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ASEAN TAXONOMY FOR SUSTAINABLE FINANCE

VERSION 4



ASEAN TAXONOMY
BOARD

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FOREWORD

Message from the Chair of the ASEAN Taxonomy Board

The ATB is pleased to issue the ASEAN Taxonomy for Sustainable Finance (ASEAN Taxonomy) Version 4 (Version 4), containing comprehensive coverage of all six focus¹ and three enabling sectors² of the Plus Standard (PS), complementing the Foundation Framework (FF) which was completed in March 2023. The completion of the ASEAN Taxonomy is particularly significant following recent challenges in the global sustainability agenda including commitment pullbacks, and thus reinforcing the Association of Southeast Asian Nations (ASEAN)'s commitment to pursue its sustainability ambitions as outlined in *ASEAN 2045 Our Shared Future* (ASEAN, 2025).

From the outset, the ASEAN Taxonomy's multi-tiered framework aimed to be science-based and inclusive to cater to the different development stages of ASEAN Member States (AMS), which reinforces its role as the taxonomy of equivalence for the region. Since the establishment of the ATB under the auspices of the ASEAN Finance Ministers and Central Bank Governors' Meeting in March 2021, efforts to grow the sustainable finance ecosystem have accelerated commendably. When the conceptual approach of the ASEAN Taxonomy was released in November of the same year, its innovative approach engendered dialogue but at present, the ASEAN Taxonomy is recognised by international financial institutions and other stakeholders as a pragmatic and sensible approach to driving ASEAN's sustainability agenda. The ASEAN Taxonomy's design philosophy could be considered prescient when the First Global Stocktake³, released on 13 December 2023, is taken into account. Specifically, the statement called for a common but differentiated approach that recognises the need for rapid reductions in global emissions and to consider different national circumstances, pathways and approaches. The ATB continues to be committed to the ASEAN Taxonomy's principles of interoperability, credibility and ASEAN inclusivity as tenets to serving this region's climate ambitions. For example, the 'Green' tier of the ASEAN Taxonomy generally makes reference to widely used international taxonomies such as the EU Taxonomy for Sustainable Activities (EU Taxonomy) and where relevant, is tailored according to ASEAN's unique circumstances, whereas the 'Amber' tiers allow progressive pathways to 'Green' as it gets sunset over time.

In reaching this completed version of the ASEAN Taxonomy, a progressive development approach was deployed and a scheduled periodic review will be undertaken for the ASEAN Taxonomy to keep abreast with technological advancements and economic circumstances for continued relevance and effectiveness. This is consistent with the ATB's mandate to develop, promote and maintain the ASEAN Taxonomy. This significant landmark means that there is greater interoperability between the ASEAN Taxonomy and widely used international taxonomies such as the EU Taxonomy. The alignment between the ASEAN Taxonomy and AMS' national taxonomies have been reinforced by bringing national taxonomy developers to the ATB as well as demonstrating a concerted effort to coalesce towards similar taxonomy

¹ Focus sectors are Electricity, Gas, Steam and Air Conditioning Supply, Transport and Storage, Construction and Real Estate, Agriculture, Forestry and Fishing, Manufacturing, Water Supply, Sewerage, Waste Management and Remediation.

² Enabling sectors are Carbon Capture, Utilisation and Storage (CCUS), Information and Communication and Professional Scientific and Technical Activities.

³ Paragraph 28(d) of the First Global Stocktake of the Conference of Parties serving as the meeting of the Parties to the Paris Agreement

architecture and syndicate comparable coverage of Environmental Objectives (EOs), Essential Criteria (EC) and economic Activities.

This common understanding has also meant that the ASEAN Taxonomy has been used as a main reference for the Indonesia Taxonomy for Sustainable Finance (ITSF) (OJK, 2025) and the Philippine Sustainable Finance Taxonomy Guidelines (SFTG) (BSP, 2024) in addition to the other AMS' national taxonomies, whereas the Singapore-Asia Taxonomy and the Thailand Taxonomy have been developed in alignment with the ASEAN Taxonomy. Additionally, Bank Negara Malaysia (BNM) and the Securities Commission Malaysia (SCM,) announced the Technical Screening Criteria (TSC)-based Malaysian Taxonomy that is being co-developed will be aligned with the ASEAN Taxonomy to ensure regional consistency and coherence. In addition, taxonomies of other jurisdictions such as the Uzbekistan Green Taxonomy (World Bank, 2023), India's Climate Finance Taxonomy (Government of India, 2025), and the Common Framework of Sustainable Finance Taxonomies for Latin America and the Caribbean (UNDP, 2023) have made reference to the ASEAN Taxonomy in their development. It is also notable that financial institutions in the ASEAN region as well as Japan, the latter via the Asia Transition Finance Study Group, have also referred to the ASEAN Taxonomy in their respective transition finance frameworks, expanding the use of the ASEAN Taxonomy's TSC as credible targets in transition plans over time.

These references made to the ASEAN Taxonomy have reinforced its role as the common language for sustainable finance in the region and the importance of an inclusive, overarching guide for the region that facilitates equivalence for AMS' national taxonomies. At the same time, the transition imperative outlined in the ASEAN Taxonomy is now mainstreamed and reinforces the validity of the multi-tiered and inclusive assessment approach. Such efforts collectively support an orderly and just transition in our ASEAN region. Since 2022, the ATB has conducted regular stakeholder consultations and other engagements to gain input on the basis and methodology of the PS TSC, effectiveness of the transition tiers, and implementation challenges, among various items, in order to enhance and improve the ASEAN Taxonomy.

The ATB is highly encouraged by the international and regional recognition for the ASEAN Taxonomy, including how it can provide an adaptable model for addressing constituents with varying starting points and circumstances. The ATB also notes that the ASEAN Taxonomy has been used in various Second Party Opinion assessments from June 2024 to June 2025 by companies that have raised sustainable financing in Thailand, the Philippines and Malaysia. The ATB's mission remains focused on regional and international advancements as it strengthens capacity building to raise awareness and encourage use of the ASEAN Taxonomy.

The ATB is grateful to the members of ASEAN Capital Markets Forum (ACMF), the ASEAN Insurance Regulators' Meeting (AIRM), the ASEAN Senior Level Committee on Financial Integration (SLC), and the ASEAN Working Committee on Capital Market Development (WC-CMD), the Asian Development Bank (ADB), technical partners such as DNV, other stakeholders and all who have contributed towards the publication of ASEAN Taxonomy Version 4. Similar with the previous versions of the ASEAN Taxonomy, there will be continued stakeholder consultations for Version 4 to ensure that the needs of financial institutions, the real economy and other participants are being considered. Furthermore, the ATB will strengthen its focus on capacity building initiatives to promote the adoption of the ASEAN Taxonomy. It will also provide implementation guidance to scale up global capital flows and

direct investments toward sustainable Activities, in support of ASEAN's sustainability ambitions. The ATB is committed to ensure that its promotion and maintenance mandate of the ASEAN Taxonomy will be consistent with the key principles of interoperability and alignment with widely used international taxonomies as well as AMS' national taxonomies.

Mardini Eddie
Chair
ASEAN Taxonomy Board

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1. The ASEAN Capital Markets Forum, the ASEAN Insurance Regulators' Meeting, the ASEAN Senior Level Committee on Financial Integration, and the ASEAN Working Committee on Capital Market Development.
2. The Asian Development Bank (ADB) through Technical Assistance (TA) 6983 *Accelerating Climate Transitions through Green Finance in Southeast Asia* and TA 9924 *Promoting an Interconnected, Inclusive, and Resilient ASEAN Capital Market* and funding contributions from the Green Climate Fund (GCF), the Government of the United Kingdom and the Republic of Korea e-Asia and Knowledge Partnership Fund (EAKPF) through their support for the ASEAN Catalytic Green Finance Facility (ACGF), as well as the Government of Luxembourg through their financing support for the Financial Sector Development Partnership Special Fund (FSDPSF).

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ABBREVIATIONS AND DEFINITIONS

Term	Abbreviation	Definition
Activity	-	An Activity which may be assessed for classification under the ASEAN Taxonomy. An Activity takes place when resources such as capital, goods, labour, manufacturing techniques or intermediate products are combined to produce specific goods or services. It is characterised by an input of resources, a production process and an output of products (goods or services). For purposes of assessment, an Activity may be defined as an expansion or significant upgrade of an existing Activity.
Activity Code	AC	A code used by the ASEAN Taxonomy to define individual Activities within an ISIC Group.
ASEAN Capital Markets Forum	ACMF	A high-level grouping of capital market regulators from all ASEAN jurisdictions.
ASEAN Finance and Central Bank Deputies' Meeting	AFCDM	Meeting of ASEAN Finance and Central Bank Deputies.
ASEAN Finance Ministers' and Central Bank Governors' Meeting	AFMGM	Meeting of ASEAN Finance Ministers and Central Bank Governors.
ASEAN Insurance Regulators' Meeting	AIRM	Platform to strengthen the insurance cooperation in the development of insurance regulatory and supervisory frameworks and research and capacity building.
ASEAN Member State	AMS	In reference to one or more of the members of the Association of Southeast Asian Nations.
ASEAN Taxonomy Board	ATB	A body set up under the auspices of the AFMGM to develop, maintain and promote a multi-tiered ASEAN Taxonomy.
Assessor	-	Person or organisation which assesses an Activity and assigns a classification on this basis.
Assessment	-	Process by which the applicability of a classification to an Activity is ascertained.
Association of Southeast Asian Nations	ASEAN	Association of member states in Southeast Asia, which promotes intergovernmental cooperation and facilitates economic, political, security, military, educational, and sociocultural integration between its members and countries in the Asia-Pacific.
Building Research Establishment Environmental Assessment Method	BREEAM	A sustainability assessment methodology recognised and used worldwide, for masterplan projects, infrastructure, and buildings. It aims to set standards for the environmental performance of buildings through the design, specification, construction, and

		operation phases; and can be applied for both new developments as well as refurbishments.
Carbon Capture, Utilisation and Storage	CCUS	The capture of CO ₂ from large point sources, such as power generation or industrial facilities. If not being used on-site, the CO ₂ is compressed and transported to be used in a range of applications or injected into deep geological formations.
Carbon lock-in		Carbon lock-in occurs when transitioning to cleaner and more sustainable energy sources is more difficult due to the existing infrastructure and economic systems being built around the use of carbon-based fuels.
Carbon Risk Real Estate Monitor	CRREM	Tool that helps the real estate industry reduce climate risks by aligning with decarbonisation goals.
Classification		Colour-coded system used in the ASEAN Taxonomy for identifying the degree to which an Activity is sustainable through its contribution to an Environmental Objective (EO). Classification levels are Green, Amber and Red. To be classified as Green or Amber, an Activity must: 1. Result in a positive benefit to one or more EOs; or 2. Create some form of utility whilst displacing another provider of that utility which detracts from an EO or EOs. A Red classification means that an Activity is not aligned with the ASEAN Taxonomy.
Climate Bonds Standard	CBS	Labelling scheme with criteria allowing certification of bonds and loans as consistent with a 2°C warming limit.
Coal phase-out	CPO	An Activity whereby processes involving combustion of coal, such as coal powered generation of electricity, are shut down over time in line with aims to reduce GHG emissions. Coal phase-out is considered an Activity which may receive classification under the ASEAN Taxonomy.
Coal-fired Power Plant	CFPP	A power station which generates electricity from the combustion of coal.
Commencement		Unless otherwise stated, 'Commencement' of an Activity refers to: 1. <u>Where Activity requires significant infrastructure</u>: the start of the on-site construction, upgrade or expansion of the facilities required to conduct the Activity. For a large construction project, Commencement shall normally mean the same as NTP; or

		2. <u>Where Activity does not require significant infrastructure</u> : the start of operations and the provision of the utility intended by that Activity. For purposes of assessment, Commencement may also be defined as an expansion or significant upgrade of an existing Activity.
Contribution		Contribution made by an Activity towards achieving an EO.
Company		In the context of ASEAN Taxonomy, the term 'Company' means the organisation seeking classification of an Activity.
Do No Significant Harm	DNSH	The principle by which Activities may not be classified as Green or Amber by the ASEAN Taxonomy if they have resulted in or will result in unremedied significant harm which has been caused or will be caused to one or more of the EOs by an Activity, or any actions required to implement the Activity.
Economic Research Institute for ASEAN and East Asia	ERIA	International organisation established to conduct research activities and make policy recommendations for further economic integration in the East Asia.
Electric Vehicle	EV	A vehicle that uses electric motors for propulsion.
Environmental Impact Assessment / Environmental and Social Impact Assessment	EIA / ESIA	A comprehensive document of a project's potential environmental (and social) risks and impacts.
Environmental Objectives	EO	Environmental Objectives which the ASEAN Taxonomy is intended to facilitate.
Environmental, Social and Governance	ESG	Factors that are considered in decision making that incorporate sustainability considerations.
Essential Criteria	EC	Minimum criteria which must be fulfilled when implementing an Activity. The EC are DNSH, RMT and SA.
Energy Use Intensity	EUI	A metric used to measure a building's annual energy use, often used to benchmark a building by expressing its energy use as a function of its size or other characteristics.
European Commission	EC	Executive branch of the EU.
European Union	EU	Supranational political and economic union of 27 member states.
Financial Close	FC	Refers to the completion of the financial arrangements and agreements necessary for a project's funding and commencement of construction or operation.
Foundation Framework	FF	Frame for assessing the contribution of Activities which is based on Guiding Principles.

Free and Prior Informed Consent	FPIC	Specific right that pertains to indigenous peoples which allows them to give or withhold consent to a project that may affect them or their territories.
Grandfathering		The basis of the classification of a financial instrument after the relevant TSC has changed or the Activity Tier to which it applies has been sunset.
Greenhouse Gases	GHG	Gases that absorb and emit radiant energy within the thermal infrared range, causing the greenhouse effect.
Indonesia Taxonomy for Sustainable Finance	ITSF	Indonesia's taxonomy that classifies economic activities to guide financing towards Indonesia's sustainability goals and net zero target.
Information and Communication		Activities related to unified communications and the integration of telecommunications and computers, and necessary enterprise software, middleware, storage and audio-visual, that enable users to access, store, transmit, understand and manipulate information.
International Capital Market Association	ICMA	Self-regulatory organisation and trade association for participants in international capital markets.
International Standard Industrial Classification	ISIC	Standard United Nations Statistics Division (UNSD) classification of economic activities.
Island System		A collection of grid-connected power generation, electrical distribution, storage, control assets and loads, which have the ability to operate together independently of a wider electrical network. Note that an Island System in this context does not need to be a literal island surrounded by water.
Leadership in Energy and Environmental Design	LEED	A green building certification program used worldwide that is environmentally oriented with aims to improve building and construction performance across seven key areas of environmental and human health.
Lifecycle Emissions		The total amount of emissions associated with a product, service, or Activity over its entire lifecycle, from the extraction of raw materials to the disposal of waste. This could be associated with the construction, operation, and decommissioning of a specific development. More information can be referenced in in ISO 14067:2018.
Multi-Jurisdiction Common Ground Taxonomy	M-CGT	A list of green and sustainable economic activities recognised multilaterally by China, the European Union (EU) and Singapore; the M-CGT shows how the three taxonomies map with each other.
Nationally Determined Contribution	NDC	National climate action plan to cut emissions and adapt to climate impacts.
Network of Central Banks and	NGFS	Network of 148 central banks and financial supervisors and 23 observers that aims to accelerate

Supervisors for Greening the Financial System		the scaling up of green finance and develop recommendations for central banks' role for climate change.
Nomenclature generale des Activities economiques dans les Communautés europeennes	NACE	Statistical classification of economic activities in the European Community.
Notice to Proceed	NTP	The point in time signalling the start of construction process for an infrastructure project.
Paris Agreement		Paris Agreement under the United Nations Framework Convention on Climate Change.
Photovoltaic	PV	Conversion of light into electricity using semiconducting materials.
Plus Standard	PS	Frame for assessing the contribution of Activities which is based on objective pre-defined TSC.
Red		In the context of classification of Activities, this term means any Activity which is explicitly classified as Red through one of the assessment frames or which is listed in Appendix A of the Main Report.
Remedial Measures to Transition	RMT	Measures taken to remediate or mitigate the impact of any significant harm resulting from an Activity, or any actions required to implement the Activity.
Renewable		Referring to a resource or energy source that can be naturally replenished or regenerated over time.
Senior Level Committee on Financial Integration	SLC	ASEAN Senior Level Committee on Financial Integration comprising ASEAN central bank deputies/senior officials and Chairs/Co-Chairs of the different ASEAN working committees on financial integration.
Social Aspects	SA	EC of the ASEAN Taxonomy which relates to an obligation for Activities to avoid causing social harm.
Steering Committee on Capacity-building	SCCB	ASEAN Steering Committee on Capacity-building.
Substantial Contribution	SC	Contribution required for an Activity to be assessed as Green. A substantial contribution means that an Activity makes a meaningful positive impact on one or more of the EOs. It must show clear, demonstrable benefits. It identifies Activities that genuinely support ASEAN's sustainability and transition goals
Sunsetting		The process by which a Tier may be retired for any given Activity; as a result, classification of that Activity at that Tier will no longer be possible.
Sustainable Development Goals	SDG	17 UN objectives intended to serve as a "shared blueprint for peace and prosperity for people and the planet now and into the future".

Sustainable Development Scenario	SDS	International Energy Agency scenario outlining a global pathway to net-zero emissions, aligning with goals from the Paris Agreement and UN SDG.
Technical Expert Group on Sustainable Finance	TEG	Group established by the European Commission to develop recommendations on topics related to the EU Taxonomy, including technical screening criteria.
Technical Screening Criteria	TSC	Quantitative and/or qualitative criteria against which the classification of the Activity is assessed.
Threshold		Defined numerical value for a quantitative TSC.
Tier		A gradation of TSC setting for EOs. Tier 1 sets TSC which represent a higher level of contribution to an EO than Tiers 2 and 3. Tier 1 is aligned with a Green classification, whilst Tiers 2 and 3 represent transitional TSC and are aligned with the Amber classification.
TSC Review Body	TRB	Body responsible for reviewing and proposing enhancements to TSC.
TSC Period		Period during which TSC are extant for the purposes of classification of an Activity.
TSC Review		Process at the end of TSC Period by which a TSC may be adjusted.
United Nations	UN	Intergovernmental organisation intended to maintain international peace and security.
United Nations Economic and Social Commission for Asia and the Pacific	UNESCAP	One of the five regional commissions under the jurisdiction of the UN Economic and Social Council.
United Nations Environment Programme	UNEP	Institution responsible for coordinating responses to environmental issues within the UN system.
Working Committee on Capital Market Development	WC-CMD	Coordinating committee which monitors initiatives and progress of ASEAN members towards building the capacity and laying the infrastructure for development of ASEAN capital markets.
Zero Direct Emissions		Pertaining to processes or systems that produce no emissions of GHG or harmful pollutants directly during operation.

EXECUTIVE SUMMARY

Rapid industrialisation in Southeast Asia, a region with a population of almost 680 million people (ASEAN, 2024), has led to significant social and environmental challenges, including climate change impacts, poor air quality, and waste management. It is estimated that 230 million people (ASEAN, 2025) in the region are living in vulnerable coastal areas and the ASEAN Member States (AMS) are committed to meet the daunting challenges of transitioning to low-carbon economies while building strong, inclusive growth that reduces poverty against the backdrop of recent global challenges and climate ambition shifts. The ASEAN Taxonomy Board (ATB) was established in March 2021 to develop, maintain, and promote an ASEAN Taxonomy that is credible yet inclusive as a means of classifying sustainable economic activities to help drive ASEAN's sustainability agenda.

Since then, the sustainable finance ecosystem in the region has developed rapidly and new guidance comprising official AMS taxonomies and transition finance frameworks have been introduced as tools to help spur the demand and supply of sustainable finance. Despite the progress made, there is still a clear and vast gap between the financing needed and delivered. While investments in Southeast Asia have been growing since 2016, the required investments to fund Southeast Asia's transition until 2030 has been estimated at USD 1.5 trillion (Bain & Company; GenZero; Standard Chartered; Temasek, 2024) and it is estimated that a USD 50 billion annual investment gap exists (Bain & Company; GenZero; Standard Chartered; Temasek, 2025). The United Nations had also estimated that investment for five ASEAN markets, namely Indonesia, Malaysia, the Philippines, Thailand and Viet Nam, would have a shortfall of USD 537 billion in supply of sustainable finance investment by 2030 (Jakarta Post, 2020). The Asian Development Bank estimates that Southeast Asia needs USD 210 billion per year in climate resilient infrastructure (ADB, 2022), which represents 5.7% of the region's GDP. Funding for climate change adaptation is particularly challenging and has become an area of increasing importance in recent years.

The ATB has come a long way since the introduction of Version 1 of the ASEAN Taxonomy in November 2021. It finalised Version 3 of the ASEAN Taxonomy in December 2024 after incorporating inputs gathered during stakeholder consultation, which include the principles-based Foundation Framework (FF) and criteria for three focus sectors and one enabling sector⁴ of the Technical Screening Criteria (TSC)-based Plus Standard (PS). Since 2021, the ATB has conducted annual targeted consultations with stakeholders comprising financial institutions, government ministries and agencies, industry associations, real economy participants and civil society organisations to obtain input on the basis and methodology of the ASEAN Taxonomy design, structure and criteria, implementation and adoption concerns, transition efforts and interoperability. These exercises are critical to ensure the ambition articulated in the ASEAN Taxonomy has been considered alongside practicality. International investors look for ASEAN's regional taxonomy criteria to align with international benchmarks for interoperability but also acknowledge the unique circumstances in the region and the need to contextualise to jurisdictional concerns. Stakeholders' primary expectation from the ASEAN Taxonomy is a reasonable one - for the basis, methodology and references for the TSC to be science-based or evidence-based, consistently applied and relevant. They also recognised that this process is complex and needed to be accomplished through ASEAN's consensus-

⁴ Focus sectors: Electricity, Gas, Steam and Air Conditioning Supply; Transport and Storage; Construction and Real Estate. Enabling sector: Carbon Capture, Utilisation and Storage

based consultation and agreement. A key consideration is also alignment of the ASEAN Taxonomy with official taxonomies of AMS – Indonesia, Malaysia, the Philippines, Singapore, Thailand and Viet Nam – and vice versa. The ASEAN Taxonomy was envisaged as a taxonomy of equivalence where classifications under any AMS national taxonomy will have an equivalent classification under the ASEAN Taxonomy. Significant effort and resources have been expended by the ATB to align elements such as design architecture, activity coverage and criteria development approach, while also recognising that member states have their own national priorities to consider that may lead to varying scopes and approaches.

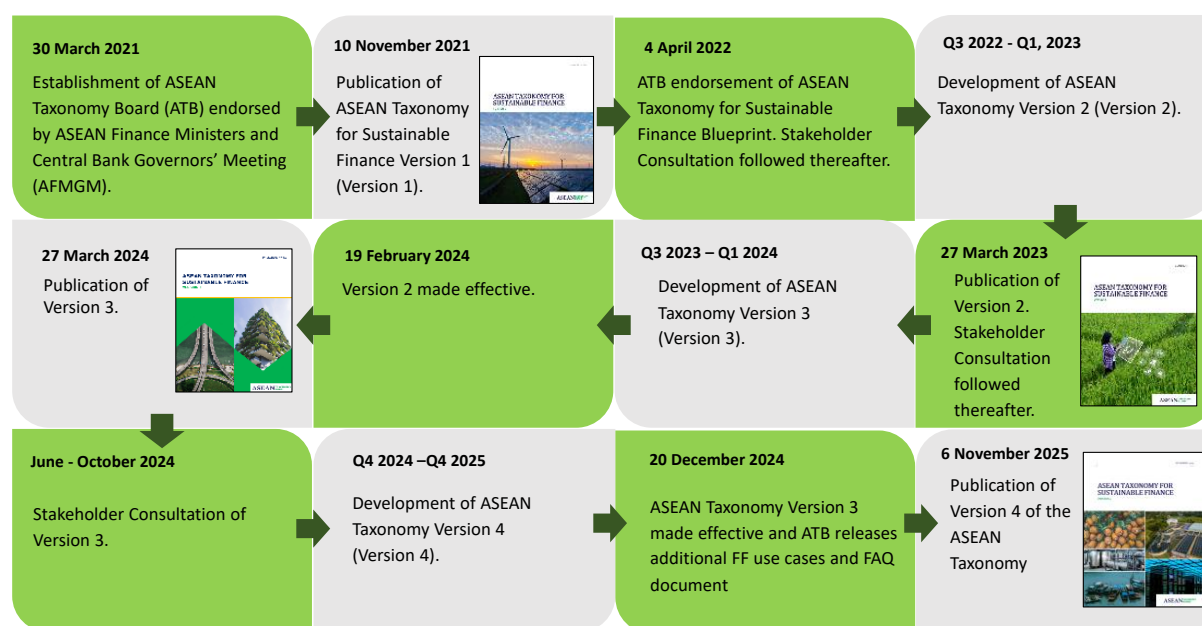


Figure 1: This figure illustrates the key milestones in the development, publication and consultation process of the ASEAN Taxonomy

At its introduction, the transition approach of the ASEAN Taxonomy was considered novel, in that a multi-tiered assessment model using the traffic light system was made available to users incorporating a principles-based FF and a TSC-based assessment frame PS, to enable a just transition towards sustainable finance adoption by facilitating different circumstances and starting points. The AMS' national taxonomies also adopt a similar approach to incorporate transition in their assessment approaches in classifying sustainable economic Activities. Six focus sectors and three enabling sectors were identified as a priority in the ASEAN sustainability journey and are covered under the PS according to contribution to GHG emissions and economic importance.

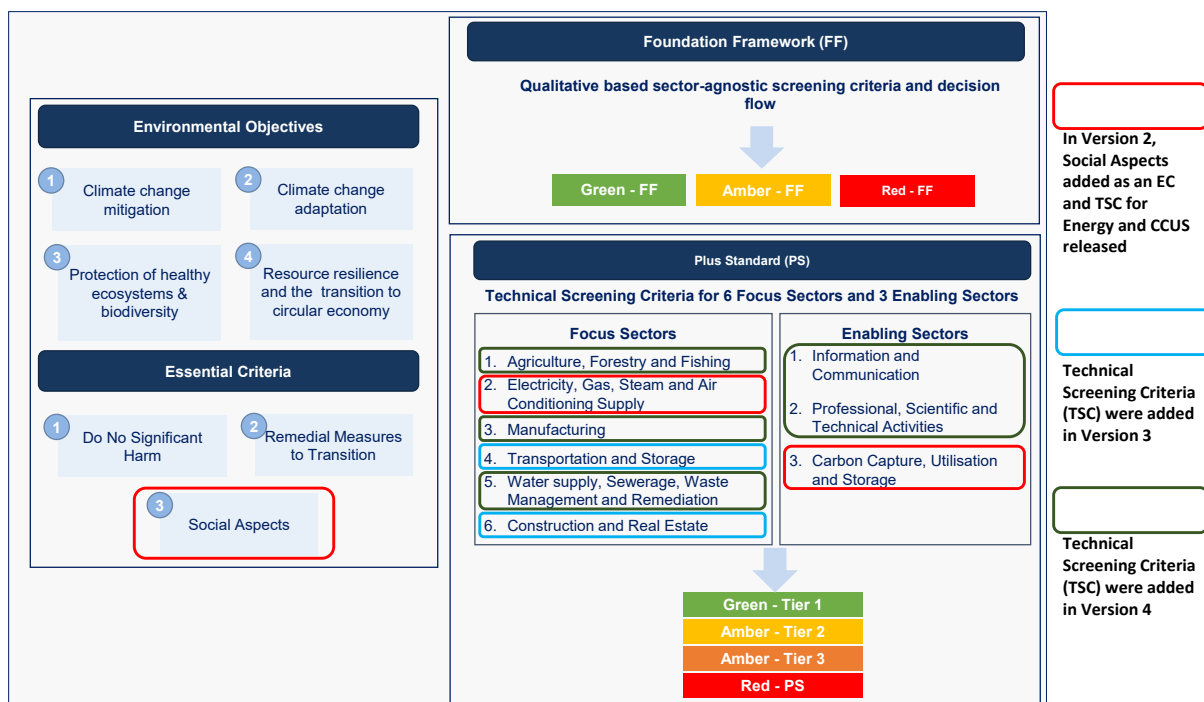


Figure 2: This figure illustrates the complete coverage of the ASEAN Taxonomy, covering Environmental Objectives and Essential Criteria that underpin the FF and PS

The ASEAN Taxonomy is based on four Environmental Objectives (EOs): Climate Change Mitigation, Climate Change Adaptation, Protection of Healthy Ecosystems and Biodiversity, and Resource Resilience and the Transition to a Circular Economy. To be classified under the ASEAN Taxonomy, any Activity must demonstrate that it appropriately contributes to at least one of these EOs and does not have any adverse effects on other EOs. EO1 focuses on decarbonisation pathways for Activities, requiring them to align with decarbonisation trajectories in line with the Paris Agreement. EO2 addresses reducing the negative effects of climate change and increasing resilience through implementing processes or actions. EO3 looks to protecting the natural ecosystem and biodiversity, promoting sustainable use of natural resources, and minimising adverse impacts on the environment. EO4 promotes resource resilience and the transition to a circular economy through principles such as minimising resource use, optimising resource yield, and closing resource loops through effective waste management. This can be achieved by adjusting business operations and implementing circular economy principles via adapted products, production, technologies, and processes.

The ASEAN Taxonomy requires an Activity to fulfil three Essential Criteria (EC) for classification: Do No Significant Harm (DNSH), Remedial Measures to Transition (RMT), and Social Aspects (SA). DNSH ensures that an Activity that contributes to one EO does not cause significant harm to another EO. RMT ensures that any significant harm is either removed or rendered insignificant within a specific time period. SA intends to ensure that entities performing an Activity comply with the standards governing human rights, labour rights (which now covers informal labour), and impact on people living close to investments.

In the ASEAN Taxonomy, TSC are used to classify Activities based on their contributions to EOs using quantitative, qualitative (e.g., process-based), or nature of Activity-based criteria. Classification refers to an Activity's contribution to an EO, while Tier refers to the different levels of TSC. PS has Tiers 1-3 aligned with Green Tier 1, Amber Tier 2, and Amber Tier 3

classifications, while the FF does not use the Tier system and only has Green, Amber and Red classifications. In all cases, a Red classification means that an Activity is not aligned with the ASEAN Taxonomy. Version 4 of the ASEAN Taxonomy also incorporates grandfathering rules and entity/portfolio assessment that provides additional guidance to taxonomy users. This is an important consideration because taxonomies provide Activity level assessments, whereas users may want to understand how changes in TSC impact the labelling of financial instruments for market stability and alignment of entire entities, portfolios, or financial instruments with these classifications respectively.

Other than developing and promoting the ASEAN Taxonomy, the mandate of the ATB also includes maintaining it, engaging and consulting with representatives from AMS and real economy participants on implementation or adoption matters, and approving any changes arising from a regular and systematic review process as governed by the ATB's terms of reference. It also considers and develops TSC for each primary EO of each Tier for each defined Activity, where relevant, in a manner that will allow flexibility for individual AMS while representing a decarbonisation framework for ASEAN that balances ambition for sustainability with economic and technical realities. AMS will set their policies on how the ASEAN Taxonomy will be used in their jurisdictions.

The assessment frame for Activities seeks to determine if the Activity meets the requirements of at least one of the EOs, avoids significant harm to other EOs, remediates any harm caused, meets all Social Aspects criteria, and the appropriate assessment approach is selected based on AMS policy and country-level preference. The process for assessing an Activity using the FF involves using principles-based guiding questions and a decision tree which determine the fulfilment of EO and EC. To assess an Activity using the PS, fulfilment of specific criteria of the EO and EC, as laid out in the Annexes must be demonstrated.

The PS, in this version of the ASEAN Taxonomy, has been completed and provides comprehensive coverage to all six focus and three enabling sectors⁵ first identified in Version 1, incorporating quantitative and/or qualitative criteria. The ASEAN Taxonomy has diverse potential users including AMS, regulators, financial institutions, users of capital, and rating agencies. Users may also assess entities and portfolios as set out in this version of the ASEAN Taxonomy. The ATB will continue to engage with stakeholders on a regular basis in fulfilling its third mandate of promoting the ASEAN Taxonomy and to ensure effort is expanded to encourage the adoption and implementation of the Taxonomy.

⁵ The additional TSC in Version 4 of the ASEAN Taxonomy are for the focus areas sectors: Agriculture, forestry and fishing; Manufacturing; Water Supply, Sewerage, Waste Management and Remediation Activities; and enabling sectors: Information and Communication; Professional, Scientific and Technical Activities.

1. INTRODUCTION

In November 2021, Version 1 of the ASEAN Taxonomy was published, focusing on climate change mitigation and adaptation, serving as a foundational map to guide capital towards Activities that promote the transition of the real economy to a more sustainable footing. Version 1 provided an initial framework for stakeholder discussions and was designed to be credible, science-based, inclusive, and adaptable to the varying development stages of AMS. Version 2 (released March 2023, effective February 2024 after consultations) expanded the FF with qualitative guiding questions, decision trees, and use cases; introduced Technical Screening Criteria (TSC) for the Energy sector and Carbon capture, utilisation, and storage; and incorporated Do No Significant Harm (DNSH) and Social Aspects (SA) criteria. Version 3 (released March 2024; effective December 2024) added TSC for Transportation and storage, and Construction and Real Estate sectors, refined Annexes for clarity (e.g., life cycle assessments and climate risk vulnerability) (ATB, 2024). This version of the ASEAN Taxonomy includes three new focus sectors (Agriculture, forestry and fishing, Manufacturing, and water supply, sewerage, waste management and remediation) and two enabling sectors (Information and Communication, and Professional, Scientific and Technical Activities).

ASEAN is an intergovernmental organisation comprising member states in Southeast Asia: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Timor-Leste and Viet Nam. ASEAN's population reached almost 680 million in 2025, covering about 4.5 million square kilometres across diverse landmasses, including over 20,000 islands. The region exhibits profound diversity in populations, histories, languages, religions, and cultures, both across AMS and within individual states. Economic variations are significant, with GDP per capita ranging from Myanmar (around USD 1,359), Lao PDR (around USD 2,100) and Cambodia (around USD 2,700) to economies such as Brunei Darussalam (around USD 35,000) and Singapore (over USD 90,000) (ASEANStats, n.d.) and AMS are at different starting points in their sustainability journey. This diversity demands an inclusive approach to development, regional progress, and cooperation. The ASEAN Taxonomy's usability accounts for varying financial sector maturity levels, incorporating principles-based assessments for less ready markets and stricter TSC for more developed ones to facilitate equitable transitions.

The GDP of ASEAN, valued at approximately USD 4 trillion, is greater than all but the four largest economies in the world (ASEANStats, n.d.). The expansion of services (e.g., tourism, processing, transport) and industrial sectors (e.g., oil and gas, mining, electronics) has driven growth, convergence, and economic development across AMS, aligning with regional objectives for resilience and integration (von Kameke, 2022).

ASEAN's rapid industrialisation has intensified social and environmental challenges. Issues include poor air quality, water pollution, inadequate waste management, over-extraction of resources, and sanitation deficiencies, varying in severity across AMS. The region is both a contributor to and increasingly vulnerable to global climate change, with projections indicating disproportionate impacts on welfare, livelihoods, and economic activities through rising sea levels, extreme weather, and biodiversity loss (ASEAN, 2021). By 2025, ASEAN's vulnerability is exacerbated by events like intensified heatwaves and floods, underscoring the need for adaptive measures (ASEAN, 2025).

Beyond greenhouse gas emissions, environmental concerns encompass urban air quality, waste management, and resource conservation. In 2024, seven AMS ranked among the world's top 50 most PM2.5-polluted countries, with air pollution remaining endemic due to industrial emissions, traffic, and biomass burning (IQAir, 2024). With urbanisation and population growth, ASEAN waste volumes reached over 300 million tonnes in 2023, projected to exceed 400 million tonnes by 2030, doubling from 2016 levels (ASEAN, 2020). While traditions and informal sectors handle organic and recyclable waste effectively in some areas, open dumping and burning persist, contributing to health risks and emissions. These challenges, compounded by climate vulnerabilities, position financing as pivotal to advancing ASEAN's sustainability agenda.

The ASEAN Finance Ministers and Central Bank Governors' Meeting (AFMGM) recognised sustainable finance's role in 2019, emphasising a shared understanding of sustainability to attract capital to sustainable investments and deter non-sustainable activities. This led to the need for a credible, regionally interoperable sustainable finance taxonomy aligned with international standards that can also support equivalence among AMS taxonomies. The ASEAN Taxonomy Board (ATB) was established in March 2021 to develop, maintain, and promote the ASEAN Taxonomy for Sustainable Finance (ASEAN Taxonomy), under the auspices of the AFMGM and the four ASEAN financial sector workstreams, the ASEAN Capital Markets Forum (ACMF), ASEAN Insurance Regulators' Meeting (AIRM), ASEAN Senior Level Committee on Financial Integration (SLC), and ASEAN Working Committee on Capital Market Development (WC-CMD).

The ASEAN Taxonomy Version 4 represents a comprehensive milestone in guiding capital towards sustainable activities across ASEAN's diverse economies. Nevertheless, it remains a living document designed to evolve with advancements in technology, science, regional priorities and global circumstances. The ASEAN Taxonomy allows for future inclusion of additional sectors and Activities as their environmental contributions become clearer. The ATB will continue to explore expanding the range of focus or enabling sectors (e.g., sustainable tourism for biodiversity or health infrastructure for climate resilience) to address emerging needs and align with national and international taxonomies.

A summary of the history of the development of the ASEAN Taxonomy can be found in Annex 6.

2. PRINCIPLES FOR THE ASEAN TAXONOMY

2.1. Scope and application

The ASEAN Taxonomy is an overarching guide that acts as a common language enabling an orderly and just transition, fostering sustainable finance adoption by AMS. It is designed to cater to the different ASEAN economies, financial systems, and transition paths. It provides alignment on underlying principles and serves to inform AMS policymakers alongside financial sector and real economy stakeholders. The ASEAN Taxonomy will help to harmonise the classification of sustainable Activities and assets across ASEAN.

The ASEAN Taxonomy was conceived based on five Principles (Table 1), and it has been designed to be, as much as possible, interoperable with taxonomies used in other relevant jurisdictions.

Table 1: Five Principles of the ASEAN Taxonomy

PRINCIPLE 1
<i>The ASEAN Taxonomy will be the overarching guide for all AMS, providing a common language and complementing their respective national sustainability initiatives.</i>
PRINCIPLE 2
<i>The ASEAN Taxonomy will take into consideration widely used taxonomies and other relevant taxonomies, as appropriate, and shall be contextualised to facilitate an orderly transition towards a sustainable ASEAN.</i>
PRINCIPLE 3
<i>The ASEAN Taxonomy shall be inclusive and beneficial to all AMS.</i>
PRINCIPLE 4
<i>The ASEAN Taxonomy shall provide a credible framework, including definitions, and where appropriate, be science-based.</i>
PRINCIPLE 5
<i>The ASEAN Taxonomy will be aligned with the sustainability initiatives taken by the capital market, banking, and insurance sectors, or at least not in conflict.</i>

2.2. Rationale for ASEAN Taxonomy design

The ASEAN Taxonomy offers two assessment frames, which are the FF and the PS. These frames are illustrated in Figure 3.

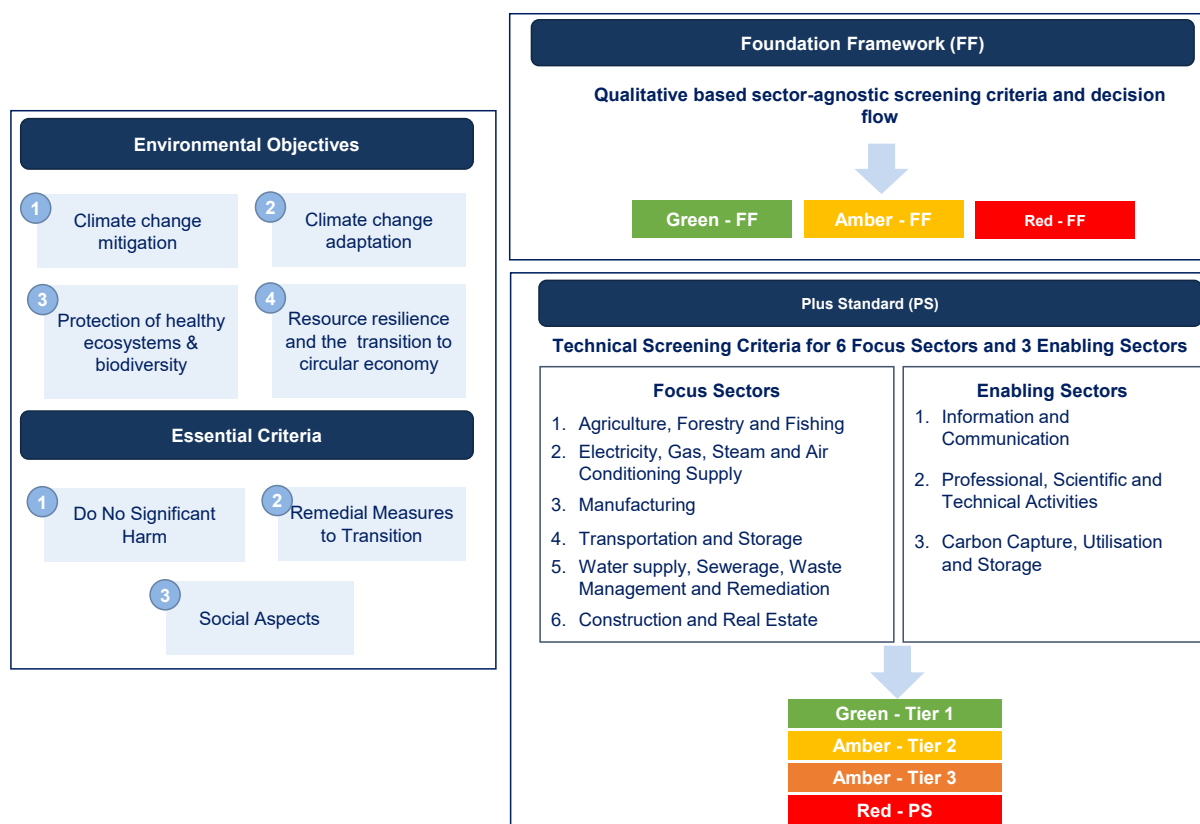


Figure 3: Structure of the ASEAN Taxonomy

This design recognises a diverse range of potential users (i.e., companies, investors, and governments) across the AMS. A ‘one-size-fits-all’ taxonomy will not provide an inclusive solution for ASEAN. The FF and PS were developed to ensure the inclusivity of users from diverse economic backgrounds.

The FF was developed as part of this inclusivity and is intended as a ‘starter’ assessment frame for AMS. The principles-based assessment frame of the FF allows Activities to be assessed and classified using qualitative guiding questions.

The PS was developed as an advanced form of assessment with defined TSC. The Tier concept (elaborated in Section 3.6) is developed to accommodate different levels of development and varied economic activities, which results in different starting points for AMS.

The ASEAN Taxonomy offers guidance on assessing Activities, entities, portfolios and financial instruments, accommodating the diverse economic contexts and development stages across AMS. Details on assessment of Activities is shown in Chapter 4, while guidance for grandfathering of financial instruments is shown in Chapter 6. Instructions on how to report entities, portfolios, and financial instruments using the ASEAN Taxonomy is shown in Chapter 6.

3. ASEAN TAXONOMY CONCEPTS AND ELEMENTS

3.1. Environmental Objectives

The ASEAN Taxonomy was created to facilitate four Environmental Objective (EOs):

- EO1: Climate Change Mitigation.
- EO2: Climate Change Adaptation.
- EO3: Protection of Healthy Ecosystems and Biodiversity.
- EO4: Resource Resilience and the Transition to a Circular Economy.

Any Activity seeking classification under the ASEAN Taxonomy must demonstrate a contribution to at least one of these EOs. The Activity may also not detract from the EO to which it is intended to contribute due to direct or indirect effects caused by the Activity to that EO. The EOs are explained in more detail in the following sections.

3.1.1. EO1: Climate Change Mitigation



Climate Change Mitigation focuses on decarbonisation pathways for Activities.

Activities shall be assessed in alignment with the ASEAN Taxonomy, taking into account AMS-specific decarbonisation pathways. Where possible, Activities shall be aligned to the decarbonisation trajectories that aim to meet the 1.5°C target under the Paris Agreement which was ratified by all AMS in 2017.

Decarbonisation pathways vary across AMS due to different economic structures and dependencies. These are reflected under their respective NDCs and Long-Term Low Emission Development Strategies. Activities implemented may vary due to industrial, political, or cost barriers (e.g., availability and affordability of feasible low carbon technologies).

An Activity shall be considered as fulfilling the objective of Climate Change Mitigation if it contributes to one or more of the following:

1. Avoids GHG emissions;
2. Reduces GHG emissions; or
3. Enables others to avoid or reduce GHG emissions.

Common Climate Change Mitigation Activities include, but are not limited to: renewable energy generation, rehabilitation, retrofitting and/or replacement of energy-inefficient technology, production of energy-efficient technologies, as well as maintenance and strengthening of land-based carbon stock and sinks, above and below ground.

Table 2: Guiding Principles EO1 Criteria

Guiding Principles for EO1
1. Activity is in line with limiting global temperature rise to no more than 1.5°C in alignment with the Paris Agreement; or 2. Activity which is not already low- or zero-emissions, may be required to demonstrate the capability of avoiding or reducing GHG emissions in line with relevant best practices compared to the baseline scenario without the mitigating action.

3.1.2. EO2: Climate Change Adaptation

EO2: Climate Change Adaptation



Climate Change Adaptation focuses on managing expected negative effects of climate change, through identifying evidence and relevant information with regards to the impacts of climate change.

The objective of this EO is to lower the negative effects caused by climate change and increase resilience to withstand adverse physical impacts of current and future climate change, through implementation of processes or actions.

Activities must demonstrate resilience to identified negative impacts, ensure they do not cause maladaptation or undermine the adaptation efforts of others, and actively avoid increasing the physical climate risk for other stakeholders. Resilience is defined as the ability of the Activity to provide utility over time in the face of potential climate disruptions. The ASEAN Taxonomy is technology neutral and supplementary guidance on technology and solutions may come from the ATB and/or its members in the future.

Table 3: Guiding Principles EO2 Criteria

Guiding Principles for EO2
1. Activity shall positively contribute to a reduction in material physical climate risk and/or shall reasonably reduce material physical risk from current and future climate change. This can include obvious physical risks, such as flooding, but also less immediately visible effects, such as impacts on health from higher temperatures. 2. Impact assessments under a broad range of climate scenarios shall be conducted to provide better understanding and insights on the effectiveness and benefits of the Activity. 3. Activity that enables adaptation of other Activities should reduce the impacts of material physical risk from other Activities and/or reduce barriers to adaptation through technology, services or products. 4. Activity must not adversely affect the adaptation efforts, or increase the physical risk, of other stakeholders. 5. Adaptation solutions should be location-specific and context-specific and shall be assessed and ranked in order of priority using the best available climate projections in order to prevent and/or reduce the adverse impacts on people, nature or assets.

3.1.3. EO3: Protection of Healthy Ecosystems and Biodiversity

EO3: Protection of Healthy Ecosystems and Biodiversity



Protection of Healthy Ecosystems and Biodiversity focuses on the incorporation of conservation, restoration, and protection mechanisms of the natural ecosystems and biodiversity. This is location and context specific, and typically relevant for Activities related to agriculture, forestry and fishing, real estate, and industry.

The objective of this EO is to promote positive effects and to minimise or eliminate negative effects on the natural ecosystems and biodiversity.

Activities must promote or enable restoration, conservation and facilitate protection mechanisms of the ecosystems and biodiversity and promote the sustainable use and protection of water and marine resources.

Table 4: Guiding Principles EO3 Criteria

Guiding Principles for EO3

An Activity intended to promote EO3 shall conform with the following principles while simultaneously minimising or eliminating any *direct or indirect* adverse effects on the natural ecosystems and biodiversity:

1. Enable ecosystem restoration and/or facilitate the protection of ecosystems.
2. Implement necessary measures to protect ecosystems and biodiversity, including but not limited to actions such as the adoption of sustainable logging practices and ensuring timber products are sourced from sustainably managed forests.
3. Enforce and empower existing policies related to the protection of natural areas.
4. Take into consideration the sustainable and equitable use of biodiversity and ecosystem services.
5. Substantially contribute to environmental protection from pollution by improving levels of air, water, and/or land quality, including the cleaning up of litter and other pollution.
6. Substantially contribute to achieving good environmental status of bodies of water, through protection, preservation, or restoration mechanisms; including improving water management and efficiency activities, as well as promoting the sustainable use of water through the long-term protection of available water resources.

3.1.4. EO4: Resource Resilience and the Transition to a Circular Economy

EO4: Resource Resilience and the Transition to a Circular Economy



Resource Resilience and the Transition to a Circular Economy focuses on the materiality⁶ of Activities, and their impacts to business operations, through adoption of the following principles of circularity:

1. Minimising resource use;
2. Optimising resource yield; and
3. Closing resource loops through effective waste management.

An Activity may be considered as meeting this EO through one or both of the following:

1. Adjusting business operations to conserve raw materials, energy, water, and other natural resources; or
2. Implementing circular economy principles via adapted products, production, technologies, and processes.

Table 5: Guiding Principles EO4 Criteria

Guiding Principles for EO4

An Activity intended to promote EO4 shall fulfil, where applicable, the principles:

Strategy and Operations, Adjusting Business Models:

1. Uses renewable energy, bio-based resources, or other recovered materials to reduce rate of resource extraction.
2. Uses future-proof, sustainable considerations and specifications to design and produce products, assets or process technologies that enable circular economy strategies through:
 - a. Designing for longevity, resource efficiency, durability, functionality, modularity, upgradability, easy disassembly, and repair.
 - b. Using recyclable or biodegradable materials.
 - c. Substituting substances in materials and products throughout their lifecycle by replacing such substances, where relevant, with safer alternatives and promoting traceability.
3. Optimises waste management, including the management and reduction of waste from (i) the extraction of minerals, and (ii) the construction and demolition of buildings.
4. Optimises resource use and/or extends product use, including through:
 - a. Replacement of virgin materials with secondary raw materials or by-products, either fully or partially;
 - b. Repair, reuse, donation, resale, upcycling activities or on-site composting;
 - c. Repurposing, refurbishing, remanufacturing, disassembling, upgrading and repairing, and sharing of products.

⁶ In this context, materiality refers to how significantly an Activity's use of materials affects its operations and sustainability performance. It focuses on the importance of resource use, efficiency, and waste management in driving circular economy outcomes.

5. Offers product-as-a-service based on, inter alia, leasing, pay-per-use, subscription, or deposit return schemes to reduce the demand for new products and their embedded raw materials.
6. Provides for cleaner and more efficient options for waste disposal, including minimising waste incineration and disposal to landfills.

Enablers: Facilitating the Transition

1. Develops and/or improves resource optimisation / waste management infrastructure needed for re-use and recycling to increase resource efficiency and ensure recovered materials are recycled as high-quality secondary raw material.
2. Invests in the creation of a research and development (R&D) and knowledge sharing platform to increase expertise in circular economy and/or execute circular economy-related pilot projects.

Recycling and the informal sector are among the largest contributors to EO4 in ASEAN. Activities within these sectors can be classified under EO4 if they meet the principles of the ASEAN Taxonomy.

ASEAN has published a Framework for Circular Economy for the ASEAN Economic Community (ASEAN, 2021). This document incorporates three strategic goals, six strategic principles and five priorities which are shown in Table 6. Activities intended to be classified under EO4 should be aligned with these goals, principles and priorities.

Table 6: Strategic goals, principles and priorities for ASEAN

Strategic goals	Guiding principles	Strategic priorities
1. Resilient Economy 2. Resource Efficiency 3. Sustainable and Inclusive Growth	1. Promote ASEAN integration and the development of regional value chains. 2. Take into consideration the broader impact on the economy, sectors, and society. 3. Recognise the unique circumstances of each AMS whilst supporting long-term growth prospects of the region. 4. Encourage ASEAN-wide coordination on knowledge, technology transfer, and capacity-building. 5. Evaluate financial and institutional feasibility and sustainability, including practical applications, prior to implementation. 6. Function within the reality of international production networks and linkages.	1. Standard Harmonisation and Mutual Recognition of Circular Products and Services. 2. Trade Openness and Trade Facilitation in Circular Goods and Services. 3. Enhanced Role of Innovation, Digitalisation, and Emerging/Green Technologies. 4. Competitive Sustainable Finance and Innovative ESG Investments. 5. Efficient Use of Energy and Other Resources.

3.2. Essential Criteria

Any Activity which is to be classified under the ASEAN Taxonomy must also fulfil the minimum requirements of three EC, as follows:

- EC1: Do No Significant Harm (DNSH)
- EC2: Remedial Measures to Transition (RMT)
- EC3: Social Aspects (SA)

3.2.1. EC1: Do No Significant Harm

An Activity will directly or indirectly interact with the surrounding environment. While the Activity may contribute towards an EO, it may cause unintended significant harm to the broader environment.

DNSH refers to the principle that an Activity which contributes to one EO shall also not significantly cause any harm to another EO. Assessment of DNSH to other EOs forms part of the classification assessment of an Activity and is undertaken after ascertaining the contribution of an Activity against EO-specific objectives.

For Activities to be assessed under the PS, criteria for significant harm are described in Annex 2. Guiding questions have been provided to address the DNSH aspect in the FF. However, Annex 2 can also be a useful reference for FF assessments of DNSH.

3.2.2. EC2: Remedial Measures to Transition

RMT are measures which ensure that any actual or potential significant harm is removed or rendered not significant. If it has been assessed that an Activity may cause significant harm to an EO, RMT must be put in place. Implementation of RMT needs to be planned which will effectively remove all significant harm within 5 years from the assessment date. Comprehensive and realistic plans for RMT must be presented as part of the assessment. If significant harm is occurring or will occur, and RMT is not planned to be completed within the specified timeframe (i.e., within 5 years), the Activity is automatically classified as Red.

In both the FF and the PS, if an assessment shows that an Activity is causing or may cause significant harm, the classification will be downgraded to Amber (FF) or Amber Tier 3 (PS) respectively pending effective remediation, as described in Section 3.6.3.

3.2.3. EC3: Social Aspects

Social Aspects relates to social conditions which could potentially be harmed by an Activity. An Activity may contribute to EOs, but during its lifecycle, may result in negative impacts on its employees or the surrounding communities. Therefore, it is important that taxonomy-alignment also involves the adherence of the Activity to the ASEAN Taxonomy Social Aspects. Under the ASEAN Taxonomy, there are three key Social Aspects (Table 7). Assessment of Social Aspects is undertaken at the Company level, as opposed to at an Activity level, as social policies are usually crafted at the Company level.

Table 7: Key Social Aspects

Social Aspects	Definition
 Promotion and Protection of Human Rights	Promotion of human rights and fundamental freedoms, in line with the ASEAN Human Rights Declaration (AHRD) and the Phnom Penh Statement on the Adoption of the AHRD (ASEAN, 2012).
 Labour Rights and Worker Protection	The promotion of labour rights and the prohibition of forced labour, including child labour, exploitation, trafficking in persons, violence, and abuse, align with the ASEAN Declaration on the Protection of the Rights of Migrant Workers and the ASEAN Consensus on the Protection and Promotion of Rights of Migrant Workers (ASEAN, 2012). Additionally, recognising and including informal workers in labour and social protection systems, supporting transitions to formal employment, and promoting decent work opportunities in the informal economy are consistent with the ASEAN Declaration on Promoting Competitiveness, Resilience and Agility of Workers for the Future of Work (ASEAN, 2023).
 Impact on People living Close to Investments	Management of investment-related impacts on people (including children) living in at-risk areas by encouraging inclusive and targeted measures to reduce the impacts of investments on vulnerable populations and strengthen institutional capacity to address the needs of people affected, in line with the ASEAN Declaration on Strengthening Social Protection (ASEAN, 2013).

Other Social Aspects, including but not limited to poverty reduction, job creation, and human capital development, will be considered in future versions of the ASEAN Taxonomy.

An Activity intended to achieve an EO shall not inflict harm on Social Aspects. Activities should be assessed for appropriate avoidance and mitigation of potentially exploitative practices. As a minimum, Companies carrying out the Activities and any subsidiaries or branches required for the conduct of those Activities, must meet the legal social requirements of the AMS in which they are located, with due consideration of any locally specific nuances (see Annex 4).

For example, in terms of respecting labour rights; in Viet Nam, there is a legal provision that specifically recognises the right of senior employees who are in their final year prior to retirement to reduce the number of working hours in a day or to request casual or part-time employment (Socialist Republic of Viet Nam, 1994). There are also specific legislation and regulations that cater to the employment of industrial homeworkers in Thailand (Government of Thailand, 2010) and the Philippines (DOLE, 1974).

In terms of prevention of forced and child labour, Companies must set out measures against confiscation of identity documents (e.g., passports) of their migrant workers. These measures are implied in the legislations and regulations of Cambodia, Myanmar and the Philippines while explicitly stated in other AMS (ASEAN, 2020).

The principle of free, prior, and informed consent (FPIC), grounded in international human rights standards, applies globally and should be considered where relevant. Companies operating in any country where indigenous peoples or local communities may be affected are

expected to respect their right to FPIC. For example, in the Philippines, companies carrying out Activities within ancestral domains or lands are required to undergo an FPIC process with Indigenous Cultural Communities/Indigenous Peoples as part of the meaningful stakeholder consultation requirements (FAO, 2006).

It is the assessor's responsibility to account for these nuances to uphold a complete assessment of Social Aspects across AMS. Guidance on the assessment of Social Aspects is further explored in Section 4.5.

3.3. Assessment frames

The frames for assessment under the ASEAN Taxonomy are the principles-based FF that allows for a qualitative assessment of Activities, and the PS which uses TSC to classify Activities as either Green or Amber.

3.3.1. Foundation Framework

The FF uses a principles-based assessment of Activities, assisted by guiding questions. An illustrative example of assessments under the ASEAN Taxonomy is provided in Section 4.3.1. The principles-based nature of the FF allows for assessment and classification of Activities to be performed despite challenges in availability and accessibility of data.

3.3.2. Plus Standard

The PS frame was designed to be more robust, using both threshold-based (quantitative) and process- or practice-based (qualitative) TSC. The TSC, as relevant, allow for the classification of Activities into three Tiers, which represent the respective Green and Amber policies of different AMS and consider the current state of technology and development across ASEAN. Illustrative examples of assessments using the PS frame is provided in Annex 7.

3.4. Activities

The ASEAN Taxonomy does not provide specific instructions on the classification of entities, portfolios, or financial instruments, as this document is intended to focus on the classification of Activities. Reporting methods for entities and portfolios and financial instruments are covered in Chapter 6.

An Activity is defined in the ASEAN Taxonomy as an action and not as the assets used to perform that action. For an Activity to be classified Green, Amber T2 or Amber T3 under the ASEAN Taxonomy, it must be demonstrated that the assets are used only for an Activity which meets the TSC of the intended classification. If the assets are also used for another purpose which does not meet the relevant TSC, the Activity may not receive that classification. For instance, for power generation, the Activity is the generation of electricity and not the equipment/assets installed to generate the electricity. Similarly, classification depends on achievement of TSC based on the output of the power generation facility.

A list of all Activities for which Tiers and TSC have been defined for assessment under the PS is shown in Annex 1. Any Activity can be assessed under the FF, even if it is not listed in Annex 1.

3.5. Technical Screening Criteria

The ASEAN Taxonomy has defined TSC for a range of Activities. These TSC are used in the PS to assess and classify Activities as Green, Amber T2 or Amber T3 based on their

contributions to EOs. Activities are classified as Red if they fail to meet either Green or Amber TSC.

The Activities and their associated TSC are set out in Annex 1. Annex 1 is not exhaustive and will be expanded with new Activities over time as the ATB continues to develop TSC for Activities in other focus sectors. There are three main methods by which TSC are defined (Table 8).

Table 8: Details on the different methods of defining TSC for Activities

Method	Description / Definition
Quantitative	• Impact based: minimum requirements for the impact (effect) on the environment of carrying out the Activity (e.g., GHG emissions savings). • Performance in relation to the environmental target: minimum threshold for the environmental performance of the Activity (e.g., a level of GHG emissions per unit of Activity aligned with a climate neutral economy). • Best in class performance: minimum threshold (best in class) for the environmental performance of the Activity (e.g., a level of GHG emissions per unit of activity that only the best 10% market players achieve). • Relative improvement: minimum improvement threshold for the environmental performance of the Activity (e.g., reduction of GHG emissions per unit of Activity). • Note that, in the ASEAN Taxonomy, 'threshold' relates to quantitative TSC only.
Qualitative	• Practice-based: a set of practices (best practice) for the Activity (e.g., compliance with a set of qualitative criteria, code of conduct etc.). • Process-based: a set of process-based steps (e.g., a set of actions or points of focus that need to be addressed).
Nature of the Activity	• An Activity that is automatically considered to be aligned with the respective classification due to the proven contribution of that Activity (e.g., Activity that would always meet TSC, such as solar and wind energy).

The method for TSC setting may vary across Activities and EOs and certain Activities may be more naturally suited to certain types of TSC. TSC are subject to periodic review and adjustment through a process which is described in Annex 6.

3.6. Classification system

The terms 'classification' and 'Tier' have different meanings under the ASEAN Taxonomy:

- 'Classification' relates to an Activity; where the classification of an Activity is an indication of its contribution to an EO under both the FF and the PS;
- 'Tiers' relates to the different levels of TSC defined by the PS (Tiers are not used in the FF).

Under the PS:

- An Activity which meets Tier 1 TSC may be classified Green under the PS; and
- An Activity which meets Tier 2 or Tier 3 TSC may be classified Amber under the PS (referred to as either 'Amber T2' or 'Amber T3', respectively).

3.6.1. Classification for the FF and PS

The FF and the PS both use colour-coded classification systems that represent different levels of contribution to an EO by an Activity. Classifications are divided into Green, Amber, and Red.

A Green classification means that the Activity is making a substantial contribution to the EO.

The Amber classification is present in both frames. In the PS, it is used to denote 'transitional' Activities. Amber Activities, while not meeting Green classification criteria, represent a progressive movement on the path to a more sustainable ASEAN with due consideration to the practicalities of implementing sustainable Activities. AMS may opt to begin with lower Tiers (2 or 3) for a limited period before progressing to Tier 1. Therefore, 'transitional' tiers i.e., Tiers 2 and 3 encourage continued progression towards a sustainable future.

In both the PS and the FF, an Amber classification may also be used to temporarily classify an Activity for which some remediation of harm is outstanding (see Section 3.6.3).

A Red classification means that the Activity is not aligned to any of the EOs or causes significant harm to any of the EOs. There is no Tier aligned with Red classification under the PS.

A summary of classification options is shown in Table 9.

Table 9: Summary of Classification

For the FF
• There are no defined Tiers or TSC. • An Activity may be assessed as Green in line with principles-based guiding questions. • An Activity which does not meet the principles for Green must be classified as Red. • An Activity which meets the principles for Green classification may be temporarily classified as Amber if there is outstanding unremediated harm.
For the PS
• TSC for Tier 1 are aligned with the Green classification. • TSC for Tier 2 and Tier 3 are aligned with the Amber classification; this effectively results in two levels of Amber classification: Amber Tier 2 and Amber Tier 3. • An Activity which does not meet TSC for Green, Amber Tier 2 or Amber Tier 3, must be assessed as Red. • An Activity which meets the TSC for Green, Amber T2 or Amber T3 classification may be temporarily classified as Amber Tier 3 if there is outstanding unremediated harm.

3.6.2. Tiers for the PS

Note that the ASEAN Taxonomy does not necessarily set TSC for all three Tiers for every Activity. If TSC are not defined for an Activity Tier, that Activity cannot be classified using that Tier under the PS. For example, if TSC has been defined for Tier 1 of an Activity, but not for Tier 2 and Tier 3, that Activity can be classified as Green, but not as Amber.

Tiers 2 and 3 will be gradually sunset over time for all Activities; the aim of the ASEAN Taxonomy is to migrate all Activities to Tier 1. Guidelines related to the sunsetting of Activity Tiers are described in Annex 6.

General guidelines for Tier setting and detailed TSC for each Activity within each Tier can be found in Annex 1.

3.6.3. Impact of DNSH and RMT on classification status

Classification of Activities can also be affected by the DNSH and RMT status of the proposed Activities. This applies to both the FF and the PS.

An Activity will be classified as Amber in the FF or Amber Tier 3 in the PS, if the Activity is causing or may cause significant harm. Comprehensive and realistic plans showing how the harm will be effectively remediated within 5 years must be presented. If no such plans are available, the Activity will be classified as Red. With RMT, the Activity will remain classified as Amber (or Amber Tier 3 in the PS) until the significant harm has been effectively remediated, or five years have passed from the assessment date. If the significant harm has not been effectively remediated within five years of assessment, the Activity will be re-classified as Red.

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4. GUIDANCE FOR THE ASSESSMENT OF ACTIVITIES

4.1. Assessment frame

4.1.1. Generic assessment of an Activity

Both the FF and the PS assessment frames seek to address the following questions:

- Does the Activity meet the principles of at least one of the EOs?
- Does the Activity avoid actual or potential significant harm to any of the other EOs?
- Where the Activity causes or may cause significant harm, was the harm remediated?
- If the harm has not yet been remediated, will it be remediated within the defined period?
- Will the Activity meet all the criteria under Social Aspects?

4.1.2. Selecting assessment frames

The ATB does not provide direction as to which frame should be used for assessment. However, if an Activity does not have TSC defined under the PS, that Activity can by default only be assessed under the FF.

For Activities where there are TSC defined in the PS, the Company needs to decide on the appropriate assessment frame with due consideration of country-level preference.

Each AMS has the prerogative to decide on the application of the ASEAN Taxonomy and may state or establish as policy its preference for the PS to be used as the primary assessment frame. Where an Activity takes place in more than one AMS, the more restrictive AMS policy will apply, e.g., where one AMS has stated it prefers to use the PS, but another AMS has not, the PS will normally be used.

If TSC have not been set for an Activity, it may only be assessed under the FF. If an AMS has not established the PS as the primary assessment frame, the Company may still choose to undergo an assessment under the PS. However, if an AMS policy has established the use of the PS, but the Company wishes to use the FF, the Company must provide justification for using the FF. A recommended process is illustrated in Figure 4.

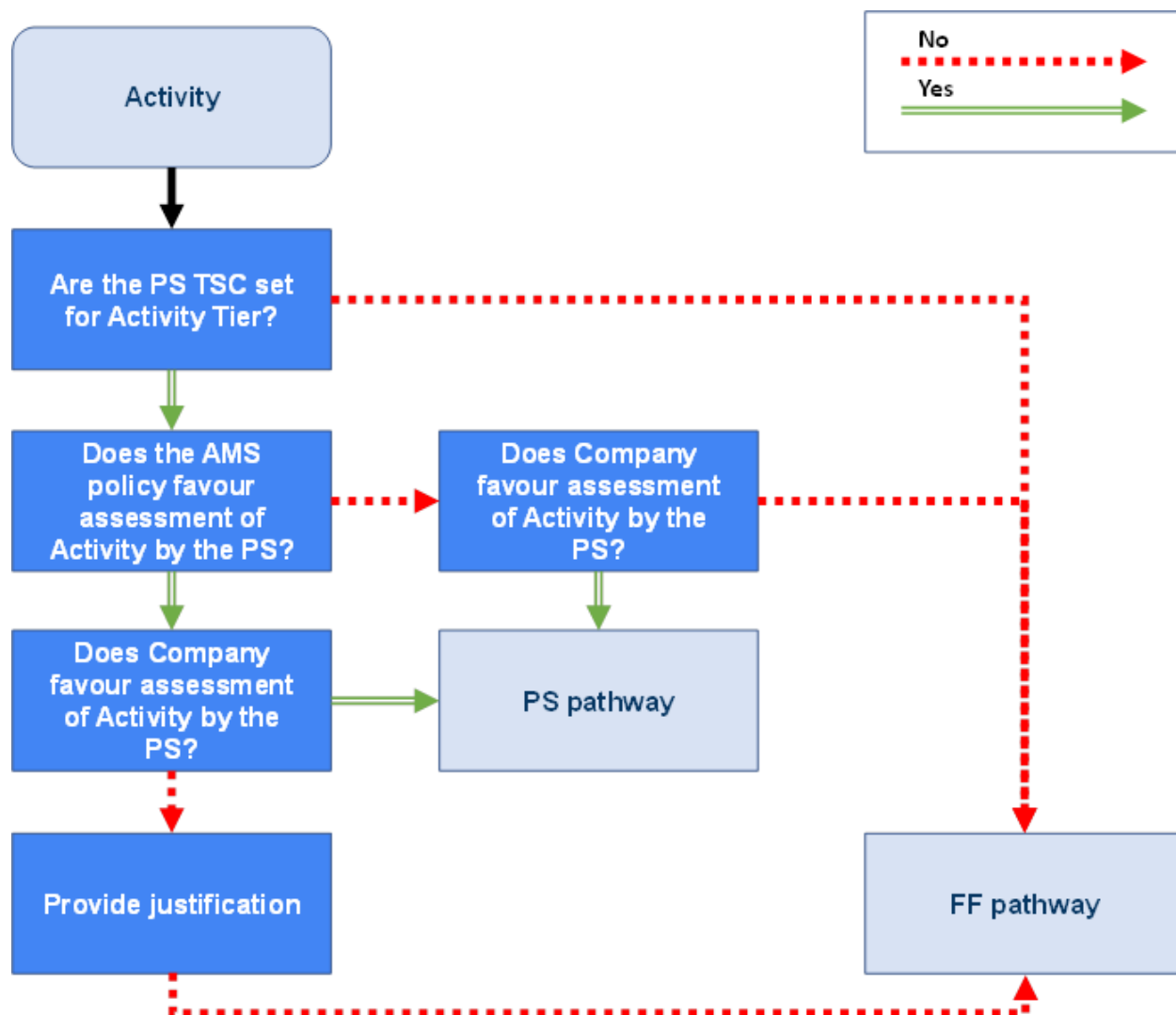


Figure 4: Recommended process for choice of the FF or the PS

If the AMS policy has established the PS as the primary assessment frame, assessment of Activities may only be conducted using the FF in exceptional circumstances and where an assessment using the PS would be effectively impossible. In this case, the Company must present justification for using the FF to assess the Activity, which must include one of the following:

- The data required to perform an assessment under the PS cannot be obtained in the respective AMS after all reasonable attempts are made to secure such data.
- The data to perform an assessment under the PS cannot be verified or certified in accordance with regional and/or international standards.

In these circumstances, the assessor will take a position as to whether the justifications provided by the Company for using the FF are legitimate and proceed accordingly.

4.1.3. Primacy of AMS in setting of policy

The ATB recognises the primacy of AMS in the setting of policy which affects their own jurisdiction. Notwithstanding all of the above, it is incumbent on the Company to ensure that any proposed Activity to be conducted in ASEAN is aligned with the strategic interests of the

AMS in which the Activity takes place, as well as considering any technical, permitting and other requirements. Each AMS is responsible for setting out and enforcing any specific requirements for users of the ASEAN Taxonomy within its jurisdiction.

4.2. User entry point

Some Activities may in principle be aligned with more than one EO. In such cases, the assessment may cite all applicable EOs. However, one EO must be stated as the primary EO against which the Activity is assessed. The Company should state which EO is to be regarded as primary at the time of assessment with due consideration to the recommendation of the assessor.

In determining the primary EO, Companies may consider various viewpoints such as alignment of the Activity with the Company as well as with national priorities. Companies should also consider the strategic priorities of other entities with an interest in the outcome of the assessment.

Table 10 outlines three common viewpoints accompanied by their relevant guiding questions to support the identification of the most relevant EO. Companies may use one or more of the viewpoints and consider one or more EO according to their strategic priority.

Table 10: Assessment User Viewpoints

1. Activity Relevance and Strategic Alignment	2. Investors / Financial Institutions' Priority	3. Government and Industry Guidance
- Which EO is most relevant to the nature of the Activity? - What is the strategic focus of the Company? - Which EO(s) is most aligned to the Company's strategic focus?	- What is the investors' priority and investment strategy? - Which EO(s) is most aligned to the investors' priority and strategy?	- Has the government issued any guidance on taxonomy compliance, whether mandatory or voluntary? - Has the government issued any guidance (including policies, roadmaps and guidelines) which indicates that this Activity contributes to a specific EO under their NDC or national plan? - Is there guidance (including policies, roadmaps and guidelines) from the sectoral bodies which indicates that this Activity contributes to a specific EO under their sectoral plan?
- Companies should use their judgement, given the responses to the questions, to determine which EO is the most relevant to the Activity being assessed. - Companies can refer to the guiding questions and narrative for each EO to better understand its relevance.		

An illustrative use case for applying the guiding questions for user entry point can be referenced under Annex 7.

4.3. Assessment using the FF

4.3.1. Illustrative end-to-end process assessment of an Activity using the FF

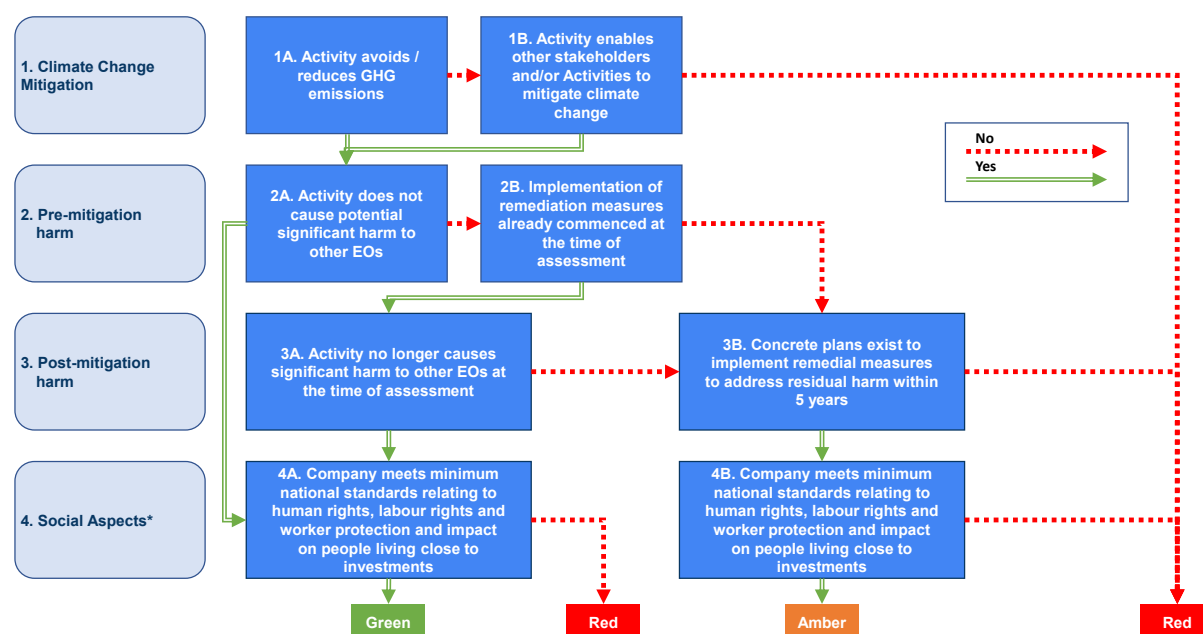
Based on the primary EO identified at the user entry point (see Section 4.2), the Company can identify the corresponding decision tree (of the primary EO) to proceed with assessment of Activities.

In total, there are four decision trees, and each decision tree is developed based on specific criteria of the EO elaborated in Sections 3.1.1 to 3.1.4.

The Company assesses the Activity beginning with Question 1A and with reference to respective guiding questions, which serve to guide the Company. Implementation of guiding questions for the EOs and ECs need to suit the local environment and circumstances.

Details of the individual decision trees along with guiding questions are in Sections 4.3.2 to 4.3.5. Refer to Annex 7 for examples of assessment of Activities using the FF.

4.3.2. EO1 assessment under the FF



* Social Aspects (4) assessment is done at Company-level, while all other assessments (1 – 3) are conducted at Activity level.

Figure 5: The EO1 Decision Tree

Table 11: Guiding Questions for EO1

S/N	Guiding questions – EO1 (Climate Change Mitigation)
1A	Does the Activity avoid / reduce GHG emissions? - How does the Activity avoid or help reduce emissions? (e.g., generation of electricity through renewables). - Does the Activity avoid locking in high-carbon activity? (i.e., delaying or preventing the transition towards low carbon alternatives). - Does the Activity avoid leading to significant GHG emissions, including CO₂, CH₄, N₂O, SF₆, NF₃ and/or HFCs? - Does the Activity avoid leading to or causing extensive deforestation practices? - Do the Company's policies and business strategy generally avoid contradicting or impeding alignment with the specified EO1 principles? - Where applicable and relevant, is a 3rd party certification or verification of alignment of Activity with EO1 available? - Does the Activity fulfil relevant environmental law(s) applicable to EO1? - Are the effects of Climate Change Mitigation efforts measurable and observable? (e.g., data on amount of carbon emissions avoided).
1B	Does the Activity enable other stakeholders and/or other Activities to mitigate climate change? - Does the Activity help other stakeholders (including the community) to mitigate climate change? (e.g., construction of a building that facilitates urban planting). - Does the Activity avoid impeding upstream and/or downstream stakeholders from reducing their GHG emissions? - Does the Activity promote intersectoral collaborations for Climate Change Mitigation without negatively affecting other sectors? - How does the Activity enable other Activities to mitigate climate change? (e.g., operation of power transmission and distribution equipment that enables the incorporation of solar power). - Are the effects of Climate Change Mitigation efforts by the enabled Activity measurable and observable? (e.g., data on amount of carbon emissions avoided).
Once evaluation is complete, proceed to Section 4.3.6 to evaluate the Activity under DNSH and RMT.	

4.3.3. EO2 assessment under the FF

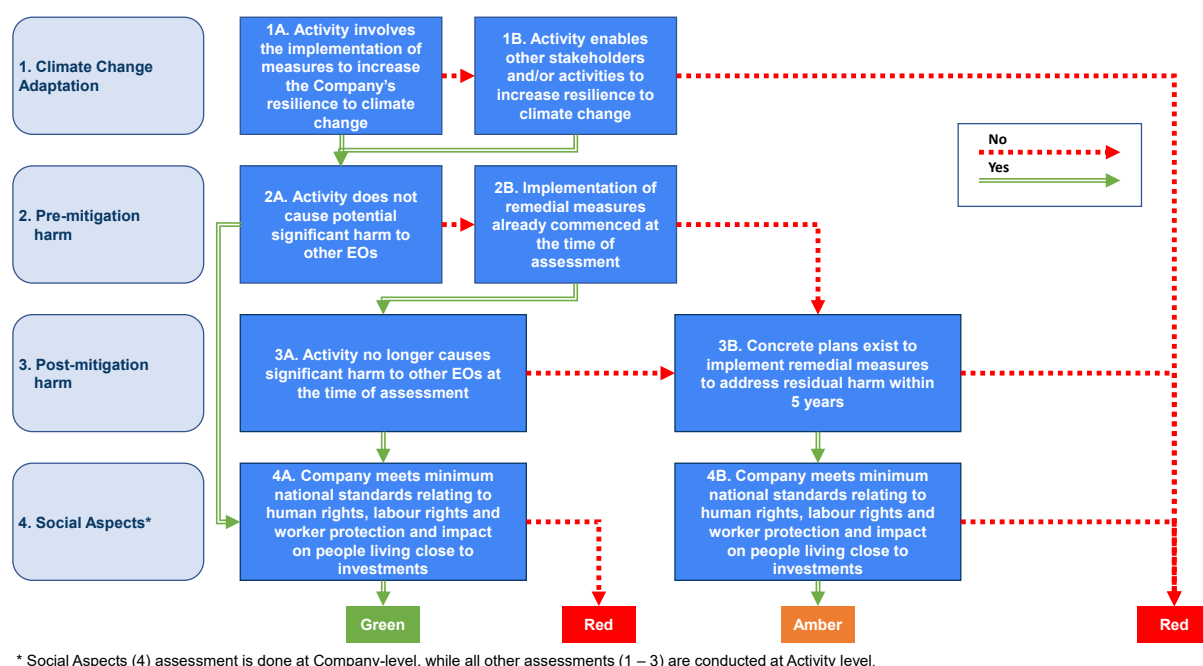


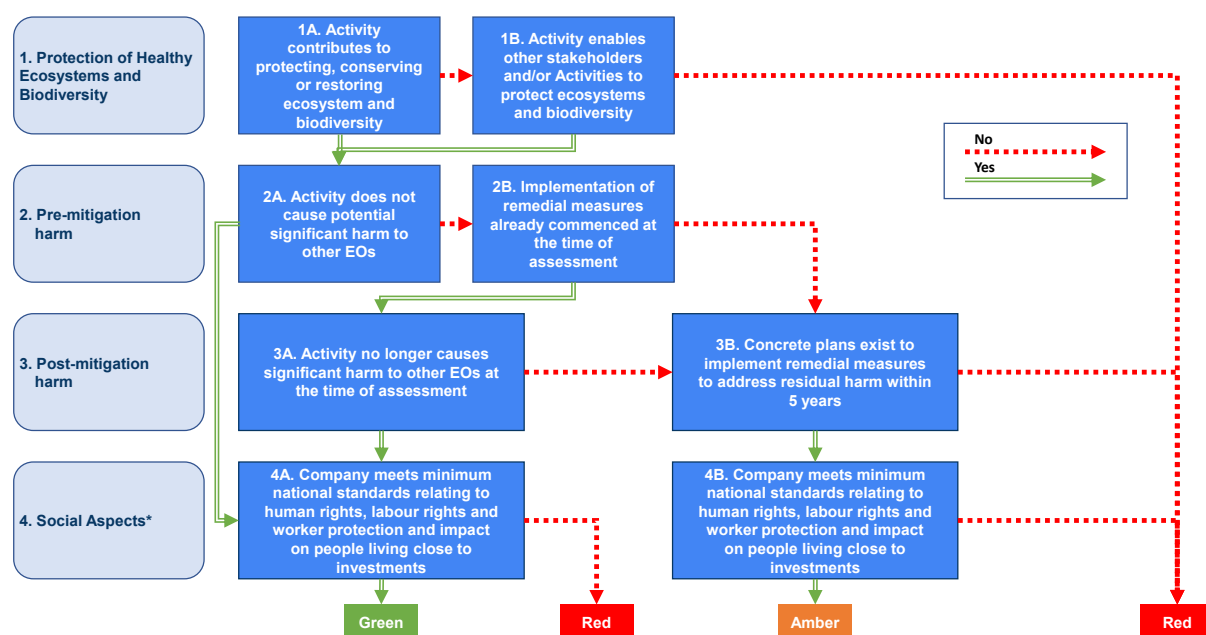
Figure 6: The EO2 Decision Tree

Table 12: Guiding Questions for EO2

S/N	Guiding questions - EO2 (Climate Change Adaptation)
1A	Does the Activity implement measures to increase the Company's resilience to climate change? - How does the Activity contribute to Company's resilience against adverse physical impacts of current and future climate change? (e.g., refurbishing infrastructure for greater resilience to impacts of sea level rise, building flood protection infrastructure to protect facilities, operation of road and rail adapted to current and future heatwaves through the use of more heat-resistant materials during its construction). - Has a climate risk assessment been conducted to establish the Activity's risk exposure towards physical climate risks? - Has robust and recent climate data, projections and scenarios been used for the assessment? - Do the results of the climate risk assessment showcase the impacts of climate change on the Activity? Is it a positive or negative impact? - Does the Activity align with entity or national level climate adaptation plans? - Does the Activity consider the expected future climate in its current and planned practices? - Does the Activity avoid leading to an increase in the vulnerability of human or natural systems due to the effects of climate change and climate variability-related risks? - Does the Activity avoid leading to an increased adverse impact of the current climate and the expected future climate, on the Activity itself or on people, nature or assets? - Does the Activity avoid impeding the adjustment to actual and expected climate change and its impacts?

	4. Do the Company's policies and business strategy generally avoid contradicting or impeding alignment with the specified EO2 principles? 5. Where applicable and relevant, is a 3rd party certification or verification of alignment of Activity with EO2 available? 6. Does the Activity fulfil relevant environmental law(s) applicable to EO2? 7. Is the reduction and/or prevention of increase in climate physical risks measurable and observable? (e.g., data on monthly transport accidents caused by natural disasters against maintenance activities delivered, data on houses repaired due to floods against budget increase for building safeguards).
1B	Does the Activity enable other stakeholders and/or Activities to increase resilience to climate change? 1. Does the Activity help other stakeholders (including the community) to reduce/manage physical risks? (e.g., provision of infrastructure to facilitate Climate Change Adaptation of stakeholders). ○ Does the Activity avoid impeding upstream and/or downstream stakeholders from increasing their resilience to climate change? 2. Does it promote intersectoral collaborations for Climate Change Adaptation without negatively affecting other sectors? 3. How does the Activity enable other Activities to reduce material physical risks? (e.g., removal of technological barriers to adaptation, Activity which primarily provides installation of irrigation systems and improved land drainage measures that lead to reduced exposure to physical climate risks). 4. Has a climate risk assessment been conducted on the enabled Activity's risk exposure towards physical climate risks? ○ Has robust and recent climate data, projections and scenarios been used for the assessment? ○ Do the results of the climate risk assessment showcase the impacts of climate change on the enabled Activity? Is it a positive or negative impact?
• Once evaluation is complete, proceed to the Section 4.3.6 to evaluate the Activity under DNSH and RMT.	

4.3.4. EO3 assessment under the FF



* Social Aspects (4) assessment is done at Company-level, while all other assessments (1 – 3) are conducted at Activity level.

Figure 7: The EO3 Decision Tree

Table 13: Guiding Questions for EO3

S/N	Guiding questions - EO3 (Protection of Healthy Ecosystems and Biodiversity)
1A	Does the Activity contribute to protecting, conserving, or restoring ecosystems and biodiversity? - Which specific principles under EO3 does the Activity meet or contribute to? - How does the Activity contribute to these principles? - Does the Activity minimise or eliminate negative effects of operations on the natural ecosystem and biodiversity? - Is the Activity significantly detrimental to the good condition and resilience of ecosystems? - Does the Activity avoid leading to a significant increase in pollutant emissions into the air, land and/or natural bodies of water? - Does the Activity avoid involving the over-exploitation of natural resources? - Does the Activity avoid involving prohibited land use? - Is the Activity detrimental to the natural ecosystem's physical, chemical and biological quality, thus impeding self-reproduction and self-restoration capability of the occupying species? - Does the Activity avoid impairing natural species composition, ecosystem structure and ecological functions? - Is the Activity detrimental to the conservation status of habitats and species within the natural ecosystem? (e.g., inhibition to the dynamic complex of plant, animal and microorganism communities and their non-living environment interacting as a functional unit). - Do the Company's policies and business strategy generally avoid contradicting or impeding alignment with the specified EO3 principles? (e.g., employment of services from subcontractors, suppliers and/or third parties with practices

	detrimental to the natural ecosystem and biodiversity). 4. Is a 3rd party certification or verification of alignment of Activity with EO3 available? 5. Does the Activity fulfil relevant environmental law(s) applicable to the specified EO3 principles? 6. Is the protection of ecosystems and biodiversity measurable and observable? (e.g., number of trees reforested, land area of habitats protected).
1B	Does the Activity enable other stakeholders and/or other Activities to protect ecosystems and biodiversity? 1. Does the Activity help other stakeholders (including the community) to protect ecosystems and biodiversity? Does the Activity avoid impeding upstream and/or downstream stakeholders from protecting ecosystems and biodiversity? 2. Does the Activity promote intersectoral collaborations for protecting biodiversity and ecosystems without negatively affecting other sectors? 3. How does the Activity enable other Activities to protect ecosystems and biodiversity? 4. Is the protection of ecosystems and biodiversity by the enabled Activity measurable and observable? (e.g., Section number of trees reforested, land area of habitats protected).
Once evaluation is complete, proceed to the 4.3.6 to evaluate the Activity under DNSH and RMT.	

4.3.5. EO4 assessment under the FF

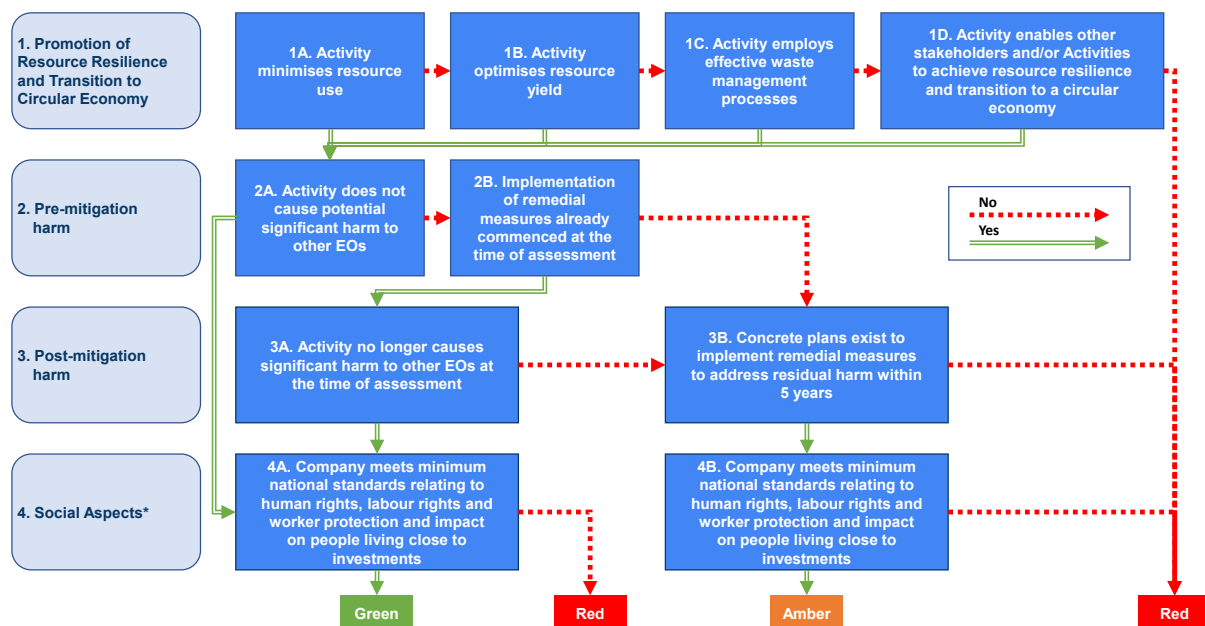


Figure 8: The EO4 Decision Tree

Table 14: Guiding Questions for EO4

S/N	Guiding questions - EO4 (Promotion of Resource Resilience and Transition to Circular Economy)	
1A	Does the Activity minimise resource use? (e.g., operation of a manufacturing plant that uses alternative fuels from waste material). 1. Does the Activity use renewable energy, bio-based resources or other recovered materials to reduce the rate of resource extraction? 2. Is the building of resource resilience and transition to circular economy measurable and observable?	Questions applicable to 1A, 1B and 1C: 1. Do the Company's policies and business strategy generally avoid contradicting or impeding alignment with the specified EO4 principle?
1B	Does the Activity optimise resource yield? (e.g., operation of a plantation that employs fertiliser application techniques to optimise crop yield). 1. Does the Activity extend the use of products through reuse, repurposing, refurbishing, remanufacturing, disassembly, upgrades and repair, and/or sharing of products? 2. Does the Activity increase resource efficiency by ensuring recovered materials are recycled as high-quality secondary raw material? 3. Is the Activity made available as product-as-a-service to reduce the demand for new products and their embedded raw materials? (e.g., inter alia, leasing, pay-per-use, subscription or deposit return schemes). 4. Does the Activity involve the use of products, assets or process technologies designed and produced based on circular economy principles? (e.g., designing for longevity, resource efficiency, durability, functionality, modularity, upgradability, easy disassembly and repair, using recyclable or biodegradable materials). 5. Does the Activity avoid leading to significant inefficiencies in the use of materials or in the direct or indirect use of natural resources at one or more stages of the product lifecycle? 6. Is the building of resource resilience and transition to circular economy measurable and observable?	2. Is a 3rd party certification or verification of alignment of Activity with EO4 available? 3. Does the Activity fulfil relevant environmental law(s) applicable to the specified EO4 principle? 4. Does the Activity avoid inhibiting the maintenance of value, the efficient use in production and consumption, the reduction of environmental impact and the minimising of waste of products, materials and other resources in the economy? 5. Does the Activity avoid involving the release of hazardous substances at all stages of their lifecycle?
1C	Does the Activity employ effective waste management processes? (e.g., operation of a manufacturing plant with systems that minimise the leaching out of nutrients from the production system into the environment, refurbishment and recycling features). 1. Does the Activity reduce waste generation, including through:	

	○ replacement of virgin materials with secondary raw materials or by-products, either fully or partially? ○ repair, reuse, donation, resale, upcycling activities or on-site composting? 2. Is the building of resource resilience and transition to circular economy measurable and observable? 3. Does the Activity apply the waste hierarchy of priority order in the prevention and management of waste materials? ○ Prevention ○ Preparing for re-use ○ Recycling ○ Other forms of recovery, e.g., energy recovery ○ Disposal 4. Does the Activity avoid leading to a significant increase in the generation, incineration or disposal of waste? 5. Does the long-term disposal of waste resulting from the Activity avoid causing significant and long-term harm to the environment?	
1D	Does the Activity enable other stakeholders and/or Activities to achieve resource resilience and transition to a circular economy? 6. Does the Activity help other stakeholders (including the community) to build resource resilience and transition to a circular economy? ○ Does the Activity avoid impeding upstream and/or downstream stakeholders from building resource resilience and transition to a circular economy? 7. Does it promote intersectoral collaborations for resource resilience and circular economy transitions without negatively affecting other sectors? 8. How does the Activity enable other Activities to build resource resilience and transition to a circular economy? 9. Is the building of resource resilience and transition to circular economy of the enabled Activity measurable and observable? (e.g., recovery, reuse and recycle rates).	
• Once evaluation is complete, proceed to Section 4.3.6 to evaluate the Activity under DNSH and RMT.		

4.3.6. Assessment of Essential Criteria

Following the EO assessment (Sections 4.3.2 to 4.3.5), the assessor proceeds to the next layer of the decision tree and assesses the Activity against EC1 – as shown in decision boxes 2A and 3A, EC2 – as shown in decision boxes 2B and 3B, and EC3 – as shown in decision boxes 4A and 4B; with reference to the respective guiding questions (Table 15).

Similar to assessment of the EO, where readily available, 3rd party certification or verification can be used to justify eligibility in meeting the EC.

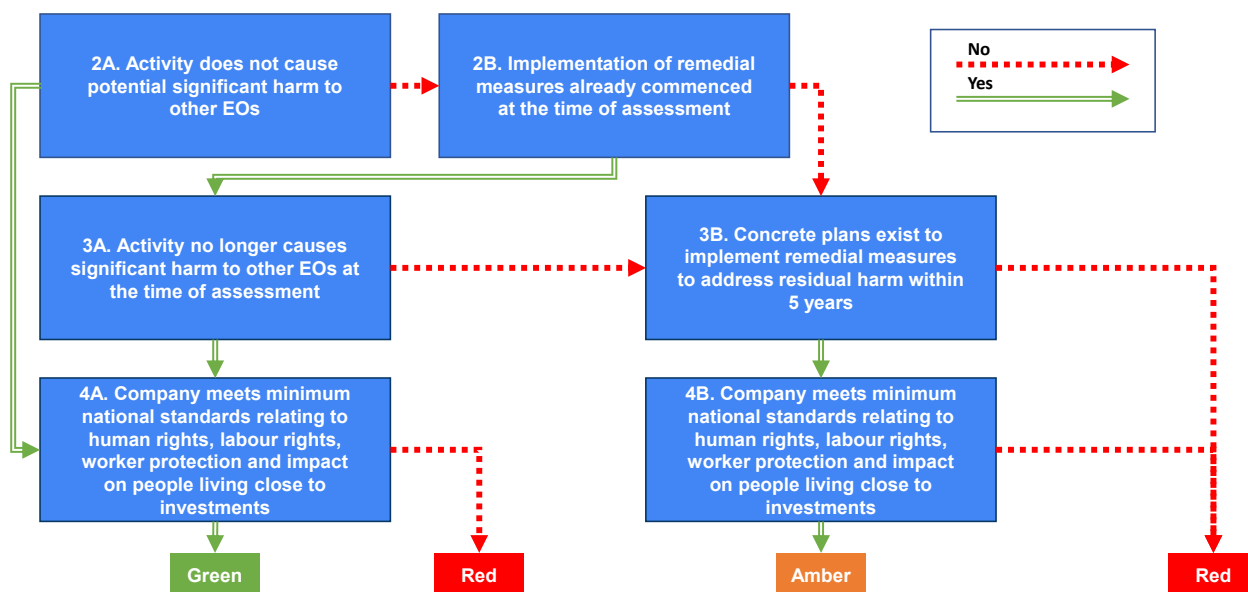


Figure 9: The logic flow and decision-tree diagram for assessing Essential Criteria

Table 15: Guiding details to the decision box in the flow diagram

Decision Box	Details to Guide Decision
2A. Activity does not cause potential significant harm to other EOs.	The Activity potentially causes harm to EOs other than the one it is being assessed against. It is important to understand the significance of the harm caused by the Activity based on the materiality of the harm to each EO. The assessor should consider whether the degree (i.e., severity) of the harm and scale of the harm when the Activity commences (i.e., the date of the notice to proceed) would reasonably indicate that the harm is material.
2B. Implementation of remedial measures already commenced at the time of assessment.	The Company implementing the Activity has recognised the potential for, or the occurrence of significant harm, and has already started to implement remedial measures to reduce harm at the time of assessment.
3A. Activity no longer causes significant harm to other EOs at the time of assessment.	The implementation of remedial measures adequately mitigates/addresses the harm caused and the Activity no longer causes significant harm to other EOs.
3B. Concrete plan exists to implement remedial measures to address residual harm within 5 years.	The implementation of remedial measures does not adequately mitigate or address the harm caused and as such, the Company has established concrete plans for additional remedial measures to address remaining harm within 5 years.
4A/4B. The Company meets minimum national standards relating to human rights, labour rights, worker protection and impact on people living close to investments.	The Company has recognised the impacts of its Activity on its employees and surrounding communities, and has met national standards relating to human rights, forced labour, child labour, informal labour and impact on people living close to investments.

Each decision box within the decision tree (Figure 9) contains a binary question that the assessor will need to answer. The assessor answers 'Yes' or 'No' to the binary question based on information pertaining to the Activity being assessed. Table 16 shows generic guiding questions which may relate to any EO.

Table 16: General guiding questions for EC1 (DNSH)

S/N	Guiding questions - Essential Criteria 1 (Do No Significant Harm)
2A	Does the Activity avoid causing potential significant harm to other EOs? 1. Has an Environmental Impact Assessment (EIA) been conducted and approved for the Activity? 2. What are the results of the EIA and where do the impacts of the Activity lie? 3. Have the remedial measures recommended within the EIA been implemented? 4. Regardless of whether an EIA has been conducted or not, is there any evidence or consideration that suggests the Activity could cause potential significant harm to other EOs?

The assessor must determine which of the three remaining EOs (other than the one to which it contributes) will experience significant harm because of the Activity. The assessor must then refer to the guiding questions in Table 17 to assess whether significant harm has been caused. associated with the specific EO(s).

Table 17: EO Specific guiding questions for EC1 (DNSH)

EO	Guiding questions - Essential Criteria 1 (Do No Significant Harm)
2A EO1	1. Does the Activity avoid significant GHG emissions, including CO₂, CH₄, N₂O, SF₆, NF₃ and/or HFCs? 2. Does the Activity avoid leading to or causing extensive deforestation practices? 3. Does the Activity avoid impeding upstream and/or downstream stakeholders from reducing their GHG emissions?
2A EO2	1. Does the Activity avoid leading to an increase in the vulnerability of human or natural systems due to the effects of climate change and climate variability-related risks? 2. Does the Activity avoid impeding upstream and/or downstream stakeholders from increasing their resilience to climate change? 3. Does the Activity avoid an increased adverse impact of the current climate and the expected future climate, on the Activity itself or on people, nature or assets? 4. Does the Activity avoid impeding the adjustment to actual and expected climate change and its impacts? 5. Does the Activity consider the expected future climate in its current and planned practices?
2A EO3	1. Is the Activity significantly detrimental to the good condition and resilience of ecosystems? 2. Does the Activity avoid leading to a significant increase in pollutant emissions into the air, land and/or natural bodies of water, relative to the situation before the commencement of said economic Activity? 3. Does the Activity avoid involving the over-exploitation of natural resources? 4. Does the Activity avoid involving prohibited land use? 5. Is the Activity detrimental to the natural ecosystem's physical, chemical and biological quality, thus impeding self-reproduction and self-restoration capability of

	the occupying species? 6. Does the Activity avoid impairing natural species composition, ecosystem structure and ecological functions? 7. Is the Activity detrimental to the conservation status of habitats and species within the natural ecosystem? (i.e., inhibitions to the dynamic complex of plant, animal and microorganism communities and their non-living environment interacting as a functional unit). 8. Does the Activity avoid impeding upstream and/or downstream stakeholders from protecting ecosystems and biodiversity?
2A EO4	1. Does the Activity avoid inhibiting the maintenance of value, the efficient use in production and consumption, the reduction of environmental impact and the minimisation of waste of products, materials and other resources in the economy? 2. Does the Activity avoid releasing hazardous substances at all stages of its lifecycle? 3. Does the Activity apply the waste hierarchy of priority order in the prevention and management of waste materials? ○ Prevention ○ Preparing for re-use ○ Recycling ○ Other forms of recovery, e.g., energy recovery ○ Disposal 4. Does the Activity avoid significant inefficiencies in the use of materials or the direct or indirect use of natural resources at one or more stages of the product lifecycle? 5. Does the Activity avoid leading to a significant increase in the generation, incineration or disposal of waste? 6. Does the long-term disposal of waste resulting from the Activity avoid causing significant and long-term harm to the environment? 7. Does the Activity avoid impeding upstream and/or downstream stakeholders from building resource resilience and transition to a circular economy?

Table 18: Guiding questions for EC2 (RMT)

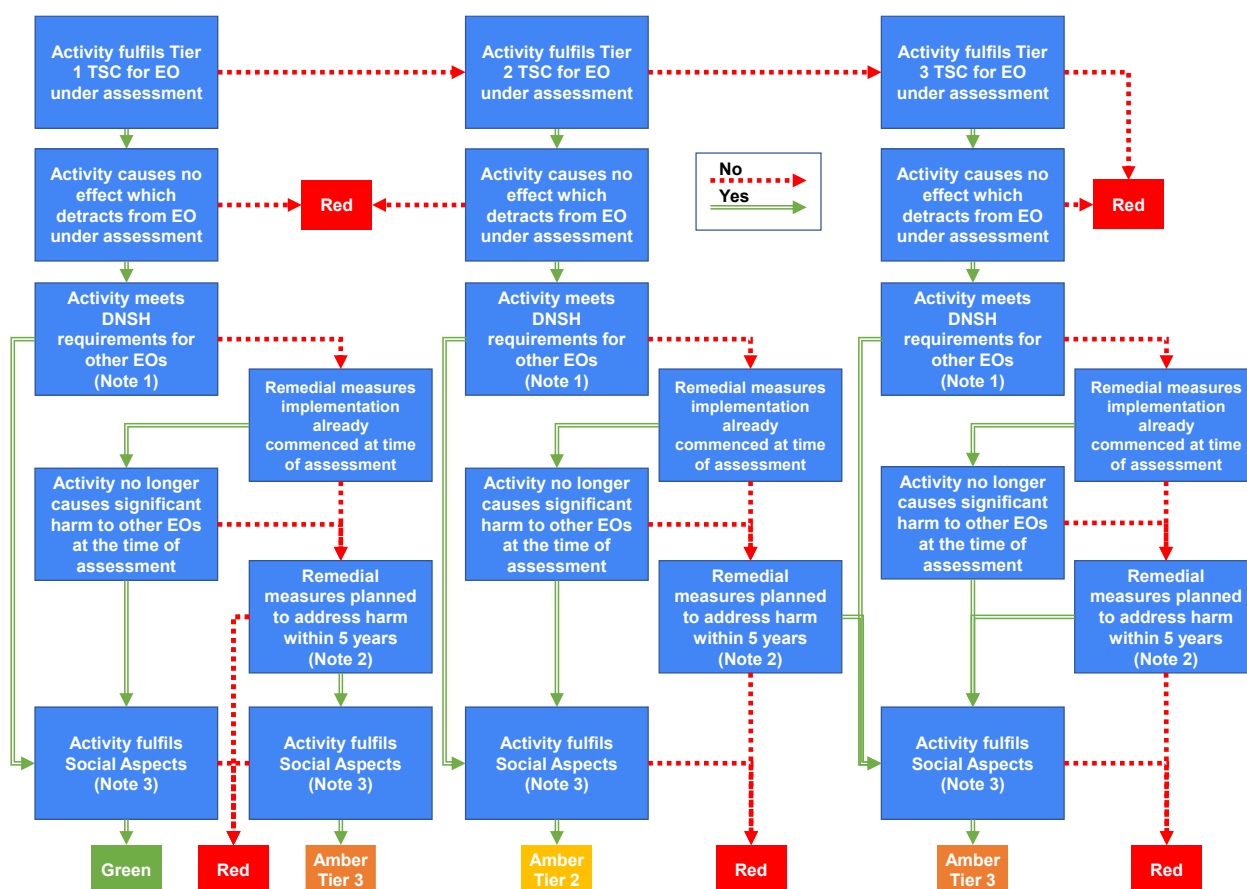
S/N	Guiding questions - Essential Criteria 2 (Remedial Measures to Transition)
2B	Have remedial measures already started to be implemented at the time of assessment? 1. Does the Activity remediate risks and impacts through, for example compliance with relevant (national) environmental law(s), internal policies and processes, implementation of additional measures that reduce harm? 2. What are these proposed actions and their contributions to remediation (e.g., avoidance, minimisation and reduction)? 3. Is there available technology for this Activity in place for compliant risk management measures against the adverse effects of climate change? 4. If the Activity is new and has yet to commence, consider whether there are planned remedial measures already in place to address the potential harm.
3A	Does the Activity no longer cause significant harm to other EOs at the time of assessment? 1. 'Residual harm' refers to any harm that remains even after compliance with the relevant environmental laws and Company's processes and policies, as well as implementation of any other measures on top of compliance.
3B	Are there concrete plans established for remedial measures to address the residual harm within a defined timeframe (i.e., within 5 years)? 1. Do the planned remedial measures fall within the defined timeframe? 2. What is the expected output for tracking and monitoring results (e.g., annual reports, sustainability reports, other publications)? 3. Are the remedial measures and assessments done appropriate/proportionate to the business' scale of operations and industry benchmarks? 4. Who are the direct stakeholders involved in the Activity's supply chain? What are these proposed actions and their contributions to remediation (e.g., avoidance, minimisation and reduction)?

The assessor is required to answer all relevant guiding questions with 'yes' to pass the EC1 and EC2 assessment.

The assessor can first determine which of the three remaining EOs (other than the one to which it contributes) will experience significant harm because of the Activity. The assessor can then refer to the guiding questions associated with the specific EO(s) to assess whether significant harm has been caused. Details on the assessment of Social Aspects, which is applicable for both the PS and the FF, are in Section 4.5.

4.4. Assessment using the PS

If an Activity is to be assessed by the PS, the Company is required to provide evidence of the fulfilment of the terms of the EO (or EOs), DNSH (if material), RMT (if applicable) and Social Aspects under the terms of the ASEAN Taxonomy (see Figure 10).



Notes

1. DNSH Requirements are the same for all Tiers
2. Activity must be re-assessed to ensure harm has been remediated within 5 years
3. Social Aspects are the same for all Tiers

Figure 10: PS Assessment Tree

4.4.1. Applicability of TSC

Activities are typically assessed against the TSC which are in effect at the time of the assessment. However, if the Activity has not yet commenced:

- If TSC which will apply at the time of commencement are known at the time of assessment, the Activity should be classified according to the TSC which will apply at commencement.
- If the TSC which will apply at the time of commencement are not known at the time of classification, the Activity should be assessed according to the TSC currently in force; if TSC change after assessment and before commencement, an updated assessment should be conducted and the Activity reclassified accordingly.

The labelling of financial instruments is subject to the rules set out in Chapter 5. Use cases of their application are shown in Annex 7.

4.4.2. Assessment of the contribution of the Activity to the EO

The contribution of the Activity to the EO is determined by its contribution to the respective Tier 1 (Green), Tier 2 (Amber T2), or Tier 3 (Amber T3) TSC. These TSC are listed and described in Annex 1. Note that an Activity which directly or indirectly causes an effect which detracts from the EO for which the Activity is seeking classification will be classified as Red.

4.4.3. Assessment of DNSH

Specific criteria and frames for identifying and assessing the harm caused by Activities are set out in Annex 2. Companies and assessors should refer to the categories of potential significant harm which may be caused by Activities and evaluate the harm caused by the Activity based on the guidance provided in Annex 2.

4.4.4. Remedial Measures to Transition

Where it has been assessed that significant harm is occurring, or will occur, the Company must demonstrate that a realistic and comprehensive plan is in place to mitigate the harm to a level where it is no longer significant. In this case, a remediation plan must be submitted. This plan must demonstrate that there will be no significant harm occurring within 5 years after assessment of the Activity. Activities for which RMT is outstanding shall be provisionally classified as Amber Tier 3 until the RMT is complete and significant harm has effectively been remediated.

The Activity shall be subject to a new assessment, which shall be conducted at the expense of the Company, either upon remediation of the harm or within five years of the original classification, whichever occurs first:

- If the new assessment shows that harm has been remediated, the Activity shall be classified appropriately according to the achievement of the TSC;
- If it cannot be shown that harm can be remediated within five years, or if within the five-year period it is determined that the harm cannot be remediated, Activity shall be classified as Red.

Refer also to Section 3.6.3.

4.5. Assessment of Social Aspects

Social Aspects assessments are applicable for both the FF and the PS.

The key requirement of Social Aspects assessment is to meet relevant social regulations and legislation in the relevant AMS.

There are three Social Aspects that need to be considered under the EC3 assessment:

- Promotion and protection of human rights.
- Labour rights and worker protection.
- Impact on people living close to investments.

Unlike EC1 and EC2, EC3 assessment is performed at a Company-level as opposed to at an Activity-level. This is because social policies are usually developed at the Company level.

Table 19: Guiding questions through the decision tree for the EC3 Assessment

S/N	Guiding questions - Essential Criteria 3 (Social Aspects)
4A	Does the Company meet minimum national standards relating to human rights, labour rights and worker protection and impact on people living close to investments? In the absence of minimum standards established through national regulations or legislations, the following guiding questions will be used: 1. Promotion and protection of human rights a. Does the Company have policies or guidelines that uphold an individual's right to enjoy just, decent and favourable working conditions? b. Does the Company have a clear and transparent policy that sets out measures to create a positive environment in overcoming discrimination? c. Does the Company have a policy that provides decent wages to all workers, taking into account adequate standards of living? 2. Labour rights and worker protection a. Does the Company employ occupational health and safety practices? b. Does the Company have a clear and transparent policy that sets out measures taken to prevent and eliminate all forms of exploitation, trafficking, violence and abuse in its entire supply chain? c. Does the Company have a clear and transparent policy that prohibits child labour and ensures compliance with minimum age requirements for employment in its operations and supply chain, in line with international standards? d. Do all workers have the right to enter into, and leave, employment voluntarily and freely? e. If the Company employs migrant workers, are the migrant workers treated fairly? f. Does the Company ensure all its workers free access to their documentation? g. If the Company employs private employment agencies, do they conduct measures to ensure that such agencies are not involved in any form of exploitation, trafficking, violence and abuse? h. Does the Company conduct assessments to understand the risks and vulnerabilities faced by informal workers and their communities, and implement measures to address them? i. Are there efforts to involve local communities or informal worker groups in creating solutions for better working conditions or social protections? j. Does the Company raise awareness among informal workers about their rights, available resources, or risks, and provide platforms (e.g., collectives or associations) to empower them to meet their basic needs? 3. Impact on people living close to investments a. Does the Company conduct risk and vulnerability assessments to ensure targeted response measures that would contribute to the progressive implementation, effective monitoring and evaluation, as well as optimum impact of social protection? b. Does the Company engage and strengthen the capacity of the community for better responsiveness, coordination and effectiveness of risk reduction and management policies?
4B	

S/N	Guiding questions - Essential Criteria 3 (Social Aspects)
	c. Does the Company promote public awareness of their exposure and vulnerability and establish platforms to empower people to meet their basic needs?

The boundary of Social Aspects coverage is as follows:

1. The Social Aspects assessment will cover the immediate Company carrying out the Activity as well as branches/subsidiaries (if any) that are directly involved in carrying out the Activity, without which the Activity cannot be carried out.
2. The adherence of suppliers and subcontractors directly involved in carrying out the Activity, without whom the Activity cannot be undertaken, to the Social Aspects must also be demonstrated, e.g., through the signing of a Code of Conduct.
3. The Company should refer to national legislations and regulations of the respective country in which the organisation (e.g., corporate or branch/subsidiary) is based.

For example, if the immediate Company carrying out the Activity is based in Singapore, but its subsidiary is based in Indonesia, then the assessment will be done with reference to Singapore legislations and regulations for the Company, while Indonesia legislations and regulations will be referenced for the subsidiary.

Passing the Social Aspects assessment requires adherence to the relevant AMS legislations and regulations for each Social Aspect. Not meeting national legislations and thus failing the Social Aspects assessment leads to Red classification. Refer to the use case in Annex 7.

In AMS where legislations and regulations pertinent to any of the Social Aspects are absent, the assessor shall utilise the guiding questions instead. The Activity will pass the Social Aspects assessment if all the guiding questions are at least satisfactorily met.

If a Company is found or known to have an unsatisfactory track record (due to violations or breaches) in at least one of the Social Aspects, the said Company will still be allowed to undergo the Social Aspects assessment; but as an additional requirement, it has to prove that its relevant processes (where violations or breaches have occurred) have improved and remediation processes were implemented to prevent a repeat of violation or breach.

Data on a Company's violations and breaches of the Social Aspects may be collected through publicly available sources, but it is ultimately up to the Company's discretion to voluntarily disclose such violations or breaches.

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5. GRANDFATHERING

The ASEAN Taxonomy sets TSC for the classification of Activities, in accordance with rules which are described in Section 4.4.1. Financial instruments where the use of proceeds is intended to finance these Activities may also be labelled accordingly.

As TSC may be subject to change over time, this may result in changes to the classification of the underlying Activities and assets. Whilst the classification of Activities cannot be grandfathered, the ASEAN Taxonomy allows grandfathering of associated financial instruments.

The rules contained within this Chapter relate to the grandfathering of all forms of financial instruments. A grandfathering period starts from the date a change is applied to a TSC related to the underlying Activities. During the grandfathering period, the label of instruments created with the purpose of financing Activities according to their alignment with TSC shall retain the status quo extant before the change in TSC.

A TSC change refers to any situation where a TSC changes from one state to another. In this context, TSC change may refer to pre-determined tightening of thresholds, sunset dates for Amber Tiers, or periodic revisions. The rules for grandfathering are the same for any of these forms of TSC change.

Grandfathering rules only apply in the case of the first TSC change after the issuance of a bond or creation of a loan which would result in the misalignment of the classification of the Activities financed and the label of the financial instrument. The grandfathered status of any financial instrument will not be affected by any subsequent TSC change.

Section 5.2 relates specifically to grandfathering as it pertains to bonds. Section 5.3 relates to all other financial instruments. The rules have been developed to ensure consistency in the classification of Activities that are funded by multiple financial instruments. The goal is to preserve market stability or minimise market disruptions when TSC change. This is intended to encourage a more effective flow of capital to support the sustainability agenda of ASEAN and ease the monitoring of labelling of financial instruments throughout the duration of the instruments.

Grandfathering may include Green or Amber financial instruments, where funds are allocated to investments where underlying Activities are aligned with the ASEAN Taxonomy Tier 1 (Green), Tier 2 (Amber T2) or Tier 3 (Amber T3).

5.1. Transparency in the event of changes to classification

Users should be aware that the ASEAN Taxonomy TSC may be subjected to change over time, such as pre-determined tightening of thresholds, sunset dates for Amber Tiers, or undergo periodic revisions (see Annex 6). When thresholds tighten, sunset dates come into force, or when TSC are revised, entities issuing financial instruments labelled under the ASEAN Taxonomy have a responsibility to ensure transparency to lenders and other relevant stakeholders.

In all cases, entities issuing financial instruments are responsible for informing lenders and other relevant stakeholders of any anticipated changes to the label, as soon as they become aware of them and when those changes occur.

5.2. Grandfathering of bonds

This subsection pertains to grandfathering rules for bonds⁷ for which the use of proceeds is to be allocated to Activities which align with Tier 1 (Green), Tier 2 (Amber T2) or Tier 3 (Amber T3) TSC of the ASEAN Taxonomy. The rules described in this section have been set with reference to the grandfathering rules applied by the EU Green Bond Standard (EU-GBS)⁸.

Within this section, these terms shall have these meanings:

- **Issuance:** Refers to the creation of a bond and its delivery to investors in exchange for payment.
- **Allocation:** Refers to the commitment or earmarking of bond proceeds to a specific purpose for the intended use of proceeds. Allocation refers to the decision to dedicate proceeds to an eligible purpose but does not necessarily imply that proceeds have been applied.
- **Utilisation:** Refers to the actual use of bond proceeds to finance or refinance the intended specific purpose. Utilisation marks the stage at which proceeds are spent or drawn down and may occur progressively following (or concurrent with) allocation.

The rules apply to bonds, the proceeds of which are allocated, in part or in their entirety, to one or more of the following:

- Fixed assets that are not financial assets;
- Capital expenditure;⁹
- Operating expenditure that was incurred no more than 3 years before the issuance of the bond;¹⁰
- Financial assets, the proceeds of which are allocated to one of the uses listed above and which were created no more than 5 years after the issuance of the bond.

Proceeds of the bond must be allocated to an Activity in alignment with TSC applicable at the time of issuance of the Green or Amber bond. The bond issuer must maintain an annual allocation report to demonstrate that proceeds are allocated in a manner which is consistent with the relevant TSC. Due consideration shall be given to the transparency requirements stated in Section 5.1.

These consider two situations:

1. Bond is issued and proceeds are allocated before a change in TSC
2. Bond is issued and proceeds are not yet allocated before a change in TSC

Section 5.2.1 to 5.2.2 describe the application of bond labels (Green, Amber T2, Amber T3) with respect to allocation of proceeds. Note these rules are based on the date of allocation,

⁷ For convenience, the term 'bond' is used throughout this section. However, these rules also apply to an individual issuance or tranche forming part of a bond programme. Similarly, the disposal of assets and reallocation of bond proceeds shall be treated in the same manner as the issuance of a new bond.

⁸ Regulation 2023/2631 on European Green Bonds and optional disclosures for bonds marketed as environmentally sustainable and for sustainability-linked bonds, Article 8, 22 November 2023 https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L_202302631

⁹ Related to assets or processes that are associated with the ASEAN Taxonomy-aligned Activities; part of a plan to expand ASEAN Taxonomy-aligned Activities or to allow Activities to become ASEAN Taxonomy-aligned; or related to the purchase of output from ASEAN Taxonomy-aligned Activities and individual measures enabling the target Activities to become low-carbon or to lead to GHG reductions.

¹⁰ Ibid.

as this term is defined above. Proceeds need not necessarily have been utilised for allocation to have occurred.

5.2.1. Bond is issued and proceeds are allocated before a change in TSC

Where proceeds have been allocated to Activities classified under the ASEAN Taxonomy prior to any changes to the TSC, the label of the financial instruments will not be affected, and will remain status quo, in line with the TSC which applied at the time of allocation. In this instance, the use of proceeds is aligned with the TSC applicable at allocation until the end of the originally stated term of the bond.

Note that allocation and utilisation have the distinct meanings defined in Section 5.2. Proceeds allocated before a change in TSC need not necessarily have been utilised before the TSC change in order for the rules in this section to apply.

5.2.2. Bond is issued and proceeds are not yet allocated before a change in TSC

If TSC are changed after a bond is issued, but before its proceeds are allocated to specific Activities, proceeds allocated after the TSC change can continue to align with the TSC applicable immediately prior to the change for up to seven years from the effective date of the TSC change. After the end of this 7-year period, the Activities to which the proceeds are allocated must be aligned with TSC applicable at that time. This means issuers have up to seven years to bring all unallocated proceeds in line with the new TSC or the bond will not retain its label.

5.2.3. Proceeds allocated in accordance with a portfolio approach

Where issuers' proceeds are allocated in accordance with a portfolio approach, issuers shall include in their portfolio only those assets whose activities were aligned with the TSC that were in effect at the time the asset was originated, provided this was within the previous seven years from the date of the allocation report.

5.3. Grandfathering of other financial instruments

This subsection relates to the ASEAN Taxonomy Tier 1 (Green), Tier 2 (Amber T2) or Tier 3 (Amber T3) TSC which are applied to financial instruments other than those described in Section 5.2. These other financial instruments are principally, but not necessarily exclusively, loans.

These financial instruments are labelled based on the classification of the underlying Activities to which the proceeds are allocated at the time the financial instrument is originated in accordance with the rules set out in Section 4.4.1. If the proceeds are utilised at a later date for the purpose they were allocated for, the classification of the underlying Activities will not change from the allocation date, as is the case with bonds.

For Activities aligned with Tier 1 (Green), Tier 2 (Amber T2) or Tier 3 (Amber T3) TSC, the length of the grandfathering period shall be 7 years after the TSC amendment. Due consideration shall be given to the transparency requirements stated in Section 5.1.

In addition to ensuring consistent treatment, this grandfathering period was set with due consideration to developments in financial markets where new financial structures could be introduced (e.g., blended finance instruments and fixed income securities with equity features).

5.4. Use cases related to grandfathering

Use cases which explain the practical usage of grandfathering rules as described in this Chapter are provided in Annex 7.

6. APPLICATION OF THE ASEAN TAXONOMY TO ENTITIES AND PORTFOLIOS AND FINANCIAL INSTRUMENTS

6.1. Introduction

The ASEAN Taxonomy classifies individual Activities into: Green, Amber T2, Amber T3 or Red. However, it does not currently provide a framework for assessing the alignment of entire entities, portfolios, or financial instruments with these classifications, except in cases where such financial assets are wholly dedicated to Activities that fall entirely within a single Tier.

This Chapter introduces a methodology for reporting on entities, portfolios, and financial instruments based on their exposure to underlying Activities across the ASEAN Taxonomy's classification tiers.

In this Chapter, the terms Green, Amber T2, and Amber T3 have the meanings defined in PS, as shown in Annex 1.

The following Activities are classified as Red:

- Activities listed in Annex 1 that do not meet the TSC for classification as Green, Amber T2 or Amber T3.
- Activities listed in Appendix A of this Main Report.

Any Activity not listed in Annex 1 or Appendix A is described as Out-of-Scope.

Users may also choose to report Out-of-Scope Activities or associated investments separately using the classifications described by FF. However, Activities classified under FF should not be comingled with Activities classified under PS and should be reported separately using a methodology similar to that described in this Chapter.

It also outlines how the ASEAN Taxonomy interacts with the ASEAN Transition Finance Guidance (ATFG) (ACMF, 2024), offering a basis for evaluating the progress of these entities in their transition toward greater sustainability.

6.2. Reporting for companies and other operating entities

Companies and other operating entities refer to organisational units, whether private or public (e.g. corporations, state-owned enterprises, government agencies, utilities), that function as going concerns and generate goods or services through their operations, as distinct from entities whose primary purpose is to hold, manage, or trade financial portfolios or instruments. Companies or other entities set up primarily for the management of investments should be considered in Section 6.3.

Companies and other operating entities can report their alignment with the ASEAN Taxonomy by using financial metrics, such as revenue, capital expenditure (CapEx), or operating expenditure (OpEx), to express the proportion of their Activities that meet Green, Amber T2, Amber T3, Red or Out-of-Scope, as defined in Section 6.1. The use of these metrics provides a consistent and comparable means for stakeholders, such as investors and financial institutions, to assess environmental performance and support investment or lending decisions.

The choice of metric - Revenue, CapEx or OpEx - depends on an entity's operational context and sustainability transition stage, ensuring alignment with strategic objectives and transparency through the disclosed justification.

- **Revenue:** Reflects net turnover from products or services aligned with Green or Amber Tiers under at least one of the four EOs or Red or Out-of-Scope Activities. Suitable for entities with mature, stable operations generating consistent income from sustainable products or services.
- **CapEx:** Represents the proportion of capital expenditure tied to ASEAN Taxonomy-aligned Activities or credible alignment plans. Ideal for capital-intensive industries or entities in early transition stages.
- **OpEx:** Covers the proportion of operating expenditure, including non-capitalised costs like research, renovation, leases, or maintenance, linked to ASEAN Taxonomy-aligned Activities or supporting CapEx plans. Relevant for service-oriented or asset-light sectors with significant ongoing expenses.

Entities should select the most representative metric based on their activities and disclose their choice and rationale for transparency.

Any plans supporting CapEx and OpEx reporting should be disclosed at the Activity's aggregated level. This approach ensures flexibility while maintaining comparability across diverse entities. An example of reporting for a diverse entity is illustrated in Figure 11.

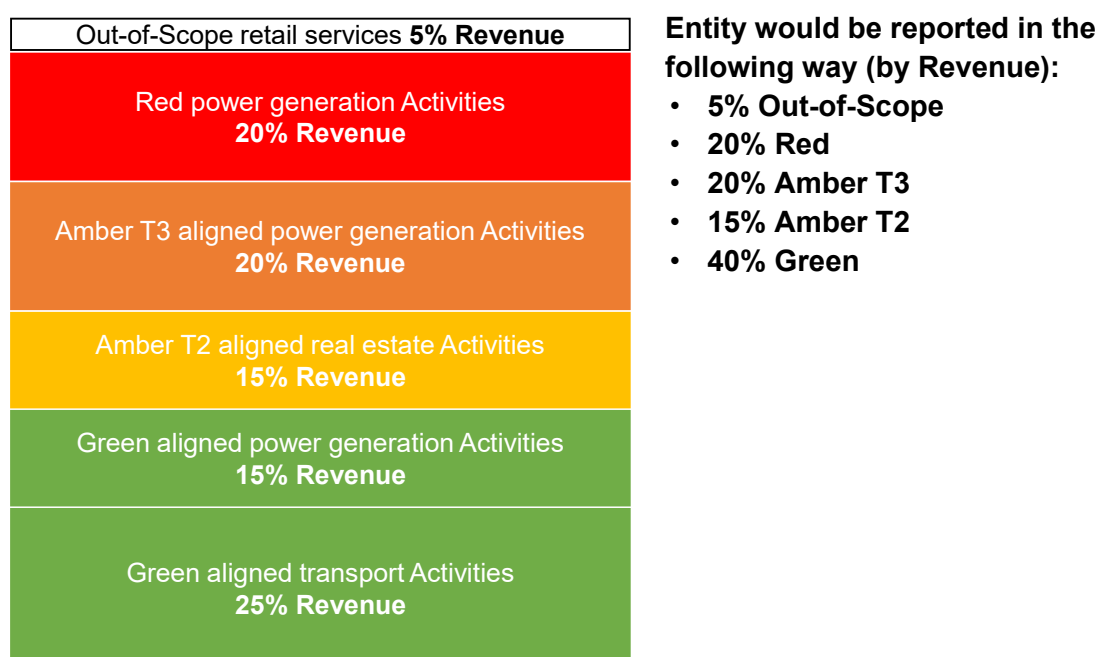


Figure 11: Example of Reporting Method for Companies and other Operating Entities

Figure 11 demonstrates a use case for a diversified company reporting revenue. Revenue is: 5% Out-of-Scope (e.g., Activities not covered by the taxonomy, such as retail services); 20% Red (e.g., unsustainable coal-fired power plants); 20% Amber T3 (e.g., fossil gas power generation with higher emissions); 15% Amber T2 (e.g., road freight transport with vehicles meeting transitional emissions standards); and 40% Green (e.g., fully aligned Activities such as new buildings with advanced Green Building Certification (GBC) or zero-emission freight vehicles).

6.3. Reporting of portfolios and financial instruments

Portfolios and financial instruments mean investment vehicles, including funds, trusts, securitisations, or companies and other entities established primarily to hold, manage, or trade financial assets, where the activity consists of allocating capital among financial instruments, rather than conducting operational activities that generate goods or services.

To report in a manner aligned with the ASEAN Taxonomy, such entities can assess their entire investment portfolio across all asset classes, including both debt and equity, to determine the extent to which investments fall within Activities which may be classified by the ASEAN Taxonomy. This involves:

- Calculating the weight of each investment in the portfolio by value.
- Multiplying that weight by the proportion of the investment that is classified under the ASEAN Taxonomy categories, as defined in Section 6.1:
 - Green
 - Amber T2
 - Amber T3
 - Red
 - Out-of-Scope

Both equity (e.g., listed shares, private equity) and debt (e.g., loans, bonds) may be included as potential investment classes.

The distribution of classifications for each individual investment or financing can be estimated in terms of revenue, except for investments or financing which are partly or fully related to special-purpose debt raised for Activities which may be classified under the ASEAN Taxonomy. In this latter case, the distribution of classifications should be calculated based on value.

In all cases, where equity is held in or debt is used to finance specific projects within the scope of the ASEAN Taxonomy, and those projects are expected to meet the relevant TSC, 100% of that investment may be reported under the appropriate classification.

After calculating individual exposures, portfolio owners and managers should aggregate the data to determine the overall distribution of their portfolio across the ASEAN Taxonomy categories. An example is shown in Figure 12.

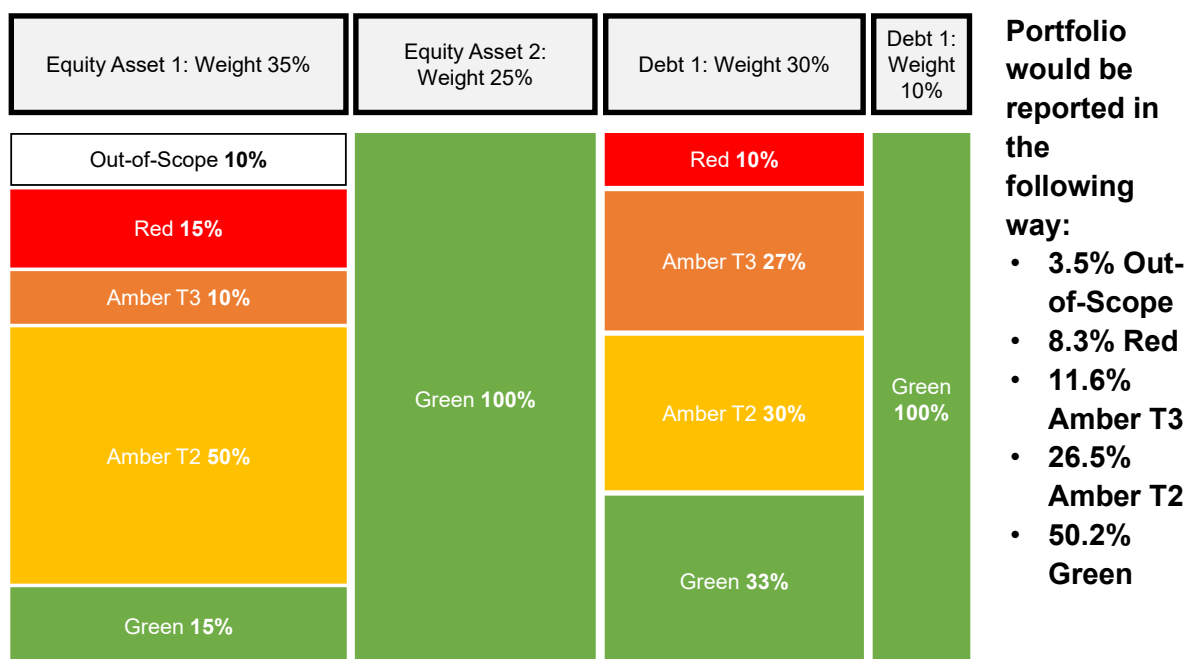


Figure 12: Example of Reporting Method for Portfolios and Financial Instruments

Figure 12 demonstrates a use case for a financial institution reporting its investment portfolio. The portfolio, comprising weighted averages of equity and debt assets, is assessed by value and aligned with ASEAN Taxonomy categories. For example, with weights of 35% (Equity Asset 1), 25% (Equity Asset 2), 30% (Debt 1), and 10% (Debt 2), the aggregated exposure would be: 3.5% Out-of-Scope (e.g., assets in sectors not covered by the taxonomy, such as retail trade); 8.3% Red (e.g., investments in conventional oil extraction); 11.6% Amber T3 (e.g., steel manufacturing with higher emissions); 26.5% Amber T2 (e.g., cement production with transitional emissions levels); and 50.2% Green (e.g., fully aligned Activities such as certified eco-friendly agriculture or zero-emission public transport).

6.4. Integrating the ASEAN Taxonomy with the ASEAN Transition Finance Guidance

6.4.1. Complementary frameworks

The ASEAN Taxonomy provides a static assessment of Activities' environmental performance, defining Green and Amber Tiers. In contrast, the ATFG addresses dynamic transition plans, enabling financing for companies at various stages of their sustainability journey, provided they demonstrate credible pathways, including to ASEAN Taxonomy alignment. This integration ensures that transition finance supports ASEAN's diverse economies while adhering to 1.5°C or well-below 2°C climate pathways.

6.4.2. ASEAN Taxonomy as the foundation

The ASEAN Taxonomy can serve as a benchmark for ATFG assessments. Entities seeking transition finance may show how their operations will align with or progress through the ASEAN Taxonomy's Green or Amber Tiers, using the PS TSC to ensure alignment with science-based pathways. The ASEAN Taxonomy's periodic reviews, which tighten criteria over time, must be reflected in these plans, ensuring adaptability to evolving requirements.

6.4.3. ATFG Tiers and ASEAN Taxonomy linkages

The ATFG introduces three tiers to evaluate transition plans, each of which may be related to the ASEAN Taxonomy. Activities which may be classified under ASEAN Taxonomy Tier 1 (Green) will correspond with the ATFG aligned and aligning tiers (1.5°C and well-below 2°C). Amber Activities may also be included within an entity classified under the ATFG aligning tier, provided it can be demonstrated that these Activities form part of an entity-wide pathway consistent with a well-below 2°C transition.

The progressing tier of ATFG supports companies showing material progress towards the Paris Agreement but not yet meeting all criteria, with a commitment to address gaps within two years. Activities which may be classified under ASEAN Taxonomy Tiers 2 and 3 (Amber T2 and Amber T3) may be used as evidence of this progress.

6.4.4. Practical implementation

Stakeholders should first assess a company's current operations, where appropriate, by using the ASEAN Taxonomy Tiers to establish the starting point. Companies then develop transition plans that reflect how their operations and technologies can progress through the tiers of the ASEAN Taxonomy and, as a result, which ATFG tier they would be categorised under. Investors evaluate these plans using ASEAN Taxonomy TSC to ensure credibility. Both parties must account for the ASEAN Taxonomy's periodic reviews, anticipating stricter requirements.

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APPENDIX A: ACTIVITIES CLASSIFIED RED

The ASEAN Taxonomy aims to promote environmentally sustainable Activities. The automatic Red classification of certain Activities reflects a commitment to mitigating climate change and transitioning towards cleaner, more sustainable energy sources. In this way, the ASEAN Taxonomy signals a focus on investments that align with the region's environmental goals, fostering a shift towards low-carbon and climate-resilient economies within the AMS. The following Activities may not be classified as Green or Amber by either the FF or the PS, and are therefore automatically classified as Red.

Energy:

- Coal or oil power generation without abatement;
- Heat recovery from coal or oil fuelled power generation without abatement;
- Coal mining or oil extraction, refining, processing or production and associated supply chain infrastructure.

Transport:

- New roads, road bridges, road upgrades, parking facilities, fossil fuel filling stations, etc;
- Oil tankers or other ships solely transporting coal or oil.

Waste:

- Collection of waste that is going to landfill;
- Landfill without gas capture.

It should be noted that while abated coal is currently not included in this list, abated fossil fuels are currently technologically limited and may not yet be a viable solution in transitioning or achieving a 1.5°C outcome. Its application to subsequent versions of the ASEAN Taxonomy and inclusion in this Appendix will be further reviewed depending on technological developments.

Any Activity dedicated to the enablement of an Activity listed in this Appendix is also automatically classified as Red.

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LIST OF ANNEXES

1. Technical Screening Criteria
2. DNSH Criteria
3. Assessment of Climate Risk
4. Regulations pertaining to Social Aspects listed by AMS
5. Regulations pertaining to the Environment listed by AMS
6. Development and Maintenance of the ASEAN Taxonomy
7. Use Cases

ASEAN TAXONOMY BOARD



Association of Southeast Asian Nations

<https://asean.org/>



ASEAN Finance Cooperation Web Portal

<https://afcwp.asean.org/>



ASEAN Capital Markets Forum

<https://www.theacmf.org/sustainable-finance/publications>



Sustainable Finance Institute Asia

<https://www.sfinstitute.asia/asean-taxonomy/>



Contact Us

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Technical Screening Criteria (TSC) for the Plus Standard

Updated as of 6 November 2025

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LIST OF REVISIONS

The following table provides a summary of key revisions to the ASEAN Taxonomy for Sustainable Finance (ASEAN Taxonomy) with respect to Activity TSC which were published in previous versions:

Version	Title	Revisions	Endorsed on	Issued on
1/2024 (Annex 1)	351[071] Transmission and distribution (T&D) of electricity	The revision was made to enhance the interoperability of the TSC with other widely used international taxonomies such as the EU Taxonomy and the Singapore-Asia Taxonomy. The revision for the Green Tier is as follows: 1. T&D infrastructure or equipment is part of a System where: a. >67% of new generation capacity which achieved commercial operation on the System over a five-year rolling period is Green; OR¹ b. emissions intensity <100 gCO₂e/kWh for the System measured on a lifecycle basis over a rolling five-year period;	25 April 2024	3 May 2024
2/2024 (Annex 1)	TSC for Construction and real Estate Basis for TSC setting for Environmental Objective 4: Resource Resilience and the Transition to a Circular Economy	The revision was made to refine the basis of the TSC in order to achieve Environmental Objective 4 (EO4). The revision for the Tier 2 (Amber T2) basis is as follows: Activity supports a transition towards a Green pathway within a defined time frame; AND Results in a contribution to the EO which is at least as good as the technology which results in the lowest possible waste production which is² currently technologically and economically feasible for widespread use in ASEAN; OR Results in achieving the best reduction in EUI from a building construction and implementation plan.	27 May 2024	4 June 2024
1/2025 (Annex 1)	Various Activities Electricity, Gas, Steam and Air	Cross references to Activities introduced in ASEAN Taxonomy Version 4 have been added where relevant to the respective Activities.	22 Oct 2025	6 Nov 2025

	Conditioning Supply			
2/2025 (Annex 1)	351[014] Electricity generation from bioenergy, including co-firing with fossil fuels. 353[013] Production of heating/cooling from renewable non-fossil gaseous and liquid fuels	The following TSC applicable to all Tiers (EO1 TSC) was replaced by cross reference to Activity introduced in ASEAN Taxonomy Version 4: 3821[001] Anaerobic digestion of bio-waste: 1. Anaerobic digestion of organic biowaste or sewage which is conducted at the site of the power generation must comply with the following: a. Implement monitoring and contingency plan to minimise methane leakage; b. Biogas produced onsite at a facility for the conduct of this Activity must be used only for this Activity or other Activities defined by the ASEAN Taxonomy, etc; AND c. Any bio-waste that is used for anaerobic digestion is source segregated and collected separately.	22 Oct 2025	6 Nov 2025
3/2025 (Annex 1)	352[010] Transmission and distribution networks for renewable and low-carbon gases 352[030] Storage of renewable and low-carbon gases	New criterion added at EO1 TSC to Tier 1 (Green) and Tier 2 (Amber T2) respectively, as previously set out in ASEAN Taxonomy Version 3: - Gas supplied to the network must meet Tier 1 (Green) TSC laid down in Activity 2011[001] Manufacture of low-carbon gases, including hydrogen - Gas supplied to the storage must meet Tier 2 (Amber T2) TSC laid down in Activity 2011[001] Manufacture of low-carbon gases, including hydrogen.	22 Oct 2025	6 Nov 2025
3/2025 (Annex 1)	51[001] Airport infrastructure, including low-carbon assets and facilities	Cross reference added to Activity 303[001] Manufacture of aircraft which is an Activity added in ASEAN Taxonomy Version 3.	22 Oct 2025	6 Nov 2025
4/2025 (Annex 1)	All Activities	Review Programme specified in accordance with Section 1.4.	22 Oct 2025	6 Nov 2025
5/2025 (Annex 1)	All Activities involving power generation and cogeneration	Appendix A of the Main Report has been adjusted with respect to abated power generation and cogeneration to reflect TSC set in some Manufacturing Activities.	22 Oct 2025	6 Nov 2025

PREAMBLE

Annex 1 of the ASEAN Taxonomy encompasses the list of Activities and their respective Technical Screening Criteria (TSC), as developed by the ASEAN Taxonomy Board (ATB). This Annex may be revised in the future by the ATB, in accordance with the procedures set out in Annex 6.

Version 2 of the ASEAN Taxonomy, first published on 27 March 2023 and made effective on 19 February 2024, introduced Annex 1, to include Activities within the following ISIC codes:

- ISIC 351 Electricity, gas, steam, and air conditioning supply;
- ISIC 352 Transmission and distribution networks for renewable and low-carbon gases; including storage of renewable and low-carbon gases; and
- ISIC 353 Production of heating/cooling through various means; including storage of thermal energy.

Version 2 also included Activities which are not included in ISIC, under the Carbon capture, utilisation and storage enabling sector, namely:

- Activity 000[010] Transport of CO₂; and
- Activity 000[020] Underground permanent geological storage of CO₂.

Version 3 of the ASEAN Taxonomy, published on 27 March 2024, was updated to include Activities within the following ISIC codes:

- ISIC 410 Construction;
- ISIC 681 Real estate;
- ISIC 492 Land transportation;
- ISIC 501 Water transportation; and
- ISIC 51 Air transportation.

Subsequent to a stakeholder consultation in Q3 2024, clarifications to these TSC were included in this updated version.

Version 4 of the ASEAN Taxonomy was updated to include Activities within the following ISIC codes:

- ISIC 01–03 Agriculture, Forestry and Fishing.
- ISIC 10–33 Manufacturing.
- ISIC 36–39 Water supply, sewerage, waste management and remediation activities.
- ISIC 58–63 Information and communication.
- ISIC 69–75 Professional, scientific and technical activities.

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1. INTRODUCTION

This Annex contains information in support of the ASEAN Taxonomy. This Annex is further divided into focus sectors and enabling sectors, with Technical Screening Criteria (TSC) for each sector and its cross references to Do No Significant Harm (DNSH) criteria.

1.1 Purpose of Annex

This Annex contains details of the respective guiding principles and TSC for all Activities for which TSC have been defined under the Plus Standard (PS). For each Activity, TSC have been defined for each Tier which is applicable to that Activity in each Environmental Objective (EO). Development of the Annex was completed as of V4 publication but could be subject to future revisions as detailed in Annex 6. It is only possible to classify an Activity under the PS approach of the ASEAN Taxonomy, under an EO if TSC have been set for the Activity in that EO, for the respective Tier.

The term 'No TSC available' in this Annex means that the Activity cannot be classified under that EO at that Tier by use of the PS, and there are currently no plans to develop TSC for that Activity Tier. The term, 'TSC are presently not available for the Activity Tiers defined.' means that the TSC could be developed for that Activity Tier in future revisions of this Annex.

As a guideline, where TSC are not defined for Activities, this is for the following reasons:

- EO1: Climate Change Mitigation:
 - Activities that make no significant contribution to reducing global emissions, or that do not support or enable other Activities to achieve greenhouse gas (GHG) reductions.
 - Activities that may contribute to GHG reductions, but where their primary and more substantial contribution is to another EO. For example, in the Agriculture, Forestry and Fishing sector, certain Activities are generally assessed under EO3, although practices that reduce GHG emissions may also be considered in the classification of the Activity.
- EO2: Climate Change Adaptation:
 - Activities for which Climate Change Adaptation is better treated as a DNSH requirement, rather than as a primary objective. These Activities do not exist specifically to provide climate resilience.
 - In the Electricity, Gas, Steam and Air Conditioning Supply sector, for instance, only certain Activities can be assessed under EO2; namely, those that clearly and explicitly provide, support or enable a climate resilience function.
- EO3: Protection of Healthy Ecosystems and Biodiversity:
 - Activities cannot be classified under this EO solely on the basis of meeting DNSH requirements.
 - Activities are generally only classified if they actively support the EO, for example through practices in the Agriculture, Forestry and Fishing sector, or the Water Supply, Sewerage, Waste Management and Remediation Activities sector, that directly contribute to protecting ecosystems and biodiversity.
- EO4: Resource Resilience and the Transition to a Circular Economy:
 - Activities that do not provide a clear or material contribution to resource efficiency, sustainable material use, waste minimisation, or circular economy objectives.

- As with other EOs, Activities cannot be classified under EO4 solely for meeting DNSH requirements. They must demonstrate a positive and measurable contribution, rather than incidental compliance.

In cases where TSC are defined for an Activity EO at higher Tiers, but not at lower Tiers, this may reflect one or more of the following:

- Availability of mature technologies: Where technologies or practices that achieve the EO at a high level of performance are already commercially and economically viable, it may be unnecessary to define lower-tier thresholds. In such cases, only higher Tiers are specified to reflect the expectation that alignment should be achieved directly through these available solutions.
- Binary nature of contribution: For some EOs, contribution can only be meaningfully assessed on a *yes/no* basis. In such cases, there is no scope for defining a transition pathway or intermediate performance levels. Activities are therefore either fully aligned at the higher Tier(s) or not aligned at all.
- Policy or sectoral priorities: A clear minimum standard of performance is set to avoid legitimising transitional activities at lower levels.

Details on the procedure for the assessment of an Activity for the purposes of classification under the PS can be found in the Main Report, Chapter 4.

Notwithstanding any TSC published in this Annex, any Activity which is directly or indirectly resulting in an effect which detracts from the EO to which it is intended to contribute should be classified as Red.

Note that the information provided in this Annex is not intended for use in assessments conducted using the Foundation Framework (FF).

In all places in this Annex, the term carbon capture, utilisation, and storage (CCUS) may refer to circumstances where greenhouse gases are captured with the intention of utilisation, storage or both. This can apply to any focus sector defined under the ASEAN Taxonomy, where relevant.

1.2 Activity Identification System

Definitions and Activities under the PS are grouped under ISIC codes. The ISIC system is the international reference classification of productive activities based on a set of internationally agreed concepts, definitions, principles, and classification rules. The ASEAN Taxonomy also appends an additional code to the end of the ISIC code to precisely define the Activity within the ISIC code.

This additional code is known as the Activity code (AC). For example:

- 351[040] Electricity generation from hydropower; where:
 - 351: ISIC code for 'Electric power generation, transmission and distribution'
 - [040]: AC for hydropower within this ISIC code

Activities consistent with the relevant ISIC classification and AC may fall within the scope of the Activity. Note that the "Includes" list shown in Activity Notes is intended for clarification and is not necessarily exclusionary.

1.3 Types of TSC and Activities

The ASEAN Taxonomy defines three types of TSC, as shown in Table 1. The plans outlined below correspond to each of these types. In practice, an Activity may apply more than one type of TSC.

For example, some Activities are assessed using a combination of both qualitative and quantitative TSC.

Table 1: Types of TSC

#	Type of TSC	Explanation	Examples of Activities included
1	TSC applied to Activities classified 'by their nature'.	TSC which relate to specific Activities which are normally considered to be Green by default (assuming any other TSC which may be applicable to that Activity are also fulfilled).	- Electricity generation using solar photovoltaic technology. - Electricity generation from wind power. - Storage of electricity, including pumped storage. - Operation of personal mobility devices, cycle logistics - Manufacture of equipment for the production and use of hydrogen - Manufacture of renewable energy technologies
2	Qualitative TSC.	Process- or practice-based TSC which require for an Activity to demonstrate that it is following certain principles, standards or rules.	- All Activities may be subject to some qualitative TSC (e.g., Activities listed down under the Construction and Real Estate sector). - However, for specific types of Activity, qualitative TSC tend to predominate, e.g.: - Agriculture, Forestry and Fishing sector - Construction and Real Estate Activities sector (although quantitative TSC do feature in some Activities). - Most enabling sectors (with some exceptions, such as data processing, where quantitative TSC predominate). - TSC for EO2 in all applicable sectors.
3	Quantitative TSC.	Threshold-based TSC where Activities are required to meet certain defined numerical targets (e.g., gCO ₂ e/kWh).	- All forms of power generation and transportation which emit GHG. - Electrical transmission and distribution (T&D) networks which incorporate GHG emitting generation. - Sea and coastal transport. - Data processing.

1.4 TSC Review and Update Programmes

The TSC published in this Annex may evolve over time. This is particularly true for Amber (Tier 2 and Tier 3) TSC, which are intended to be sunset gradually. However, as indicated in this Annex, certain Green TSC may also be subject to change.

The ATB recognises the importance of transparency and consistency to foster confidence in the ASEAN sustainable finance market. To this end, the ASEAN Taxonomy will implement processes for stakeholder consultation, review, and updates of TSC as necessary. Details of these processes are outlined in Annex 6.

The ASEAN Taxonomy categorises TSC into three types based on their review and update mechanisms:

1. Enduring
2. Updates pre-set
3. Review date pre-set

The ATB retains ultimate authority over the ASEAN Taxonomy and reserves the right to amend any part, including TSC, as deemed necessary.

1.4.1 Enduring TSC

Enduring TSC are designed to remain unchanged over time and not to sunset. For example, the Green TSC for Activity 351[021] *Electricity generation using solar photovoltaic technology* states: Activity generates electricity using solar photovoltaic (PV) technology. This is an enduring TSC, as it is not expected to change.

1.4.2 Updates pre-set TSC

Updates pre-set TSC are scheduled to change over time, with specific changes detailed in this Annex. These changes may apply at the Activity level or to a group of Activities, as outlined in the Current, Future TSC, and Review Programmes subsection of the relevant Sector Appendix.

For example:

- 492[002] Transport by motorbikes, passenger cars and light commercial vehicles: time limitations for TSC are specified at the Activity.
- For all Activities in Appendix A of this Annex where classification is defined by lifecycle emissions (gCO₂/kWh), future threshold changes are shown in Section A.2.

1.4.3 Review date pre-set TSC

Review date pre-set TSC are expected to change over time, but specific changes are not detailed in this document. These Activities will undergo consultation, review, and updates according to the schedule in Annex 6.

While review date pre-set TSC are prioritised for review, any Activity TSC may be reviewed if deemed necessary by the ATB.

1.4.4 Other ASEAN Taxonomy requirements, including DNSH

Other components of the ASEAN Taxonomy, including but not limited to DNSH requirements, may also be subject to review and adjustment as outlined in Annex 6.

1.5 Grandfathering

It is recognised that, as TSC are updated and sunset over time, the classification of underlying Activities may change for financial instruments that were originally labelled in line with the classifications in place at the time of their issuance. Chapter 5 of the ASEAN Taxonomy Version 4 Main Report sets out grandfathering rules, which apply to financial instruments across all Tiers. These rules allow labelled financial instruments to retain their original classification for a defined period after changes in the TSC have altered the classification of the underlying Activity.

2. APPENDICES – FOCUS SECTORS

A. ELECTRICITY, GAS, STEAM AND AIR CONDITIONING SUPPLY

A.1. Bases for TSC Setting

Environmental Objective 1: Climate Change Mitigation

Tier	Description / Definition
Tier 1 (Green)	1. TSC are aimed at achieving defined GHG emissions levels, which reference credible, 1.5°C-aligned science-based pathways, as aligned with the Paris Agreement. 2. Note that a Green Activity need not necessarily preclude the use of fossil fuels. Activities which can achieve these targets while using fossil fuels may be aligned.¹ 3. In practice, this definition usually takes the form of quantitative thresholds which limit the emission of GHG for given units of utility. For example, it has been assessed that a threshold of 100 gCO₂e/kWh for power generation is aligned with limiting temperature rise to 1.5°C by 2100. The equivalent value of 28 gCO₂e/MJ has been used for heating and cooling Activities. As seen below, thresholds may be adjusted after the first TSC Period, which concludes at the end of 2030.
Tier 2 (Amber T2)	1. Activity supports a transition towards a Green pathway within a defined time frame; AND a. Results in a contribution to the EO which is at least as good as the lowest carbon emitting technology currently that is technologically feasible for widespread use in ASEAN, with a prescribed sunset date; OR b. Enables or promotes the implementation of a Green Activity in the context of this EO.
Tier 3 (Amber T3)	1. Activity is in line with supporting the meeting of Nationally Determined Contribution (NDC) reduction targets of AMS that do not have a net-zero 2050 timeline; OR 2. Activity meets the TSC of Amber (Tier 2) or Green but has been assessed that it will do some level of significant harm to other EOs, which will be remediated within 5 years.

Environmental Objective 2: Climate Change Adaptation

Tier	Description / Definition
Tier 1 (Green)	1. Activity where measures have been implemented to ensure own resilience to climate change and thereby contribute to overall local, national or regional resilience; OR 2. Activity supports other Activities to increase resilience to climate change.
Tier 2 (Amber T2)	No TSC available.
Tier 3 (Amber T3)	No TSC available.

¹ Not including any technology listed in Main Report Appendix A: Activities classified Red

Environmental Objective 3: Protection of Healthy Ecosystems and Biodiversity

Tier	Description / Definition
Tier 1 (Green)	No TSC available.
Tier 2 (Amber T2)	No TSC available.
Tier 3 (Amber T3)	No TSC available.

Environmental Objective 4: Resource Resilience and the Transition to a Circular Economy

Tier	Description / Definition
Tier 1 (Green)	No TSC available.
Tier 2 (Amber T2)	No TSC available.
Tier 3 (Amber T3)	No TSC available.

All TSC set within this Appendix are common for all AMS. The Green TSC were set for interoperability with widely used international taxonomies and alignment with national taxonomies.

TSC for the Amber Tiers were set against future emissions projections for all Activities under the Electricity, Gas, Steam, and Air Conditioning Supply focus sector in Southeast Asia, as derived from the IEA Sustainable Development Scenario (SDS)²:

- Tier 2 (Amber T2): reflects projected emissions intensity for Southeast Asia in 2030.
- Amber Tier 3: reflects projected emissions intensity for Southeast Asia in 2027.

The TSC set here are for TSC Period 1. Proposed future TSC can be seen below.

TSC were checked against the lowest carbon emitting technology currently that is technologically feasible, for widespread use in ASEAN, both through review of publicly available technology comparisons³ and through consultation with regional stakeholders.

The TSC for EOs 3-4 have been considered by the ATB but have not been included as no clear case can currently be identified from Activities in this focus sector that shows a direct positive benefit to these EOs. However, these EOs are considered under the DNSH assessment described in Annex 2.

Certain Activities which would normally fall under this sector may not be classified as Green, Amber T2 or Amber T3 under the TSC shown in this Annex, as stated in Appendix A (Activities Classified Red) of the ASEAN Taxonomy Main Report. This includes:

- Coal or oil power generation without abatement;
- Heat recovery from coal or oil fuelled power generation without abatement.

This Appendix does not include Waste-to-Energy (WTE), which is an Activity under the Water Supply, Sewerage and Waste Management sector (3821[003] Waste-to-Energy).

² Southeast Asia Energy Outlook 2022, International Energy Agency

³ Intergovernmental Panel on Climate Change (IPCC)

A.2. Current, Future TSC and Review Programmes

It is expected that the TSC in this Appendix will change over time, as criteria become more stringent to promote a pathway to sustainability for ASEAN. In order to promote transparency, and to allow for forward planning by users of the ASEAN Taxonomy, the ATB has included this sub-section which shows current intentions for how TSC will change over time.

For all Activities in this sector which cause the emission of GHG, which includes transmission and distribution of electricity and gas, where TSC are updates pre-set as defined in Section 1.4, these are shown in Table 2, Table 3, Table 4 and Table 5. Where TSC are review date pre-set, TSC may be set in accordance with the procedures shown in Annex 6.

Some Activity EO1 TSC, such as for 351[021] Electricity generation using solar photovoltaic technology; and 351[030] Electricity generation from wind power are enduring as defined in Section 1.4. In all cases in this sector, EO2 TSC are enduring as defined in 1.4.

In all tables below, 'years' mean from 1 January to 31 December, except for TSC Period 1 which, for this sector, commenced on publishing of ASEAN Taxonomy Version 2.

The values below which refer to TSC Periods after TSC Period 1 are indicative and may be revised in the future in line with availability of technology etc. in accordance with the procedures laid out in Annex 6.

Table 2: Plan for quantitative TSC for power generation which emits GHG

TSC Period	TSC Years	Tier 1 TSC	Tier 2 TSC	Tier 3 TSC
1	2024 - 2030	Lifecycle GHG emissions from the generation of electricity by the entire facility <100 gCO ₂ e/kWh.	Lifecycle GHG emissions from the generation of electricity by the entire facility: ≥100 and <425 gCO ₂ e/kWh.	Lifecycle GHG emissions from the generation of electricity by the entire facility: ≥425 and <510 gCO ₂ e/kWh.
2	2031 - 2035	Lifecycle GHG emissions from the generation of electricity by the entire facility <100 gCO ₂ e/kWh.	Lifecycle GHG emissions from the generation of electricity by the entire facility: ≥100 and <285 gCO ₂ e/kWh.	Sunset.
3	2036 - 2040	Lifecycle GHG emissions from the generation of electricity by the entire facility <100 gCO ₂ e/kWh.	Lifecycle GHG emissions from the generation of electricity by the entire facility: ≥100 and <185 gCO ₂ e/kWh.	Sunset.
4	2041 - 2045	Not published as of this Annex date.	Sunset.	Sunset.

Table 3: Plan for quantitative TSC for electrical T&D

TSC Period	TSC Years	Tier 1 TSC	Tier 2 TSC	Tier 3 TSC
1	2024 - 2030	T&D infrastructure or equipment is part of a System where: a. >67% of newly enabled generation capacity on the System over a five-year rolling period is Green; AND b. Emissions intensity, <100 gCO ₂ e/kWh.	T&D infrastructure or equipment is part of a System with emissions factor: ≥100 and <425 gCO ₂ e/kWh.	T&D infrastructure or equipment is part of a System with emissions factor: ≥425 and <510 gCO ₂ e/kWh.
2	2031 - 2035	T&D infrastructure or equipment is part of a System where: a. >67% of newly enabled generation capacity on the System over a five-year rolling period is Green; AND b. Emissions intensity, <100 gCO ₂ e/kWh.	T&D infrastructure or equipment is part of a System with emissions factor: ≥100 and <285 gCO ₂ e/kWh.	Sunset.
3	2036 - 2040	T&D infrastructure or equipment is part of a System where: a. >67% of newly enabled generation capacity on the System over a five-year rolling period is Green; AND b. Emissions intensity, <100 gCO ₂ e/kWh.	T&D infrastructure or equipment is part of a System with emissions factor: ≥100 and <185 gCO ₂ e/kWh.	Sunset.
4	2041 - 2045	Not published as of this Annex date.	Sunset.	Sunset.

Table 4: Plan for quantitative TSC for transmission, distribution and storage of renewable and low-carbon gas

TSC Period	TSC Years	Tier 1 TSC	Tier 2 TSC	Tier 3 TSC
1	2024 - 2030	T&D and storage of renewable and low carbon gases with lifecycle GHG intensity of <28 gCO ₂ e/MJ.	T&D and storage of renewable and low carbon gases with lifecycle GHG intensity of <65 gCO ₂ e/MJ.	No TSC available.
2	2031 - 2035	Not published as of this Annex date.	Not published as of this Annex date.	No TSC available.
3	2036 - 2040	Not published as of this Annex date.	Not published as of this Annex date.	No TSC available.
4	2041 - 2045	Not published as of this Annex date.	Not published as of this Annex date.	No TSC available.

Table 5: Plan for quantitative TSC for production of heating/cooling

TSC Period	TSC Years	Tier 1 TSC	Tier 2 TSC	Tier 3 TSC
1	2024 - 2030	Lifecycle GHG emissions <28 gCO ₂ e/MJ per unit of heat and/or cooling produced.	Lifecycle GHG emissions <65 gCO ₂ e/MJ per unit of heat and/or cooling produced.	No TSC available.
2	2031 - 2035	Not published as of this Annex date.	Not published as of this Annex date.	No TSC available.
3	2036 - 2040	Not published as of this Annex date.	Not published as of this Annex date.	No TSC available.
4	2041 - 2045	Not published as of this Annex date.	Not published as of this Annex date.	No TSC available.

A.3. TSC for Electricity, Gas, Steam and Air Conditioning Supply

351[011] Electricity generation from fossil gas

Activity Notes

- Includes:
 - Power generation as part of cogeneration.
- Excludes:
 - Power generation using gas derived from coal except where it can be shown that, by abatement through CCUS, the respective TSC below are fulfilled.
 - Co-firing of fossil fuels with fuels derived from renewable sources (refer to Activities 351[012] Electricity generation from renewable non-fossil gaseous and liquid fuels, including co-firing with fossil fuels; and 351[014] Electricity generation from bioenergy, including co-firing with fossil fuels).

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Lifecycle GHG emissions from the generation of electricity by the entire facility <100 gCO ₂ e/kWh.	Updates pre-set (see Section A.2)
Tier 2 (Amber T2)	1. Lifecycle GHG emissions from the generation of electricity by the entire facility: ≥100 and <425 gCO ₂ e/kWh.	
Tier 3 (Amber T3)	1. Lifecycle GHG emissions from the generation of electricity by the entire facility: ≥425 and <510 gCO ₂ e/kWh.	
TSC applicable to all Tiers	1. For facilities that are equipped with CCUS, CO ₂ from power generation that is captured for underground storage, must be transported and stored in accordance with the TSC for Activity 000[010] Transport of CO ₂ and Activity 000[020] Underground permanent geological storage of CO ₂ . 2. The Activity meets either of the following criteria: a. At construction, measurement equipment for monitoring of physical emissions, such as methane leakage is installed, or a leak detection and repair programme is introduced; OR b. At operation, physical measurement of methane emissions is reported, and leak is eliminated.	
Applicable Standards	• Calculation of Lifecycle Emissions ISO 14067: 2018 or ISO 14064-1: 2018. • For the purpose of estimating GHG intensity: ○ 1 MJ of heat energy shall be deemed to be equivalent to 0.277778 kWh of electricity; ○ If used for heating, calculated at the point of discharge from the heat producing facility; ○ If used for cooling, calculated at the point of discharge to the equipment for producing a cooling medium. • Regulations for the detection and elimination of gas leaks must conform at least with regulations applicable in the AMS in which the Activity takes place and should demonstrate due consideration of the Methane Guiding Principles ⁴ .	

⁴ <https://methaneguidingprinciples.org/>

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

No TSC available.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

No TSC available.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

351[012] Electricity generation from renewable non-fossil gaseous and liquid fuels, including co-firing with fossil fuels

Activity Notes

- Includes:
 - Power generation as part of cogeneration.
- Excludes:
 - Power generation using gas derived from coal except where it can be shown that, by abatement through CCUS, respective TSC below are fulfilled.
 - Waste-to-Energy (WTE); see Activity 3821[003] Waste-to-Energy.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Lifecycle GHG emissions from the generation of electricity by the entire facility <100 gCO ₂ e/kWh.	Updates pre-set (see Section A.2)
Tier 2 (Amber T2)	1. Lifecycle GHG emissions from the generation of electricity by the entire facility: ≥100 and <425 gCO ₂ e/kWh.	
Tier 3 (Amber T3)	1. Lifecycle GHG emissions from the generation of electricity by the entire facility: ≥425 and <510 gCO ₂ e/kWh.	
TSC applicable to all Tiers	1. For facilities that are equipped with CCUS, CO ₂ from power generation that is captured for underground storage, must be transported and stored in accordance with the TSC for Activity 000[010] Transport of CO ₂ and Activity 000[020] Underground permanent geological storage of CO ₂ . 2. Where the electricity makes use of fuels derived from biomass, the same TSC as described in Activity 351[014] Electricity generation from bioenergy, including co-firing with fossil fuels shall apply. 3. The Activity meets either of the following criteria: a. At construction, measurement equipment for monitoring of physical emissions, such as methane leakage is installed, or a leak detection and repair programme is introduced; OR b. At operation, physical measurement of methane emissions is reported and leak is eliminated.	
Applicable Standards	• Calculation of Lifecycle Emissions ISO 14067: 2018 or ISO 14064-1: 2018. • For the purpose of estimating GHG intensity: ○ 1 MJ of heat energy shall be deemed to be equivalent to 0.277778 kWh of electricity; ○ If used for heating, calculated at the point of discharge from the heat producing facility; ○ If used for cooling, calculated at the point of discharge to the equipment for producing a cooling medium. • Regulations for the detection and elimination of gas leaks must conform at least with regulations applicable in the AMS in which the Activity takes place	

	and should demonstrate due consideration of the Methane Guiding Principles ⁵ .

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

No TSC available.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

No TSC available.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

⁵ <https://methaneguidingprinciples.org/>

351[013] Hybrid fossil, renewable power generation, T&D, and/or energy storage for Island Systems

Activity Notes

- Includes:
 - Island System, which is defined as a collection of grid-connected power generation, electrical distribution, storage, control assets and loads, which have the ability to operate together independently of a wider electrical network.
 - Island Systems in this context can refer to 'electrical' islands and do not need to be literal islands surrounded by water.
 - Any generation, T&D or related control, monitoring or management operating within the Island System may be classified if the whole Island System meets the terms of the relevant TSC for the relevant Tier, as well as Essential Criteria (EC).
- Excludes:
 - Power generation from coal or fuels derived from coal except where it can be shown that, by abatement through CCUS, respective TSC below are fulfilled.
 - Power generation from fuels derived from waste, other than bio-waste.
 - Any Activity on an Island System with a total nameplate power generation capacity of >100 MW.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Lifecycle GHG emissions from the generation of electricity by the entire facility <100 gCO ₂ e/kWh.	Updates pre-set (see Section A.2)
Tier 2 (Amber T2)	1. Lifecycle GHG emissions from the generation of electricity by the entire facility: ≥100 and <425 gCO ₂ e/kWh.	
Tier 3 (Amber T3)	1. Lifecycle GHG emissions from the generation of electricity by the entire facility: ≥425 and <510 gCO ₂ e/kWh.	
TSC applicable to all Tiers	1. Any part of the Island System may be classified under the appropriate Tier if the lifecycle GHG emissions for the whole Island System are within the TSC for that Tier. 2. If an Island System becomes unaligned with the classification after having previously been aligned, Activities within that System are not considered aligned unless the individual Activity can be shown to be aligned with a specific TSC (e.g., operation of a wind or solar farm). 3. Where the electricity makes use of fuels derived from biomass, the same TSC as described in Activity 351[014] Electricity generation from bioenergy, including co-firing with fossil fuels shall apply. 4. For facilities that are equipped with CCUS, CO ₂ from power generation that is captured for underground storage, must be transported and stored in accordance with the TSC for Activity 000[010] Transport of CO ₂ and Activity 000[020] Underground permanent geological storage of CO ₂ .	
Applicable Standards	• Calculation of Lifecycle Emissions ISO 14067: 2018 or ISO 14064-1: 2018. • For the purpose of estimating GHG intensity:	

	○ 1 MJ of heat energy shall be deemed to be equivalent to 0.277778 kWh of electricity; ○ If used for heating, calculated at the point of discharge from the heat producing facility; ○ If used for cooling, calculated at the point of discharge to the equipment for producing a cooling medium.

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which must be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND 2. It must be shown that the Activity is necessary for the provision of energy security of supply to consumers within the Island System, as an adaptation measure addressing specific identified physical climate risks projected to impact energy supply to the area. It should be shown that: a. The Island System could not technologically or economically be integrated into a wider electrical network within the periods considered in the CRVA; OR b. The wider electrical network is projected to experience significant disruptions due to climate change impacts, cannot be feasibly made resilient to those impacts and an Island System is deemed to represent the most suitable back-up or alternative energy supply option.	Enduring
Tier 2 (Amber T2)	No TSC available.	
Tier 3 (Amber T3)	No TSC available.	
TSC applicable to all Tiers	1. If an Island System becomes unaligned with the classification after having previously been aligned, Activities within that System are not considered aligned unless the individual Activity can be shown to be aligned with a specific TSC (e.g., operation of a wind or solar farm). 2. Where the electricity makes use of fuels derived from biomass, the same TSC as described in Activity 351[014] Electricity generation from bioenergy, including co-firing with fossil fuels shall apply.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

No TSC available.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

No TSC available.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

351[014] Electricity generation from bioenergy, including co-firing with fossil fuels

Activity Notes

- Includes:
 - Power generation using biofuels derived, as applicable, from Activities which meet the TSC corresponding to the respective Tier as defined by the ASEAN Taxonomy:
 - 01[001] General perennial or non-perennial crops;
 - 02[002] Forestry plantation;
 - 2011[001] Manufacture of low-carbon gases, including hydrogen;
 - 3821[001] Anaerobic digestion of bio-waste; OR
 - Waste from industrial crops or food.
 - Power generation as part of cogeneration.
- Excludes:
 - Power generation from coal or fuels derived from coal except where it can be shown that, by abatement through CCUS, respective TSC below are fulfilled.
 - Waste-to-Energy (WTE), other than bio-waste; see Activity 3821[003] Waste-to-Energy.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Lifecycle GHG emissions from the generation of electricity by the entire facility <100 gCO ₂ e/kWh.	Updates pre-set (see Section A.2)
Tier 2 (Amber T2)	1. Lifecycle GHG emissions from the generation of electricity by the entire facility: ≥100 and <425 gCO ₂ e/kWh.	
Tier 3 (Amber T3)	1. Lifecycle GHG emissions from the generation of electricity by the entire facility: ≥425 and <510 gCO ₂ e/kWh.	
TSC applicable to all Tiers	1. For facilities that are equipped with CCUS, CO ₂ from power generation that is captured for underground storage, must be transported and stored in accordance with the TSC for Activity 000[010] Transport of CO ₂ and Activity 000[020] Underground permanent geological storage of CO ₂ .	
Applicable Standards	• Calculation of Lifecycle Emissions ISO 14067:2018 or ISO 14064-1:2018. • For the purpose of estimating GHG intensity: ○ 1 MJ of heat energy shall be deemed to be equivalent to 0.277778 kWh of electricity; ○ If used for heating, calculated at the point of discharge from the heat producing facility; ○ If used for cooling, calculated at the point of discharge to the equipment for producing a cooling medium. • Regulations for the detection and elimination of gas leaks must conform at least with regulations applicable in the AMS in which the Activity takes place and should demonstrate due consideration of the Methane Guiding Principles⁶.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

⁶ <https://methaneguidingprinciples.org/>

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

No TSC available.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

No TSC available.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

351[021] Electricity generation using solar photovoltaic technology

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity generates electricity using solar photovoltaic (PV) technology.	Enduring
Tier 2 (Amber T2)	No TSC available.	
Tier 3 (Amber T3)	No TSC available.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

No TSC available.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

No TSC available.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant (floating solar)	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Not Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Not Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

351[022] Electricity generation using CSP technology

Activity Notes

- Excludes:
 - Power generation through a combination of CSP and a combustion process (refer, as applicable, to Activities 351[011] Electricity generation from fossil gas; 351[012] Electricity generation from renewable non-fossil gaseous and liquid fuels, including co-firing with fossil fuels; 351[014] Electricity generation from bioenergy, including co-firing with fossil fuels).

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity generates electricity using concentrated solar power (CSP) technology.	Enduring
Tier 2 (Amber T2)	No TSC available.	
Tier 3 (Amber T3)	No TSC available.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

No TSC available.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

No TSC available.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant (floating solar)	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Not Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Not Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

351[030] Electricity generation from wind power

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity generates electricity using wind power.	Enduring
Tier 2 (Amber T2)	No TSC available.	
Tier 3 (Amber T3)	No TSC available.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

No TSC available.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

No TSC available.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

351[040] Electricity generation from hydropower

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	Generation plant meets criteria (1) OR (2) OR (3): 1. The electricity generation facility is a run-of-river plant and does not have an artificial reservoir; 2. Power density of the electricity generation facility is above 5 W/m ² ; 3. Lifecycle GHG emissions from the generation of electricity by the entire facility <100 gCO ₂ e/kWh.	Updates pre-set (see Section A.2)
Tier 2 (Amber T2)	Generation plant meets criterion (1): 1. Lifecycle GHG emissions from the generation of electricity by the entire facility: ≥100 and <425 gCO ₂ e/kWh	
Tier 3 (Amber T3)	No TSC available.	
Applicable Standards	• The GHG emissions intensity is the average GHG emissions intensity, including emissions associated with the reservoir only and allocated to hydropower only, averaged over an estimated 100-year life of the facility. This can be estimated in one of two ways: ○ Using the G-res tool⁷; ○ Site-specific assessments carried out by the issuer or its appointed consultant following IEA Hydro Framework as described in the ‘Guidelines for the Quantitative Analysis of Net GHG Emissions from Reservoirs’⁸. • Power density is defined as the nameplate capacity of the facility divided by the surface area of the reservoir.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

No TSC available.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

No TSC available.

⁷ <https://g-res.hydropower.org/about-tool/>

⁸ Task XII: Hydropower & the Environment Task 1: Managing the Carbon Balance of Freshwater Reservoirs (2007 - Present), <https://www.ieahydro.org/annex-xii-hydropower-and-the-environment>

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

351[050] Electricity generation from geothermal energy

Activity Notes

- Includes:
 - Power generation as part of cogeneration.
- Excludes:
 - Power generation through a combination of geothermal and combustion processes (refer, as applicable, to 351[011] Electricity generation from fossil gas; 351[012] Electricity generation from renewable non-fossil gaseous and liquid fuels, including co-firing with fossil fuels; 351[014] Electricity generation from bioenergy, including co-firing with fossil fuels).

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Lifecycle GHG emissions from the generation of electricity by the entire facility <100 gCO ₂ e/kWh.	Updates pre-set (see Section A.2)
Tier 2 (Amber T2)	1. Lifecycle GHG emissions from the generation of electricity by the entire facility: ≥100 and <425 gCO ₂ e/kWh.	
Tier 3 (Amber T3)	1. Lifecycle GHG emissions from the generation of electricity by the entire facility: ≥425 and <510 gCO ₂ e/kWh.	
Applicable Standards	• Calculation of Lifecycle Emissions ISO 14067:2018 or ISO 14064-1:2018. • For the purpose of estimating GHG intensity: ○ 1 MJ of heat energy shall be deemed to be equivalent to 0.277778 kWh of electricity; ○ If used for heating, calculated at the point of discharge from the heat producing facility; ○ If used for cooling, calculated at the point of discharge to the equipment for producing a cooling medium.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

No TSC available.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

No TSC available.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

351[060] Electricity generation from ocean energy

Activity Notes

- Excludes:
 - Offshore wind; refer to Activity 351[030] Electricity generation from wind power.
 - Floating solar PV; refer to Activity 351[021] Electricity generation using solar photovoltaic technology.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity generates electricity from ocean energy.	Enduring
Tier 2 (Amber T2)	No TSC available.	
Tier 3 (Amber T3)	No TSC available.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

No TSC available.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

No TSC available.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

351[071] Transmission and distribution (T&D) of electricity

Activity Notes

- Includes:
 - T&D related Activities on an electrical System which meets the TSC for the relevant classification. A System in this context may refer to the entire T&D System of an AMS but may also refer to a subordinate System within that national System.
- Excludes:
 - T&D Activity related entirely to transportation of electricity from a power generator which does not meet the TSC for which the T&D is seeking classification.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. T&D infrastructure or equipment is part of a System where: a. >67% of new generation capacity which achieved commercial operation on the System over a five-year rolling period⁹ is Green¹⁰; OR b. Emissions intensity <100 gCO₂e/kWh for the System measured on a lifecycle basis over a rolling five-year period; OR 2. Activity relates entirely to the implementation or operation of equipment and infrastructure: a. For electrical connection to power generation, classified as Green based on compliance with the TSC for the respective technology; OR b. For electrical connection and related supporting infrastructure, for Green electrical transport based on alignment with the TSC for the respective technology; OR c. Which is intended to increase the controllability and observability of the System and to enable the development and integration of Green power generation.	Updates pre-set (see Section A.2)
Tier 2 (Amber T2)	1. T&D infrastructure or equipment is part of a System with emissions intensity for the installed facilities: ≥100 and <425 gCO₂e/kWh; AND 2. Activity relates to the implementation or operation of equipment and infrastructure which will support an increase of the generation or use of Green electricity in the System or Green electrical transport (as defined in the ASEAN Taxonomy).	
Tier 3 (Amber T3)	1. T&D infrastructure or equipment is part of a System with emissions intensity: ≥425 and <510 gCO₂e/kWh; AND 2. Activity relates to the implementation or operation of equipment and infrastructure which will support an increase of the generation or use of Green electricity in the System or Green electrical transport.	

⁹ Requirement is waived if no new generation capacity was installed in that period

¹⁰ The term Green in all parts of this TSC refers to technology which may be classified as Green under the ASEAN Taxonomy

TSC applicable to all Tiers	1. In the case of a power control area¹¹ of an electrical T&D network, the weighted average emissions intensity should be calculated for the entire T&D network. 2. In the case of individual subordinate T&D systems, an emissions intensity for that subordinate System may be estimated. 3. If a System becomes unaligned after having previously been aligned, no new T&D Activities are aligned with the applicable classification from that moment onward, until the System complies again with the TSC (except for those Activities that are always aligned). 'Activities that are always aligned' refers to (e.g.,) a transmission line which only supplies renewable energy. This means that, even if the rest of the system becomes unaligned, that specific line will remain aligned.	
Applicable Standards	• Calculation of Lifecycle Emissions ISO 14067: 2018 or ISO 14064-1:2018.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND 2. It must be shown that the Activity is necessary for the provision of energy security of supply to consumers within the System with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned: a. Operation of T&D equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR b. Operation of monitoring and control equipment or other related IT systems to operate or maintain T&D equipment in the event of projected flooding, storm conditions or higher temperatures; OR c. Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of T&D-related equipment in scenarios of projected flooding, storm conditions or higher temperatures.	Enduring
Tier 2 (Amber T2)	No TSC available.	
Tier 3 (Amber T3)	No TSC available.	

¹¹ A power control area is a power system, a part of a power system or a combination of systems to which a common generation control scheme is applied.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

No TSC available.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

No TSC available.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Not Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

351[072] Storage of electricity, including pumped storage

Activity Notes

- Includes:
 - All electrical storage systems which are available to provide power to electrical networks or loads.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Construction and operation of grid-connected electricity storage, including pumped hydropower storage.	Enduring
Tier 2 (Amber T2)	No TSC available.	
Tier 3 (Amber T3)	No TSC available.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3.	Enduring
Tier 2 (Amber T2)	No TSC available.	
Tier 3 (Amber T3)	No TSC available.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

No TSC available.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

No TSC available.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

351[100] Coal power phase-out

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Aligned with a 1.5°C outcome and is consistent with the IEA Net Zero Emissions Pathway for the power sector to achieve net-zero emissions by 2050. Specific conditions under (1) include: a. Coal phase out by 2040; AND b. Coal plants achieving financial close (FC) after 31 December 2022 will not qualify; AND c. Operation duration of the coal plant from FC is capped at 35 years; AND d. It has been independently verified or acknowledged by internationally recognised bodies or programmes that qualifying coal plants show climate impact through the demonstration of positive absolute emissions savings over the expected lifetime of the coal plant compared with a case with no intervention to phasing it out. Coal plants under the ADB ETM or JETP programmes, or which meet the definition set out in the joint paper by CPI, RMI and CBI¹², meet these criteria.	Updates pre-set (as defined in this TSC)
Tier 2 (Amber T2)	1. Aligned with a 1.5°C outcome for coal phase-out that is derived from regional- or country-specific pathways that are consistent with science-based pathways. Specific conditions under (1) include: a. Coal phase out by 2050; AND b. Coal plants achieving FC after 31 December 2022 will not qualify; AND c. Operation duration of the coal plant from FC is capped at 35 years.	
Tier 3 (Amber T3)	1. Operation duration of the coal plant from FC is capped at 35 years; AND 2. Coal plants that achieve FC after 31 December 2022 will not qualify, except for coal plants: a. That achieve FC from 1 January 2023 up till 31 December 2027; AND b. Which will result in minimum possible lifecycle greenhouse gas emissions using technologies which are affordable, accessible, and reliable.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

No TSC available.

¹² <https://rmi.org/insight/guidelines-for-financing-credible-coal-transition/>

EO4: Resource Resilience and the Transition to a Circular Economy TSC

No TSC available.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Not Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

352[010] Transmission and distribution networks for renewable and low-carbon gases

Activity Notes

- Includes:
 - Operation of facilities related to low carbon hydrogen, renewable-derived gases, fossil gases or mixtures thereof which meet the criteria below.
- Excludes:
 - Networks supplying fuels derived from coal except where it can be shown that, by abatement through CCUS, respective TSC below are fulfilled.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	Activity fulfils either criteria (1.a), (1.b), OR (1.c); criterion (2) must be fulfilled in all cases. - Operation of gas networks for the transmission and distribution of renewable and low-carbon gases (including hydrogen and fossil gas), including: - New networks transporting renewable and low carbon gases with lifecycle GHG intensity of <28 gCO₂e/MJ; - Networks converted or re-purposed for renewable and low carbon gases with lifecycle GHG intensity of <28 gCO₂e/MJ; - Activity which results in the injection of fuel gas with lifecycle GHG intensity of <28 gCO₂e/MJ into an existing network; - Gas supplied to the network must meet Tier 1 (Green) TSC laid down in Activity 2011[001] Manufacture of low-carbon gases, including hydrogen.	Review date pre-set (see Section A.2)
Tier 2 (Amber T2)	Activity fulfils either criterion (1.a) OR (1.b); criterion (2) must be fulfilled in all cases. - Operation of gas networks for the transmission and distribution of renewable and low-carbon gases (including hydrogen and fossil gas), including: - New networks transporting gases with lifecycle GHG intensity of <65 gCO₂e/MJ; - Networks converted or re-purposed for gases with lifecycle GHG intensity of <65 gCO₂e/MJ. - Gas supplied to the network must meet Tier 2 (Amber T2) TSC laid down in Activity 2011[001] Manufacture of low-carbon gases, including hydrogen.	
Tier 3 (Amber T3)	No TSC available.	
TSC applicable to all Tiers	- For all Tiers, it must be shown that the average carbon intensity of a low carbon gas transported through the network is below the respective threshold. - As indicated above, this Activity permits the transportation of fossil gas, as long as it meets the thresholds shown, which are aligned with principles explained above in the bases for setting	

	TSC. This inclusion is subject to review and may be revised at the end of the first TSC Period. 3. For purposes of assessment, fuel gas GHG intensities should be averaged over a rolling five-year period.	
Applicable Standards	• Calculation of Lifecycle Emissions ISO 14067:2018 or ISO 14064-1:2018. • Regulations for the detection and elimination of gas leaks must conform at least with regulations applicable in the AMS in which the Activity takes place and should demonstrate due consideration of the Methane Guiding Principles¹³.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND 2. It must be shown that the Activity is necessary for the provision of energy security of supply to consumers with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned: a. Operation of T&D equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR b. Operation of monitoring and control equipment or other related IT systems to operate or maintain T&D equipment in the event of projected flooding, storm conditions or higher temperatures; OR c. Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of T&D-related equipment in scenarios of projected flooding, storm conditions or higher temperatures.	Enduring
Tier 2 (Amber T2)	No TSC available.	
Tier 3 (Amber T3)	No TSC available.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

No TSC available.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

No TSC available.

¹³ <https://methaneguidingprinciples.org/>

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Not Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

352[030] Storage of renewable and low-carbon gases

Activity Notes

- Includes:
 - Operation of facilities related to low carbon hydrogen, renewable-derived gases, fossil gases or mixtures thereof which meet the criteria below.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	Activity facilities fulfil either criteria (1.a) OR (1.b) AND Activity fulfils criterion (1.c). Criteria (2) and (3) must be fulfilled in all cases. 1. Activity is the operation of: a. New storage facilities for renewable and low carbon gases; b. Existing underground gas storage facilities converted for dedicated renewable and low-carbon gases; c. Activity which results in the injection of fuel gas with lifecycle GHG intensity of <28 gCO₂e/MJ into an existing network; 2. Renewable and low-carbon gases, including hydrogen and fossil gases, stored in the facility meets lifecycle GHG intensity of <28 gCO₂e/MJ; 3. Gas supplied to the storage must meet Tier 1 (Green) TSC laid down in Activity 2011[001] Manufacture of low-carbon gases, including hydrogen.	Review date pre-set (see Section A.2)
Tier 2 (Amber T2)	Activity facilities fulfil either criterion (1.a) OR (1.b). Criteria (2) and (3) must be fulfilled in all cases. 1. Activity is operation of: a. New storage facilities for gases; b. Existing underground gas storage facilities converted for dedicated gases; 2. Gases, including hydrogen and fossil gases, stored in the facility meet lifecycle GHG intensity of <65 gCO₂e/MJ; 3. Gas supplied to the storage must meet Tier 2 (Amber T2) TSC laid down in Activity 2011[001] Manufacture of low-carbon gases, including hydrogen.	
Tier 3 (Amber T3)	No TSC available.	
TSC applicable to all Tiers	1. For all Tiers, it must be shown that the average carbon intensity of a low carbon gas stored in the facility is below the respective threshold. 2. As indicated above, this Activity permits the storage of fossil gas, as long as it meets the thresholds shown, which are aligned with principles explained above in the bases for TSC Setting. This inclusion is subject to review and may be revised at the end of the first TSC Period.	

	3. For purposes of assessment, fuel gas GHG intensities should be averaged over a rolling five-year period.	
Applicable Standards	• Calculation of Lifecycle Emissions ISO 14067: 2018 or ISO 14064-1: 2018. • Regulations for the detection and elimination of gas leaks must conform at least with regulations applicable in the AMS in which the Activity takes place and should demonstrate due consideration of the Methane Guiding Principles¹⁴.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND 2. It must be shown that the Activity is necessary for the provision of energy security of supply to consumers with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned: a. Operation of fuel gas storage facilities which have been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR b. Operation of monitoring and control equipment or other related IT systems to operate or maintain fuel gas storage facilities in the event of projected flooding, storm conditions or higher temperatures; OR c. Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of related fuel gas storage facilities in scenarios of projected flooding, storm conditions or higher temperatures.	Enduring
Tier 2 (Amber T2)	No TSC available.	
Tier 3 (Amber T3)	No TSC available.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

No TSC available.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

No TSC available.

¹⁴ <https://methaneguidingprinciples.org/>

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Not Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

353[011] Production of heating/cooling from solar thermal energy

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity produces heating/cooling using solar thermal energy.	Enduring
Tier 2 (Amber T2)	No TSC available.	
Tier 3 (Amber T3)	No TSC available.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND 2. It must be shown that the Activity is necessary for the provision of energy security of supply to consumers with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned: a. Operation of heating/cooling equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR b. Operation of monitoring and control equipment or other related IT systems to operate or maintain heating/cooling equipment in the event of projected flooding, storm conditions or higher temperatures; OR c. Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of heating/cooling-related equipment in scenarios of projected flooding, storm conditions or higher temperatures.	Enduring
Tier 2 (Amber T2)	No TSC available.	
Tier 3 (Amber T3)	No TSC available.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

No TSC available.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

No TSC available.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Not Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

353[012] Production of heating/cooling from geothermal energy

Activity Notes

- Excludes:
 - Geothermal heating/cooling as part of cogeneration (refer to 351[050] Electricity generation from geothermal energy).
 - Geothermal heating/cooling through a combination of geothermal and a combustion process (refer, as applicable, to 353[013] Production of heating/cooling from renewable non-fossil gaseous and liquid fuels; 353[014] Production of heating/cooling from fossil gas).

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Lifecycle GHG emissions <28 gCO ₂ e/MJ per unit of heat and/or cooling produced.	Review date pre-set (see Section A.2)
Tier 2 (Amber T2)	1. Lifecycle GHG emissions <65 gCO ₂ e/MJ per unit of heat and/or cooling produced.	
Tier 3 (Amber T3)	No TSC available.	
Applicable Standards	• Calculation of Lifecycle Emissions ISO 14067: 2018 or ISO 14064-1: 2018.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND 2. It must be shown that the Activity is necessary for the provision of energy security of supply to consumers with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned: a. Operation of heating/cooling equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR b. Operation of monitoring and control equipment or other related IT systems to operate or maintain heating/cooling equipment in the event of projected flooding, storm conditions or higher temperatures; OR c. Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of heating/cooling-related equipment in scenarios of projected flooding, storm conditions or higher temperatures.	Enduring
Tier 2 (Amber T2)	No TSC available.	
Tier 3 (Amber T3)	No TSC available.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

No TSC available.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

No TSC available.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

353[013] Production of heating/cooling from renewable non-fossil gaseous and liquid fuels

Activity Notes

- Includes:
 - Heating/cooling resulting from non-biological renewable non-fossil gaseous and liquid fuels only.
 - Heating/cooling resulting from a blend of non-biological renewable non-fossil gaseous and liquid fuels and biofuels.
 - Biofuels are derived, as applicable, from Activities which meet the TSC corresponding to the respective Tier as defined by the ASEAN Taxonomy:
 - 01[001] General perennial or non-perennial crops;
 - 02[002] Forestry plantation;
 - 2011[001] Manufacture of low-carbon gases, including hydrogen;
 - 3821[001] Anaerobic digestion of bio-waste; OR
 - Waste from industrial crops or food.
- Excludes:
 - Heating/cooling as part of cogeneration (refer to Activity 351[014] Electricity generation from bioenergy, including co-firing with fossil fuels).
 - Heating/cooling resulting from bioenergy only.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Lifecycle GHG emissions <28 gCO ₂ e/MJ per unit of heat and/or cooling produced.	Review date pre-set (see Section A.2)
Tier 2 (Amber T2)	1. Lifecycle GHG emissions <65 gCO ₂ e/MJ per unit of heat and/or cooling produced.	
Tier 3 (Amber T3)	No TSC available.	
TSC applicable to all Tiers	1. For facilities that are equipped with CCUS, CO ₂ from energy provision that is captured for underground storage, must be transported and stored in accordance with the TSC for Activity 000[010] Transport of CO ₂ and Activity 000[020] Underground permanent geological storage of CO ₂ . 2. The Activity meets either of the following criteria: a. At construction, measurement equipment for monitoring of physical emissions, such as methane leakage, is installed, or a leak detection and repair program is introduced; b. At operation, physical measurement of methane emissions is reported, and leak is eliminated.	
Applicable Standards	• Calculation of Lifecycle Emissions ISO 14067:2018 or ISO 14064-1:2018. • Regulations for the detection and elimination of gas leaks must conform at least with regulations applicable in the AMS in which the Activity takes place	

	and should demonstrate due consideration of the Methane Guiding Principles ¹⁵ .

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND 2. It must be shown that the Activity is necessary for the provision of energy security of supply to consumers with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned: a. Operation of heating/cooling equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR b. Operation of monitoring and control equipment or other related IT systems to operate or maintain heating/cooling equipment in the event of projected flooding, storm conditions or higher temperatures; OR c. Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of heating/cooling-related equipment in scenarios of projected flooding, storm conditions or higher temperatures.	Enduring
Tier 2 (Amber T2)	No TSC available.	
Tier 3 (Amber T3)	No TSC available.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

No TSC available.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

No TSC available.

¹⁵ <https://methaneguidingprinciples.org/>

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Not Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Not Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

353[014] Production of heating/cooling from fossil gas

Activity Notes

- Excludes:
 - Fossil heating/cooling as part of cogeneration (refer, as applicable, to 351[011] Electricity generation from fossil gas; 351[013] Hybrid fossil, renewable power generation, T&D, and/or energy storage for Island Systems).

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Lifecycle GHG emissions <28 gCO ₂ e/MJ per unit of heat and/or cooling produced.	Review date pre-set (see Section A.2)
Tier 2 (Amber T2)	1. Lifecycle GHG emissions <65 gCO ₂ e/MJ per unit of heat and/or cooling produced.	
Tier 3 (Amber T3)	No TSC available.	
TSC applicable to all Tiers	1. For facilities that are equipped with CCUS, CO ₂ from energy provision that is captured for underground storage, must be transported and stored in accordance with the TSC for Activity 000[010] Transport of CO ₂ and Activity 000[020] Underground permanent geological storage of CO ₂ . 2. The Activity meets either of the following criteria: a. At construction, measurement equipment for monitoring of physical emissions, such as methane leakage is installed, or a leak detection and repair program is introduced; OR b. At operation, physical measurement of methane emissions is reported, and leak is eliminated. c. This Activity permits the storage of fossil gas, as long as it meets the thresholds shown, which are aligned with principles explained above in the bases for TSC setting. This inclusion is subject to review and may be revised at the end of the first TSC Period.	
Applicable Standards	• Calculation of Lifecycle Emissions ISO 14067:2018 or ISO 14064-1:2018. • Regulations for the detection and elimination of gas leaks must conform at least with regulations applicable in the AMS in which the Activity takes place and should demonstrate due consideration of the Methane Guiding Principles¹⁶.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND	Enduring

¹⁶ <https://methaneguidingprinciples.org/>

	2. It must be shown that the Activity is necessary for the provision of energy security of supply to consumers with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned: a. Operation of heating/cooling equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR b. Operation of monitoring and control equipment or other related IT systems to operate or maintain heating/cooling equipment in the event of projected flooding, storm conditions or higher temperatures; OR c. Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of heating/cooling-related equipment in scenarios of projected flooding, storm conditions or higher temperatures.	
Tier 2 (Amber T2)	No TSC available.	
Tier 3 (Amber T3)	No TSC available.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

No TSC available.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

No TSC available.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Not Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Not Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

353[015] Production of heating/cooling using waste heat

Activity Notes

- Excludes:
 - Any heating/cooling conducted by a cogeneration (combined heat and power) plant (refer, as applicable, to Activities 351[011] Electricity generation from fossil gas; 351[012] Electricity generation from renewable non-fossil gaseous and liquid fuels, including co-firing with fossil fuels; 351[013] Hybrid fossil, renewable power generation, T&D, and/or energy storage for Island Systems; 351[014] Electricity generation from bioenergy, including co-firing with fossil fuels; 351[022] Electricity generation using CSP technology; 351[050] Electricity generation from geothermal energy).

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Heating/cooling from waste heat resulting from another process; AND 2. It must be shown that such waste heat would otherwise be lost and would result in no utility.	Enduring
Tier 2 (Amber T2)	No TSC available.	
Tier 3 (Amber T3)	No TSC available.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND 2. It must be shown that the Activity is necessary for the provision of energy security of supply to consumers with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned: a. Operation of heating/cooling equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR b. Operation of monitoring and control equipment or other related IT systems to operate or maintain heating/cooling equipment in the event of projected flooding, storm conditions or higher temperatures; OR c. Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of heating/cooling-related equipment in scenarios of projected flooding, storm conditions or higher temperatures.	Enduring
Tier 2 (Amber T2)	No TSC available.	

Tier 3 (Amber T3)	No TSC available.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

No TSC available.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

No TSC available.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

353[020] District heating/cooling distribution

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	- Activity is operation of an efficient district heating and cooling system; or evidence can be provided to show that the system will become an efficient district heating and cooling system within 3 years of assessment, where an efficient district heating or cooling system is defined as using at least: 50% renewable energy; 50% waste heat; 75% cogenerated heat; OR 50% of a combination of such energy and heat; OR - Activity is an advanced pilot system (control and energy management systems, Internet of Things).	Review date pre-set (see Section A.2)
Tier 2 (Amber T2)	No TSC available.	
Tier 3 (Amber T3)	No TSC available.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	- Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND - It must be shown that the Activity is necessary for the provision of energy security of supply to consumers with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned: - Operation of heating/cooling equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR - Operation of monitoring and control equipment or other related IT systems to operate or maintain heating/cooling equipment in the event of projected flooding, storm conditions or higher temperatures; OR - Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of heating/cooling-related equipment in scenarios of projected flooding, storm conditions or higher temperatures.	Enduring
Tier 2 (Amber T2)	No TSC available.	
Tier 3 (Amber T3)	No TSC available.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

No TSC available.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

No TSC available.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

353[030] Storage of thermal energy

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	Activity is storage of thermal energy, including Underground Thermal Energy Storage (UTES) or Aquifer Thermal Energy Storage (ATES).	Enduring
Tier 2 (Amber T2)	No TSC available.	
Tier 3 (Amber T3)	No TSC available.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND 2. It must be shown that the Activity is necessary for the provision of energy security of supply to consumers with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned: a. Operation of heating/cooling equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR b. Operation of monitoring and control equipment or other related IT systems to operate or maintain heating/cooling equipment in the event of projected flooding, storm conditions or higher temperatures; OR c. Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of heating/cooling-related equipment in scenarios of projected flooding, storm conditions or higher temperatures.	Enduring
Tier 2 (Amber T2)	No TSC available.	
Tier 3 (Amber T3)	No TSC available.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

No TSC available.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

No TSC available.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

353[040] Production of heating/cooling using electric heat pump

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity is operation of electric heat pumps complying with both of the following criteria: a. Refrigerant threshold: Global Warming Potential does not exceed 675; b. Demonstrate a high standard of energy efficiency according to an internationally recognised certifications scheme.	Enduring
Tier 2 (Amber T2)	No TSC available.	
Tier 3 (Amber T3)	No TSC available.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND 2. It must be shown that the Activity is necessary for the provision of energy security of supply to consumers with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned: a. Operation of heating/cooling equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR b. Operation of monitoring and control equipment or other related IT systems to operate or maintain heating/cooling equipment in the event of projected flooding, storm conditions or higher temperatures; OR c. Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of heating/cooling-related equipment in scenarios of projected flooding, storm conditions or higher temperatures.	Enduring
Tier 2 (Amber T2)	No TSC available.	
Tier 3 (Amber T3)	No TSC available.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

No TSC available.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

No TSC available.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

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B. CONSTRUCTION AND REAL ESTATE

B.1. Bases for TSC Setting

Environmental Objective 1: Climate Change Mitigation

Tier	Description / Definition
Tier 1 (Green)	1. TSC are aimed at achieving an advanced level of certification in credible, national or international Green Building Certification (GBC) schemes; OR 2. TSC are aimed at specified proxies relevant to emissions intensity from energy usage/consumption in order to identify the level of greenness in some Activities; a. It has been assessed that the measure of Energy Usage Intensity (EUI) demonstrates the most comprehensive measure for assessing greenness of the Activities.
Tier 2 (Amber T2)	1. Activity supports a transition towards a Green pathway within a defined time frame; AND a. Results in a contribution to the EO which is at least as good as the lowest carbon emitting technology currently that is technologically feasible for widespread use in ASEAN; OR b. Results in achieving the best reduction in EUI from a building construction and implementation plan.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

Environmental Objective 2: Climate Change Adaptation

Tier	Description / Definition
Tier 1 (Green)	1. Activity where measures have been implemented to ensure own resilience to climate change and thereby contribute to overall local, national or regional resilience; OR 2. Activity supports other Activities to increase resilience to climate change.
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

Environmental Objective 3: Protection of Healthy Ecosystems and Biodiversity

Tier	Description / Definition
Tier 1 (Green)	TSC are presently not available for the Activity Tiers defined.
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

Environmental Objective 4: Resource Resilience and the Transition to a Circular Economy

Tier	Description / Definition
Tier 1 (Green)	1. Activity optimises waste management, including the management and reduction of waste from the construction and demolition of buildings. It has been assessed as meeting the base minimum criteria of maintaining existing structural materials, as defined under credible, international GBC schemes.
Tier 2 (Amber T2)	1. Activity supports a transition towards a Green pathway within a defined time frame; AND a. Results in a contribution to the EO which is at least as good as the technology which results in the lowest possible waste production which is currently technologically and economically feasible for widespread use in ASEAN; OR b. Results in achieving the best reduction in EUI from a building construction and implementation plan.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

All TSC set within this Appendix are common for all AMS. The Green TSC were set for interoperability with widely used international taxonomies¹⁷, including reference to credible international GBC schemes, and where relevant and available, national GBC schemes and standards in respective AMS.

TSC for Amber T2 were developed in reference to relevant GBC schemes, both national and international, where available. As there is currently no Energy Performance Certificate (EPC) applicable to AMS, TSC were checked against various international and national GBC schemes for widespread use in ASEAN. Additionally, other standards and taxonomies (such as the EU Taxonomy) reference Primary Energy Demand (PED) which AMS currently do not have. As a result, through review of publicly available technology comparisons and consultation with regional stakeholders, a commonly used measure of Energy Usage Intensity (EUI) was utilised.

These internationally recognised schemes are developed in line with achieving better than market practice and are hence seen as viable and practical benchmarks for setting TSC. There are no Amber T3 TSC available for the Construction and Real Estate sector Activities.

The TSC set within this Appendix are for TSC Period 1. Details on the proposed future TSC can be seen below.

The TSC for EO3 have been considered by the ATB but have not been included as no clear case can currently be identified from Activities in this focus sector that shows a direct positive benefit to EO3. However, this EO is considered under the DNSH assessment described in Annex 2.

B.2. Current, Future TSC and Review Programmes

It is expected that the TSC in this Appendix will change over time, as criteria become more stringent to promote a pathway to sustainability for ASEAN.

¹⁷ Including but not limited to, the EU Taxonomy for Sustainable Finance, Singapore-Asia Taxonomy, Thailand Taxonomy.

In the case of Construction and Real Estate Activities, it is recommended that assessors should allow classification of Activities in all cases where:

- The Activity met the applicable requirements of certifications referred to in TSC which were extant at the time of its assessment; and
- The Activity complied with all national and regional rules and regulations, as well as any applicable international conventions, at the time of assessment.

The EO1 TSC for most Activities in this sector are review date pre-set as defined in Section 1.4. No sunset dates are specified in the TSC. TSC may be adjusted or sunset in accordance with the processes laid down in Annex 6. In some cases, e.g., 68[001] Electric vehicle charging stations, EO1 TSC are enduring. In all cases in this sector EO2 TSC are enduring as defined in Section 1.4.

B.3. Definitions of terms used in these TSC

To avoid ambiguity, certain terms used in these TSC are defined here.

Recognised GBC programmes encompass credible and accepted GBC programmes, including, but not limited to, those listed in Table 6.

Table 6: Credible and acceptable GBC programmes (non-exhaustive)¹⁸

International Schemes	National Schemes
• Leadership in Energy and Environmental Design (LEED) • Building Research Establishment Environmental Assessment Method (BREEAM) • EDGE (Excellence in Design for Greater Efficiencies) • WELL Building Standard • National Green Building Standard (NGBS) • Green Globes • Green Star (Australia) • BEAM Plus (Hong Kong) • Other globally recognised GBC schemes¹⁹	• Green Mark • GreenRE • Thai's Rating for Energy and Environmental Sustainability (TREES) • GREENSHIP • Green Building Index (GBI) • Building for Ecologically Responsive Design Excellence (BERDE) • LOTUS • Other nationally recognised GBC schemes for buildings²⁰

Advanced level of certification typically refers to a higher tier within a given GBC scheme. For schemes with a tiered ranking system, this includes elevated certification levels, although not necessarily the absolute top tier. The term 'advanced level of certification' may also refer to lower GBC tiers, as long as it can be demonstrated that the building in question represents a marked improvement on common practices in a specific country.

¹⁸ Some GBC schemes, such as LEED, BREEAM and Green Mark, include credits related to climate change adaptation, including flood resilience, heat stress mitigation, and water security. These can also be used to support the assessment of certain elements of a building's potential to meet the EO2 requirements of the ASEAN Taxonomy.

¹⁹ The Green Business Certification Inc. (GBCI) provides guidance for globally recognised standards (<https://www.gbci.org/>).

²⁰ The ASEAN Taxonomy will only recognise national GBC schemes for buildings in the country where the scheme is recognised. For nations without a local green building scheme, internationally recognised schemes must be used.

A building may represent a marked improvement in the context of a specific country if one of the following can be demonstrated²¹:

- The building achieves a GBC certification using a nationally recognised scheme at a tier on average or above average compared to other certified buildings of that type in that country.
- Where a nationally recognised scheme is unavailable, the building achieves a GBC certification using an internationally recognised scheme at a tier on average or above average compared to other certified buildings of that type in that country.

Notwithstanding the above, in all cases, a building must exceed the lowest certification standard of its GBC scheme to qualify as an 'advanced level of certification'.

²¹ The average certification tier for buildings of a given type in a country is defined in the following way: (1) Define the type to which the building belongs (e.g., hospital, hotel, shopping mall, office building); (2) Where that building is certified under a GBC, and in as much as data is available, identify or estimate the distribution of certification tiers under that GBC for that building type in that country; (3) The average certification level is the **median** tier for that building type in that country. Where no building of that type in that country has yet been certified under that scheme, the first building of that type to be certified under that scheme will automatically be considered the average.

B.4. TSC for Construction and Real Estate

410[001] Construction of new buildings

Activity Notes

- Includes:
 - Development and construction of residential and non-residential buildings for sale or on a fee or contract basis. Examples of Buildings in this Activity include:
 - Government Buildings
 - Healthcare
 - Schools
 - Retail
 - Hospitality
 - Data Centres
 - Transport Terminal
 - Warehouses and Distribution Centres
 - Core and Shell Development
 - Multi-family Residential Properties
 - Houses of Worship
 - Cultural, Community Recreational
- Sector generic definitions are shown in Section B.3

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Construction of new buildings for which: a. The building has been certified under a national GBC program, that is recognised by AMS or through an industry association and relevant for that jurisdiction, that achieves an advanced level of certification and is applicable to Climate Change Mitigation; OR b. The building has been certified under one of the applicable internationally recognised GBC programmes, achieving an advanced level of certification and is applicable to Climate Change Mitigation.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	1. Construction of new buildings for which: a. The building has been certified under a national GBC program, that is recognised by AMS or through an industry association and relevant for that jurisdiction, that includes criteria relevant to Climate Change Mitigation; OR b. The building has been certified under an applicable internationally recognised GBC program: AND 2. An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity complies with one or all of the following criteria: a. The economic Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, as may be evidenced through an advanced level of certification in the climate adaptation category of a recognised GBC; OR b. The physical climate risks that are material to the Activity have been identified by performing a robust Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance provided in Annex 3; OR c. The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports, scientific peer-reviewed publications and open source or paying models; AND d. The adaptation solutions implemented: i. Do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities; ii. Favour nature-based solutions or rely on blue or green infrastructure to the extent possible; iii. Are consistent with local, sectoral, regional or national adaptation plans and strategies; iv. Are monitored and measured against predefined indicators and remedial action is considered where those indicators are not met; v. Where the solution implemented is physical and consists of an Activity for which technical screening criteria have been specified, the solution complies with the do no significant harm technical screening criteria for that Activity.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	No TSC available.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

410[002] Renovation of existing buildings

Activity Notes

- Includes:
 - Construction and civil engineering works or preparation thereof.
 - An improvement Activity resulting in transformation of a building towards greater environmental sustainability but does not yet necessarily fully meet the TSC described in Activity 410[001] Construction of new buildings.
- Definitions:
 - LEED v4.1: Leadership in Energy and Environmental Design v4.1
- Sector generic definitions are shown in Section B.3

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. It leads to a reduction of Energy Usage Intensity (EUI) of at least 30%, where: a. The initial EUI and the estimated improvement is based on a detailed building survey, an energy audit conducted by an accredited independent expert or any other transparent and proportionate method and validated through an Energy Performance Certificate; OR b. The 30% improvement results from an actual reduction in EUI (where the reductions in net EUI demand through renewable energy sources are not taken into account) and can be achieved through a succession of measures within a maximum of three years; OR 2. The building has been certified under a national GBC program, that is recognised by AMS or through an industry association and is relevant for that jurisdiction, that achieves an advanced level of certification and is applicable to Climate Change Mitigation.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	1. It leads to a reduction of EUI of at least 15%, where: a. The initial EUI and the estimated improvement is based on a detailed building survey, an energy audit conducted by an accredited independent expert or any other transparent and proportionate method and validated through an Energy Performance Certificate; OR b. The 15% improvement results from an actual reduction in EUI (where the reductions in net EUI through renewable energy sources are not taken into account) and can be achieved through a succession of measures within a maximum of three years; OR 2. The building has been certified under a national GBC program, that is recognised by AMS or through an industry association and is relevant for that jurisdiction.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity complies with one or all of the following criteria: a. The economic Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, as may be evidenced through an advanced level of certification in the climate adaptation category of a recognised GBC; b. The physical climate risks that are material to the Activity have been identified by performing a robust Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance provided in Annex 3. c. The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports, scientific peer-reviewed publications and open source or paying models. d. The adaptation solutions implemented: i. Do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities; ii. Favour nature-based solutions or rely on blue or green infrastructure to the extent possible; iii. Are consistent with local, sectoral, regional or national adaptation plans and strategies; iv. Are monitored and measured against predefined indicators and remedial action is considered where those indicators are not met; v. Where the solution implemented is physical and consists in an Activity for which technical screening criteria have been specified, the solution complies with the do no significant harm technical screening criteria for that Activity.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Maintain 75% of the existing building structure (including floor and roof decking) and envelope (the exterior skin and framing, excluding window assemblies and non-structural roofing materials). Portions of buildings deemed structurally unsound or hazardous should be excluded from calculations; AND 2. Use existing interior non-structural elements (e.g., interior walls, doors, floor coverings and ceiling systems) for at least 30% of the entire completed building, including additions; AND 3. Conduct a lifecycle assessment of the project's structure and enclosure that demonstrates a minimum of 10% reduction, compared with a baseline building, in at least three of the six impact categories listed in the LEED v4.1 Building Lifecycle Reduction Criteria, one of which must be global warming potential.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	1. Maintain 45% of the existing building structure (including floor and roof decking) and envelope (the exterior skin and framing, excluding window assemblies and non-structural roofing materials). Portions of buildings deemed structurally unsound or hazardous should be excluded from calculations; AND 2. Use existing interior non-structural elements (e.g., interior walls, doors, floor coverings and ceiling systems) for at least 30% of the entire completed building, including additions; AND 3. Conduct a lifecycle assessment of the project's structure and enclosure that demonstrates a minimum of 5% reduction, compared with a baseline building in at least three of the six impact categories in LEED v4.1 Building Lifecycle Reduction Criteria, one of which must be global warming potential.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

431[001] Demolition and site preparation

Activity Notes

- Includes:
 - Activities of preparing a site for subsequent construction activities, including the removal of previously existing structures.
- Excludes:
 - Demolition and wrecking of buildings and other structures carried out as part of the remediation of contaminated sites and areas.
 - For projects associated with the Activities 410[001] Construction of new buildings or 410[002] Renovation of existing buildings, where the demolition works and the construction or renovation works are procured under the same contract, the TSC for those respective Activities apply.
- Definitions:
 - Building demolition material reuse is the practice of salvaging and repurposing construction materials and components from a demolished structure. These materials are then either incorporated into the development of the same site or made available for use in other construction projects.
 - Building demolition material recycling is the process of collecting, sorting, and reprocessing materials and components that are removed during the demolition of a building. These materials, such as concrete, wood, metal, and other construction materials, are treated to remove contaminants and then transformed into new construction materials or products.

EO1: Climate Change Mitigation TSC

TSC are presently not available for the Activity Tiers defined.

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Prior to the start of the demolition or wrecking Activity, at least the following aspects are discussed and agreed upon with the client: a. Definition of key performance indicators and target ambition level; AND b. Identification of project-specific constraints that may compromise the target ambition level (such as time, labour and space) and how to minimise these constraints; AND c. Details of the pre-demolition auditing procedure; AND d. An outline waste management plan that prioritises selective deconstruction, decontamination and source separation of waste streams. Where these actions are not prioritised, an explanation is provided to justify why selective	Review date pre-set (see Annex 6).

	deconstruction, decontamination or source separation of waste streams are not technologically feasible in the project. Cost or financial considerations are not an acceptable reason to avoid complying with this requirement; AND 2. The operator of the Activity conducts a pre-demolition audit: a. All demolition waste generated during the demolition or wrecking Activity is treated in accordance with regional waste legislation; AND b. Where there is no AMS regulation to prescribe percentage, at least 90% (by weight) of the non-hazardous demolition waste generated on the demolition site is prepared for reuse or recycling. This excludes naturally occurring material. Alternatively, at least 95% for mineral fraction and 70% for the non-mineral fraction for non-hazardous demolition waste is separately collected and prepared for reuse or recycled.	
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

681[001] Acquisition and ownership of buildings

Activity Notes

- Includes:
 - Buying real estate and exercising ownership of that real estate.
- Sector generic definitions are shown in Section B.3

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. For buildings built before 31 December 2023, the building has an advanced level of certification from an internationally recognised GBC program; OR 2. For buildings built after 31 December 2023, the building meets the criteria specified under Tier 1 (Green) in Construction of New Buildings. 3. Where the building is a large non-residential building (with an effective rated output for heating systems, systems for combined space heating and ventilation, air-conditioning systems or systems for combined air-conditioning and ventilation of over 290 kW) it is efficiently operated through energy performance monitoring and assessment.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	1. For buildings built before 31 December 2023, the building has certification from an applicable internationally recognised GBC program; AND 2. An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity complies with one or all of the following criteria: a. The economic Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, as may be evidenced through an advanced level of certification in the climate adaptation category of a recognised GBC; b. The physical climate risks that are material to the Activity have been identified by performing a robust Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance provided in Annex 3. c. The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk	Enduring

	analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports, scientific peer-reviewed publications and open source or paying models. d. The adaptation solutions implemented: - Do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities; - Favour nature-based solutions or rely on blue or green infrastructure to the extent possible; - Are consistent with local, sectoral, regional or national adaptation plans and strategies; - Are monitored and measured against predefined indicators and remedial action is considered where those indicators are not met; - Where the solution implemented is physical and consists in an Activity for which technical screening criteria have been specified, the solution complies with the do no significant harm technical screening criteria for that Activity.	
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

68[001] Electric vehicle charging stations

Activity Notes

- Includes:
 - Individual renovation measures consisting of installation, maintenance and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings).

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Installation, maintenance or repair of charging stations for electric vehicles.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity complies with one or all of the following criteria: a. The economic Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that. b. The physical climate risks that are material to the Activity have been identified by performing a robust Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance provided in Annex 3. c. The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports, scientific peer-reviewed publications and open source or paying models. d. The adaptation solutions implemented: i. Do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities; ii. Favour nature-based solutions or rely on blue or green infrastructure to the extent possible; iii. Are consistent with local, sectoral, regional or national adaptation plans and strategies; iv. Are monitored and measured against predefined indicators and remedial action is considered where those indicators are not met;	Enduring

	v. Where the solution implemented is physical and consists in an Activity for which technical screening criteria have been specified, the solution complies with the do no significant harm technical screening criteria for that Activity.	
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance ²²	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Not relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Not relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Not relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Not relevant	Annex 2, Section 4.4
EO3	Impact on Air	Not relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Not relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Not relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

²² Where item is shown as 'not relevant', it is assumed that these factors are considered in the construction and operation of the host building.

68[002] Energy efficient equipment

Activity Notes

- Includes:
 - Individual renovation measures consisting of installation, maintenance or repair of energy efficiency equipment.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity consists of one of the following individual measures provided that they comply with minimum requirements set for individual components and systems and where applicable are rated in the highest class(es) of energy efficiency defined in the relevant existing AMS regulations, standards and/or adopted classifications: a. Addition of insulation to existing envelope components, such as external walls (including green walls), roofs (including green roofs), lofts, basements and ground floors (including measures to ensure air-tightness, measures to reduce the effects of thermal bridges and scaffolding) and products for the application of the insulation to the building envelope (including mechanical fixings and adhesive); OR b. Replacement of existing windows with new energy efficient windows; OR c. Replacement of existing external doors with new energy efficient doors; OR d. Installation and replacement of energy efficient light sources; OR e. Installation, replacement, maintenance and repair of heating, ventilation and air-conditioning (HVAC) and water heating systems, including equipment related to district heating services, with highly efficient technologies; OR f. Installation of low water and energy using kitchen and sanitary water fittings which comply with technical specifications set out as below: i. The flow rate is recorded at the standard reference pressure 3 -0/+ 0.2 bar or 0.1 -0/+0.02 for products limited to low pressure; ii. The flow rate at the lower pressure 1.5 -0/+0.2 bar is $\geq$ 60% of the maximum available flow rate; iii. For mixer showers, the reference temperature is 38 ± 1 °C; iv. Where the flow has to be lower than 6 L/min, it complies with the rule set out in point 2; v. For taps the test procedure in item 6 is followed, with the following exceptions:	Review date pre-set (see Annex 6).

	▪ For taps that are not limited to low pressure applications only: apply a 3 -0/+ 0.2 bar pressure to both the hot and the cold inlets, alternatively; ▪ For taps that are limited to low pressure applications only: apply a 0.4 -0/+0.02 bar pressure to both the hot and the cold inlets and fully open the flow control. vi. Test Procedure: ▪ Fully open the obturator ▪ Gradually apply (4+2) s a torque of (6 ± 0.2) Nm to the operating mechanism in the opening direction; ▪ Maintain this torque for (300 + 15) s; ▪ Fully close the obturator; ▪ Gradually apply over (4 + 2) s a torque of (6 ± 0.2) Nm to the operating mechanism in the closing direction; ▪ Maintain this torque for (300 + 15) s; ▪ Reinsert the seat washer of screw down taps. vii. In the case of shower solutions, mixer showers, shower outlets and taps, have a max water flow of 6 L/min or less attested by an existing label in the market.	
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity complies with one or all of the following criteria: a. The economic Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity. b. The physical climate risks that are material to the Activity have been identified by performing a robust Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance provided in Annex 3. c. The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports, scientific peer-reviewed publications and open source or paying models. d. The adaptation solutions implemented: i. Do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other	Enduring

	people, of nature, of cultural heritage, of assets and of other economic activities; ii. Favour nature-based solutions or rely on blue or green infrastructure to the extent possible; iii. Are consistent with local, sectoral, regional or national adaptation plans and strategies; iv. Are monitored and measured against predefined indicators and remedial action is considered where those indicators are not met; v. Where the solution implemented is physical and consists of an Activity for which technical screening criteria have been specified, the solution complies with the do no significant harm technical screening criteria for that Activity.	
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance ²³	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Not relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Not relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Not relevant	Annex 2, Section 4.4
EO3	Impact on Air	Not relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Not relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Not relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

²³ Where item is shown as 'not relevant', it is assumed that these factors are considered in the construction and operation of the host building.

68[003] Energy performance measurement, regulation, control

Activity Notes

- Includes:
 - Individual renovation measures consisting of installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity consists of one of the following individual measures: a. Installation, maintenance and repair of zoned thermostats, smart thermostat systems and sensing equipment, including motion and daylight control; OR b. Installation, maintenance and repair of building automation and control systems, building energy management systems (BEMS), lighting control systems and energy management systems (EMS); OR c. Installation, maintenance and repair of smart metres for gas, heat, cool and electricity; OR d. Installation, maintenance and repair of façade and roofing elements with a solar shading or solar control function, including those that support the growing of vegetation.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance ²⁴	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Not relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Not relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Not relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Not relevant	Annex 2, Section 4.4
EO3	Impact on Air	Not relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Not relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Not relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

²⁴ Where item is shown as 'not relevant', it is assumed that these factors are considered in the construction and operation of the host building.

68[004] Renewable Technologies

Activity Notes

- Includes:
 - Individual renovation measures consisting of installation, maintenance and repair of renewable energy technologies which are organic to a building or collection of buildings forming part of a single facility or estate.
- Excludes:
 - Standalone equipment for the provision of electricity, gas, heat and/or cooling to an external load, which are covered under Appendix A of this Annex.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity consists of one of the following individual measures, if installed on-site as technical building systems: a. Installation, maintenance and repair of solar photovoltaic systems and the ancillary technical equipment; OR b. Installation, maintenance and repair of solar hot water panels and the ancillary technical equipment; OR c. The activities encompassing the installation, maintenance, repair, and enhancement of heat pump systems are geared towards advancing the utilisation of renewable energy for heating and cooling purposes. These actions are aligned with AMS commitments to harnessing sustainable energy sources, in line with their local energy policies and goals; OR d. Installation, maintenance and repair of wind turbines and the ancillary technical equipment; OR e. Installation, maintenance and repair of solar transpired collectors and the ancillary technical equipment; OR f. Installation, maintenance and repair of thermal or electric energy storage units and the ancillary technical equipment; OR g. Installation, maintenance and repair of high efficiency micro-CHP (combined heat and power) plant; OR h. Installation, maintenance and repair of heat exchanger/recovery systems.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity complies with one or all of the following criteria: a. The economic Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity. b. The physical climate risks that are material to the Activity have been identified by performing a robust Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance provided in Annex 3. c. The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports, scientific peer-reviewed publications and open source or paying models. d. The adaptation solutions implemented: i. Do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities; ii. Favour nature-based solutions or rely on blue or green infrastructure to the extent possible; iii. Are consistent with local, sectoral, regional or national adaptation plans and strategies; iv. Are monitored and measured against predefined indicators and remedial action is considered where those indicators are not met; v. Where the solution implemented is physical and consists in an Activity for which technical screening criteria have been specified, the solution complies with the do no significant harm technical screening criteria for that Activity.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance ²⁵	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Not relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Not relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Not relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Not relevant	Annex 2, Section 4.4
EO3	Impact on Air	Not relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Not relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Not relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

²⁵ Where item is shown as 'not relevant', it is assumed that these factors are considered in the construction and operation of the host building.

68[005] Early Warning Systems

Activity Notes

- Includes:
 - Individual renovation measures consisting of installation, maintenance, testing and repair of instruments and devices for providing early warning for climate-related hazards.
- Instruments and devices can include both early warning communication systems and hazard specific systems.
- Examples of climate related hazard specific systems that can be addressed by a local-level system could include the following:
 - Severe Weather Alert System
 - Flood Monitoring and Warning
 - Earthquake Early Warning System
 - Tsunami and Landslide Early Warning System
 - Fire Weather Warning System
 - Heatwave and Extreme Heat Warning System
 - Hurricane and Tropical Storm Tracking
 - Lightning Detection
 - Air Quality Monitoring

EO1: Climate Change Mitigation TSC

TSC are presently not available for the Activity Tiers defined.

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity complies with one or all of the following criteria: a. The economic Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity; OR b. The physical climate risks that are material to the Activity have been identified by performing a robust Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance provided in Annex 3; OR c. The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent; OR Intergovernmental Panel on Climate Change reports, scientific peer-reviewed publications and open source or paying models; OR d. The adaptation solutions implemented: i. Do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities;	Enduring

	ii. Favour nature-based solutions or rely on blue or green infrastructure to the extent possible; iii. Are consistent with local, sectoral, regional or national adaptation plans and strategies; iv. Are monitored and measured against predefined indicators and remedial action is considered where those indicators are not met; v. Where the solution implemented is physical and consists in an Activity for which technical screening criteria have been specified, the solution complies with the do no significant harm technical screening criteria for that Activity.	
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance ²⁶	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Not relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Not relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Not relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Not relevant	Annex 2, Section 4.4
EO3	Impact on Air	Not relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Not relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Not relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

²⁶ Where item is shown as 'not relevant', it is assumed that these factors are considered in the construction and operation of the host building.

C. TRANSPORTATION AND STORAGE

C.1. Bases for setting TSC

Environmental Objective 1: Climate Change Mitigation

Tier	Description / Definition
Tier 1 (Green)	- TSC are aimed at achieving defined GHG emissions levels, which reference credible, 1.5°C-aligned science-based pathways, as aligned with the Paris Agreement. In practice, this definition usually takes the form of quantitative thresholds which limit the emission of GHG for given units of distance travelled (e.g., passenger-km / vehicle-km and tonne-km for passenger and freight vehicles/vessels, respectively). - It has been assessed for the following sub-sectors that: - Land and air transport and infrastructure are at near-zero or zero-emissions (i.e., electric vehicles, state-of-the-art hybrid, hydrogen refuelling, etc.); AND - Water transport and infrastructure meet the latest emissions reduction standards set under the 2023 IMO GHG Strategy.
Tier 2 (Amber T2)	- Activity supports a transition towards a Green pathway within a defined time frame; AND - Results in a contribution to the EO which is at least as good as the lowest carbon-emitting technology currently that is technologically feasible for widespread use in ASEAN, with a prescribed sunset date; OR - Enables or promotes the implementation of a Green Activity in the context of this EO.
Tier 3 (Amber T3)	- Where an Activity meets the TSC of Amber T2 or Green but has been assessed that it will do some level of significant harm to other EOs, which will be remediated within 5 years; OR - Activity is in line with significantly reducing its GHG emissions levels following credible science-based pathways; however, is not aligned to a 1.5°C pathway.

Environmental Objective 2: Climate Change Adaptation

Tier	Description / Definition
Tier 1 (Green)	- Activity where measures have been implemented to ensure own resilience to climate change and thereby contribute to overall local, national or regional resilience; OR - Activity supports other Activities to increase resilience to climate change.
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

Environmental Objective 3: Protection of Healthy Ecosystems and Biodiversity

Tier	Description / Definition
Tier 1 (Green)	TSC are presently not available for the Activity Tiers defined.
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

Environmental Objective 4: Resource Resilience and the Transition to a Circular Economy

Tier	Description / Definition
Tier 1 (Green)	TSC are presently not available for the Activity Tiers defined.
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

All TSC set within this Appendix are common for all AMS. The Green TSC were set for interoperability with widely used international taxonomies²⁷.

TSC for the Amber Tiers were set against future emissions projections for all types of transport vehicles (i.e., land, water, and air), inclusive of freight and passenger vehicles, in Southeast Asia as derived from the IEA Net-Zero Emissions by 2050 Scenario (NZE):

- Amber T2 and Amber T3: reflects projected emissions intensity for Southeast Asia in 2030.

The TSC set here are for TSC Period 1. Proposed future TSC can be seen below.

TSC were checked against the following:

- For land-based Activities: the best available proxy data for GHG emissions, such as the EURO Standard; and lowest carbon-emitting technology currently that is technologically feasible for widespread use in ASEAN.
- For water-based Activities: modelling against the IMO 2023 GHG Emissions Strategy, consider growth scenarios²⁸ with the highest level of confidence to maintain a trajectory along the 1.5°C pathway.
- For air-based Activities: the lowest carbon-emitting technology currently that is technologically feasible, for widespread use in ASEAN, both through review of publicly available technology comparisons and through consultation with regional stakeholders.

The TSC for EOs 3-4 have been considered by the ATB but have not been included as no clear case can currently be identified in this focus sector that shows a direct positive benefit to these EOs. However, these EOs are considered under the DNSH assessment described in Annex 2.

Air transport Activities²⁹ have also been excluded under this Appendix. The basis for exclusion of these Activities under the current version of the ASEAN Taxonomy is due to limited availability of

²⁷ Including but not limited to, the EU Taxonomy for Sustainable Finance, Singapore-Asia Taxonomy, Thailand Taxonomy.

²⁸ DNV's model considers IMO's Revised 'Striving' strategy with a 13% GHG intensity reduction from a baseline scenario.

²⁹ Leasing of Aircraft; Passenger and Freight Air Transport.

data to develop thresholds, as well as no clear link for establishing contextually relevant TSC for these Activities in AMS. This can be developed in future revisions of the ASEAN Taxonomy and the ATB will monitor ongoing progress of widely used taxonomies. Note, however, that TSC are set for manufacture of aircraft at 303[001] Manufacture of aircraft.

C.2. Current, Future TSC and Review Programmes

It is expected that the TSC in this Appendix will change over time, as criteria become more stringent to promote a pathway to sustainability for ASEAN.

Note that the ATB is currently not providing general future TSC values for Activities. Activity-specific updates are specified in individual TSC as shown in this Appendix. The ATB reserves the right to make changes to address changing technological and economic situations in ASEAN.

In the current version of the ASEAN Taxonomy, the EO1 TSC for Transportation and Storage sector Activities are based on vehicle emissions at the point of use, referred to as 'tail-pipe emissions.' For water transport, this concept is known as 'tank-to-wake,' focusing solely on emissions from fuel stored in the onboard tank. However, future versions of the ASEAN Taxonomy may transition to a 'well-to-wake' approach, which would consider the entire lifecycle emissions of the Activity.

C.3. Definitions of terms used in these TSC

To avoid ambiguity, certain terms used in this TSC are defined here.

Technologically and economically feasible refers to conditions under which a project or investment can be implemented using available technology and resources in a financially viable manner. In the context of sustainable investments in ASEAN, it refers to projects in an AMS which:

- Utilise current or near future technologies which could in practice be implemented, and
- Which can be sustained over time without imposing undue economic burdens or endangering economic development in the AMS.

Dedicated to the transport of fossil fuels, in the context of water transport, refers to vessels that may be excluded from classification due to their role in transporting fossil fuels.

Table 7 lists vessels that are excluded from Green or Amber T2 classification for this reason.

Table 7: Vessels excluded due to being dedicated to the transport of fossil fuels

Activity	Tier 1 (Green)	Tier 2 (Amber T2)
Crude Oil Tankers	Excluded in all cases.	Excluded in all cases.
LNG Tankers	- Until 31 December 2030: excluded if more than 25% of tonnage transported annually is consumed at a 'non-Green' facility³⁰. - From 1 January 2031: exclusion to be reassessed, subjected to prevailing technology standards and market practices.	Not excluded.
Dry bulk carriers	- Until 31 December 2030: excluded if more than 25% of tonnage transported annually is fossil fuel consumed at a 'non-Green' facility. - From 1 January 2031: excluded if any tonnage transported annually is fossil fuel consumed at a 'non-Green' facility.	- Until 31 December 2030: excluded if more than 25% of tonnage transported annually is fossil fuel consumed at a 'non-Amber (Tier 2)' facility³¹. - From 1 January 2031: excluded if any tonnage transported annually is fossil fuel consumed at a 'non-Amber (Tier 2)' facility.

Alternative fuels are zero direct CO₂ tailpipe emission fuels, or as defined by either the Fourth IMO GHG Study (2020)³², or the EU³³. Note that the term does not include cases where avoidance of carbon emissions is achieved by onboard carbon capture and storage (OCCS), as this may be addressed in a future version of the ASEAN Taxonomy, when the technology has become more mature.

Until [date], means that a TSC is applicable up to and including the date specified. After that date, the TSC ceases to be applicable.

³⁰ A 'non-Green facility' in this context means a facility (e.g., a power station) which would not fulfil the Green TSC as defined by the ASEAN Taxonomy. Assessors would not normally be expected to conduct a full ASEAN Taxonomy assessment of any facility which is intended as the final destination of fuel carried, unless individual classification is also being sought for that facility.

³¹ A 'non-Amber (Tier 2) facility' has a similar definition to a 'non-Green facility' except that it relates to Amber (Tier 2) TSC.

³² <https://wwwcdn.imo.org/localresources/en/OurWork/Environment/Documents/Fourth%20IMO%20GHG%20Study%202020%20-%20Full%20report%20and%20annexes.pdf>, Table 75

³³ <https://alternative-fuels-observatory.ec.europa.eu/general-information/alternative-fuels>

C.4. TSC for Transportation and Storage

49[001] Infrastructure for road and public transportation, including infrastructure to enable low-carbon land transport

Activity Notes

- Definitions:
 - In this context, infrastructure refers specifically to transportation infrastructure and essential facilities.
 - This includes areas and services necessary for loading and unloading, boarding and disembarking, ticketing, travel information, passenger waiting areas, and the storage of freight and baggage.
 - Essential amenities such as washrooms, infant care facilities, health and safety provisions, and spaces for religious observance are also encompassed.
 - Non-core facilities, such as cafes, bars, restaurants, shops, entertainment venues, and exhibition spaces, are generally excluded, as they do not directly support transportation activities.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity complies with one or more of the following criteria: a. The infrastructure is dedicated to the operation of vehicles with zero tailpipe CO₂ emissions: electric charging points, electricity grid connection upgrades, hydrogen fuelling stations or electric road systems (ERS); OR b. The infrastructure and installations are dedicated to transshipping freight between the modes: terminal infrastructure and superstructures for loading, unloading and transshipment of goods; OR c. The infrastructure and installations are dedicated to urban and suburban public passenger transport, including associated signalling systems for metro, tram, and rail systems; AND 2. The infrastructure is not dedicated to the transport or storage of fossil fuels.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND 2. It must be shown that the Activity is necessary for the provision of transport security to consumers with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned: a. Operation of equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR b. Operation of monitoring and control equipment or other related IT systems to operate or maintain equipment in the event of projected flooding, storm conditions or higher temperatures; OR c. Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of equipment in scenarios of projected flooding, storm conditions or higher temperatures.
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

49[002] Infrastructure for personal mobility, cycle logistics

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The infrastructure that is constructed and operated is dedicated to personal mobility or cycle logistics: pavements, bike lanes and pedestrian zones, electrical charging, and hydrogen refuelling installations for personal mobility devices.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND 2. It must be shown that the Activity is necessary for the provision of transport security to consumers with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned: a. Operation of equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR b. Operation of monitoring and control equipment or other related IT systems to operate or maintain equipment in the event of projected flooding, storm conditions or higher temperatures; OR c. Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of equipment in scenarios of projected flooding, storm conditions or higher temperatures.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

491[001] Infrastructure for rail transport

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity complies with one of the following criteria: a. The infrastructure is either: i. Electrified trackside infrastructure and associated subsystems: infrastructure, energy, on-board control command and signalling, and trackside control-command and signalling subsystems; OR ii. New and existing trackside infrastructure and associated subsystems where there is a plan for electrification as regards line tracks, and, to the extent necessary for electric train operations, as regards sidings, or where the infrastructure will be fit for use by zero tailpipe CO₂ emission trains within 10 years from the beginning of the Activity: infrastructure, energy, on-board control-command and signalling, and trackside control-command and signalling subsystems; OR b. The infrastructure and installations are dedicated to transshipping freight between the modes: terminal infrastructure and superstructures for loading, unloading and transshipment of goods; OR c. Infrastructure and installations are dedicated to the transfer of passengers from rail to rail or from other modes to rail; AND 2. The infrastructure is not dedicated to the transport or storage of fossil fuels.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND 2. It must be shown that the Activity is necessary for the provision of transport security to consumers with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned: a. Operation of equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR b. Operation of monitoring and control equipment or other related IT systems to operate or maintain equipment in the event of projected flooding, storm conditions or higher temperatures; OR c. Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of equipment in scenarios of projected flooding, storm conditions or higher temperatures.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

4911[001] Passenger interurban rail transport

Activity Notes

- Definitions:
 - pkm: Passenger-kilometre
- Sector generic definitions are shown in Section C.3

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity complies with one or both of the following criteria: a. The trains and wagons have zero direct tailpipe CO₂ emissions; OR b. The trains and wagons have zero direct tailpipe CO₂ emissions when operated on a track with necessary infrastructure and use a conventional engine where such infrastructure is not available (bimodal); AND 2. The trains and wagons are not dedicated to the transport of fossil fuels.	Updates pre-set (as defined in these TSC).
Tier 2 (Amber T2)	1. Passenger rolling stock is aligned if its direct emissions are below 50 gCO ₂ e/p-km until 2027 (after this year only rolling stock with zero direct emissions will be aligned).	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND 2. It must be shown that the Activity is necessary for the provision of transport security to consumers with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned: a. Operation of equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR b. Operation of monitoring and control equipment or other related IT systems to operate or maintain equipment in the event of projected flooding, storm conditions or higher temperatures; OR c. Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of equipment in scenarios of projected flooding, storm conditions or higher temperatures.	Enduring

Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

4912[001] Freight rail transport

Activity Notes

- Definitions:
 - tkm: tonne-kilometre
- Sector generic definitions are shown in Section C.3

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity complies with one or both of the following criteria: a. The trains and wagons have zero direct tailpipe CO₂ emissions; OR b. The trains and wagons have zero direct tailpipe CO₂ emissions when operated on a track with necessary infrastructure and use a conventional engine where such infrastructure is not available (bimodal); AND 2. The trains and wagons are not dedicated to the transport of fossil fuels.	Updates pre-set (as defined in these TSC).
Tier 2 (Amber T2)	1. Freight transport by rail is aligned if direct emissions are below 25 gCO ₂ e/t-km until 2027 (after this year only rolling stock with zero direct emissions will be aligned).	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND 2. It must be shown that the Activity is necessary for the provision of transport security to consumers with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned: a. Operation of equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR b. Operation of monitoring and control equipment or other related IT systems to operate or maintain equipment in the event of projected flooding, storm conditions or higher temperatures; OR c. Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of equipment in scenarios of projected flooding, storm conditions or higher temperatures.	Enduring

Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

492[001] Urban and suburban transport, road passenger transport

Activity Notes

- Definitions:
 - M2: Vehicles designed and constructed for the carriage of passengers, comprising more than eight seats in addition to the driver's seat, and having a maximum mass (technically permissible maximum laden mass) not exceeding 5 tonnes, M3: Vehicles designed and constructed for the carriage of passengers, comprising more than eight seats in addition to the driver's seat, and having a maximum mass exceeding 5 tonnes;
 - CA: Single-deck vehicle; CB: Double-deck vehicle; CC: Single-deck articulated vehicle; CD: Double-deck articulated vehicle;
 - EURO Standards are European Emissions Standards. Note that these standards do not define GHG limits per se. However, these are intended to set minimum standards for M2 and M3 vehicles (i.e., buses), which are deemed to be low emission in terms of gCO₂e/pkm.
- Sector generic definitions are shown in Section C.3.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity complies with one or all of the following criteria: a. The Activity provides urban or suburban passenger transport, and its direct (tailpipe) CO₂ emissions are zero; AND³⁴ b. Until 31 December 2030, the Activity provides interurban passenger road transport using vehicles designated as categories M2 and M3 that have a type of bodywork classified as CA, CB, CC, CD and comply with the latest EURO VI Standard.	Updates pre-set (as defined in these TSC).
Tier 2 (Amber T2)	1. The Activity provides interurban passenger road transport using vehicles designated as categories M2 and M3 that have a type of bodywork classified as CA, CB, CC, CD; AND 2. Until 31 December 2030, comply with the latest EURO V Standard.	
Tier 3 (Amber T3)	1. The Activity provides interurban passenger road transport using vehicles designated as categories M2 and M3 that have a type of bodywork classified as CA, CB, CC, CD; AND 2. Until 31 December 2030, comply with the latest EURO IV Standard.	

³⁴ Activities involving urban/suburban passenger transport and interurban passenger road transport must meet both clause (1.a) and clause (1.b). For Activities that refer to only urban/suburban passenger transport or only interurban passenger road transport, only the applicable clause is required.

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND 2. It must be shown that the Activity is necessary for the provision of transport security to consumers with consideration to future possible climate related disruptions. In the context of this Activity, the following examples may be regarded as aligned: a. Operation of equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR b. Operation of monitoring and control equipment or other related IT systems to operate or maintain equipment in the event of projected flooding, storm conditions or higher temperatures; OR c. Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of equipment in scenarios of projected flooding, storm conditions or higher temperatures.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

492[002] Transport by motorbikes, passenger cars and light commercial vehicles

Activity Notes

- Definitions:
 - M1: Vehicles designed and constructed for the carriage of passengers and comprising no more than eight seats in addition to the driver's seat, and having a maximum mass (technically permissible maximum laden mass) not exceeding 3.5 tonnes; N1: Vehicles for the carriage of goods and having a maximum mass not exceeding 3.5 tonnes
 - vkm: Vehicle-kilometre
 - L: Mopeds, Motorcycles, Motor Tricycles and Quadricycles
- Sector generic definitions are shown in Section C.3.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity complies with the following criteria: a. For vehicles of category M1 and N1: i. Until 31 December 2025, direct emissions of CO₂ are <50 gCO₂e/v-km; ii. From 1 January 2026, direct emissions of CO₂ are 0 gCO₂e/v-km; b. For vehicles of category L, tailpipe CO₂ emissions are 0 gCO₂e/v-km.	Updates pre-set (as defined in these TSC).
Tier 2 (Amber T2)	1. The Activity complies with the following criteria: a. For vehicles of category M1 and N1: i. Until 31 December 2030, direct emissions of CO₂ are <50 gCO₂e/v-km.	
Tier 3 (Amber T3)	1. The Activity complies with the following criteria: a. For vehicles of category M1 and N1: i. Until 31 December 2030, direct emissions of CO₂ are <100 gCO₂e/v-km.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND 2. It must be shown that the Activity is necessary for the provision of transport security to consumers with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned: a. Operation of equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR b. Operation of monitoring and control equipment or other related IT systems to operate or maintain equipment in the event of projected flooding, storm conditions or higher temperatures; OR c. Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of equipment in scenarios of projected flooding, storm conditions or higher temperatures.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

492[003] Operation of personal mobility devices, cycle logistics

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The propulsion of personal mobility devices comes from the physical activity of the user, from a zero-emissions motor, or a mix of zero-emissions motor and physical activity. 2. The personal mobility devices are allowed to be operated on the same public infrastructure as bikes or pedestrians.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND 2. It must be shown that the Activity is necessary for the provision of transport security to consumers with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned: a. Operation of equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR b. Operation of monitoring and control equipment or other related IT systems to operate or maintain equipment in the event of projected flooding, storm conditions or higher temperatures; OR c. Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of equipment in scenarios of projected flooding, storm conditions or higher temperatures.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

4923[001] Freight transport services by road

Activity Notes

- Definitions:
 - N1: Vehicles for the carriage of goods and having a maximum mass not exceeding 3.5 tonnes; N2: Vehicles for the carriage of goods and having a maximum mass exceeding 3.5 tonnes but not exceeding 12 tonnes; N3: Vehicles for the carriage of goods and having a maximum mass exceeding 12 tonnes.
- Based on the current difference between emissions projections for freight activity by the CBI (18 gCO₂e/t-km by 2050) and IEA NZE (18 gCO₂e/t-km by 2040), it is proposed to have a forward outlook with a horizon date of 2030; indicative of reviewing the TSC at the period and potentially amending the threshold based on new emissions data in the future.
- Sector generic definitions are shown in Section C.3.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity complies with one of the following criteria: a. Vehicles of category N1 have zero direct (tailpipe) CO₂ emissions; b. Vehicles of category N2 and N3 with a technically permissible maximum laden mass not exceeding 7.5 tonnes are 'zero-emission heavy-duty vehicles'; c. Vehicles of category N2 and N3 with a technically permissible maximum laden mass exceeding 7.5 tonnes are one of the following: i. Zero-emission heavy-duty vehicle; OR ii. Where technologically and economically not feasible to comply with the criterion in point (i), until 31 December 2030 have direct (tailpipe) CO₂ emissions less than 21 gCO₂e/t-km; AND 2. Vehicles are not dedicated to the transport of fossil fuels.	Updates pre-set (as defined in these TSC).
Tier 2 (Amber T2)	1. The Activity complies with one of the following criteria: a. vehicles of category N2 and N3 with a technically permissible maximum laden mass exceeding 7.5 tonnes are one of the following: i. Where technologically and economically not feasible to achieve zero emissions, until 31 December 2030, have direct (tailpipe) CO₂ emissions less than 42 gCO₂e/t-km, and 1 January 2031 onwards, less than 21 gCO₂e/t-km; AND 2. Vehicles are not dedicated to the transport of fossil fuels.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND 2. It must be shown that the Activity is necessary for the provision of transport security to consumers with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned: a. Operation of equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR b. Operation of monitoring and control equipment or other related IT systems to operate or maintain equipment in the event of projected flooding, storm conditions or higher temperatures; OR c. Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of equipment in scenarios of projected flooding, storm conditions or higher temperatures.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

50[001] Infrastructure for water transportation, including infrastructure to enable low-carbon water transport

Activity Notes

- Sector generic definitions are shown in Section C.3.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	- The Activity complies with one or more of the following criteria: - The infrastructure is dedicated to the operation of vessels with zero direct (tailpipe) CO₂ emissions: electricity charging, hydrogen-based refuelling; - The infrastructure is dedicated to the provision of shore-side electrical power to vessels at berth; - The infrastructure is dedicated to the performance of the port's own operations with zero direct (tailpipe) CO₂ emissions; - The infrastructure and installations are dedicated to trans-shipping freight between the modes: terminal infrastructure and superstructures for loading, unloading and trans-shipment of goods; AND - The infrastructure is not dedicated to the transport or storage of fossil fuels.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND 2. It must be shown that the Activity is necessary for the provision of transport security to consumers with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned: a. Operation of equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR b. Operation of monitoring and control equipment or other related IT systems to operate or maintain equipment in the event of projected flooding, storm conditions or higher temperatures; OR c. Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of equipment in scenarios of projected flooding, storm conditions or higher temperatures.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

501[001] Retrofitting of sea and coastal freight and passenger water transport

Activity Notes

- Definitions:
 - AER: Annual Efficiency Ratio (The AER trajectory is the benchmark established by IMO under the Carbon Intensity Indicator (CII) regulations. It measures the carbon intensity of a vessel's operations by calculating its CO₂ emissions relative to its transport work.)
 - EEDI: Energy Efficiency Design Index
 - EEXI: Energy Efficiency Existing Ship Index
- Sector generic definitions are shown in Section C.3.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity complies with one or more of the following criteria: a. Until 31 December 2027, the retrofitting Activity reduces fuel consumption of the vessel by at least 10% expressed in tonnes of fuel per deadweight tonnes per nautical mile and equivalent EEXI trajectory, as demonstrated by computational fluid dynamics (CFD), tank tests or similar engineering calculations; OR b. Until 31 December 2027, the retrofitting Activity reduces fuel consumption of the vessel by at least 13% below the AER trajectories from IMO 2023, expressed in grams of fuel per deadweight tonne per nautical mile; AND 2. Vessels retrofitted or upgraded are not dedicated to the transport of fossil fuels.	Updates pre-set (as defined in these TSC).
Tier 2 (Amber T2)	1. The Activity complies with the following criteria: a. Until 31 December 2030 vessels meet the same TSC as Green criterion (1.a) or criterion (1.b); AND 2. Vessels are not dedicated to the transport of fossil fuels.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND 2. It must be shown that the Activity is necessary for the provision of transport security to consumers with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned:	Enduring

	a. Operation of equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR b. Operation of monitoring and control equipment or other related IT systems to operate or maintain equipment in the event of projected flooding, storm conditions or higher temperatures; OR c. Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of equipment in scenarios of projected flooding, storm conditions or higher temperatures.	
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

5011[001] Sea and coastal passenger water transport

Activity Notes

- Definitions:
 - AER: Annual Efficiency Ratio (The AER trajectory is the benchmark established by IMO under the Carbon Intensity Indicator (CII) regulations. It measures the carbon intensity of a vessel's operations by calculating its CO₂ emissions relative to its transport work.)
 - EEDI: Energy Efficiency Design Index
 - EEXI: Energy Efficiency Existing Ship Index
- Sector generic definitions are shown in Section C.3.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity complies with one or more of the following criteria: a. The vessels have zero direct (tailpipe) CO₂ emissions; OR b. Where technologically and economically not feasible to comply with the criterion in point (a), until 31 December 2027, hybrid and dual fuel vessels derive at least 25% of their energy from zero direct (tailpipe) CO₂ emission fuels or plug-in power for their normal operation at sea and in ports; OR c. Where technologically and economically not feasible to comply with the criterion in point (a), until 31 December 2027, the vessels have an attained EEDI / EEXI value 10% below the EEDI / EEXI requirements applicable on 1 January 2023 if the vessels are able to run on zero direct (tailpipe) CO₂ emission fuels or on fuels from alternative sources; AND 2. Vessels are not dedicated to the transport of fossil fuels.	Updates pre-set (as defined in these TSC).
Tier 2 (Amber T2)	1. The Activity complies with one or more of the following criteria: a. Until 1 January 2030, vessels must be capable of using zero direct CO₂ tailpipe emission fuels; AND, will derive at least 50% of their energy from alternative fuels; OR b. Until 31 December 2030, vessels meet the same TSC as Green criterion (1.b) or criterion (1.c); AND 2. Vessels are not dedicated to the transport of fossil fuels.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	EO2: Climate Change Adaptation TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND	Enduring

	2. It must be shown that the Activity is necessary for the provision of transport security to consumers with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned: a. Operation of equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR b. Operation of monitoring and control equipment or other related IT systems to operate or maintain equipment in the event of projected flooding, storm conditions or higher temperatures; OR c. Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of equipment in scenarios of projected flooding, storm conditions or higher temperatures.	
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

5012[001] Sea and coastal freight water transport, vessels for port operations and auxiliary activities

Activity Notes

- Definitions:
 - AER: Annual Efficiency Ratio (The AER trajectory is the benchmark established by IMO under the Carbon Intensity Indicator (CII) regulations. It measures the carbon intensity of a vessel's operations by calculating its CO₂ emissions relative to its transport work.)
 - EEDI: Energy Efficiency Design Index
 - EEXI: Energy Efficiency Existing Ship Index
- Sector generic definitions are shown in Section C.3.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity complies with one or more of the following criteria: a. The vessels have zero direct (tailpipe) CO₂ emissions; OR b. Until 31 December 2027, hybrid and dual fuel vessels derive at least 25% of their energy from zero direct (tailpipe) CO₂ emission fuels or plug-in power for their normal operation at sea and in ports; OR c. Where technologically and economically not feasible to comply with the criterion in point (a), until 31 December 2027, and only where it can be proved that the vessels are used exclusively for operating coastal and short sea services designed to enable modal shift of freight currently transported by land to sea, the vessels have direct (tailpipe) CO₂ emissions 13% below the AER trajectories from IMO 2023; OR d. Where technologically and economically not feasible to comply with the criterion in point (a), until 31 December 2027, the vessels have an attained EEDI/EEXI value 10% below the EEDI/EEXI requirements applicable on 1 January 2023 if the vessels are able to run on zero direct (tailpipe) CO₂ emission fuels or on fuels from alternative sources; AND 2. Vessels are not dedicated to the transport of fossil fuels.	Updates pre-set (as defined in these TSC).
Tier 2 (Amber T2)	1. The Activity complies with one or more of the following criteria: a. Until 1 January 2030, vessels must be capable of using zero direct CO₂ tailpipe emission fuels; AND will derive at least 50% of their energy from alternative fuels; OR b. Until 31 December 2030, vessels meet the same TSC as Green criterion (1.c) or criterion (1.d); AND 2. Vessels are not dedicated to the transport of fossil fuels.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND 2. It must be shown that the Activity is necessary for the provision of transport security to consumers with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned: a. Operation of equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR b. Operation of monitoring and control equipment or other related IT systems to operate or maintain equipment in the event of projected flooding, storm conditions or higher temperatures; OR c. Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of equipment in scenarios of projected flooding, storm conditions or higher temperatures.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

502[001] Retrofitting of inland water passenger and freight transport

Activity Notes

- Definitions:
 - AER: Annual Efficiency Ratio (The AER trajectory is the benchmark established by IMO under the Carbon Intensity Indicator (CII) regulations. It measures the carbon intensity of a vessel's operations by calculating its CO₂ emissions relative to its transport work.)
- Sector generic definitions are shown in Section C.3.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity complies with the following criteria: a. Until 31 December 2027, the retrofitting Activity reduces fuel consumption of the vessel by at least 13% below the AER trajectories from IMO 2023, expressed in grams of fuel per deadweight tonne per nautical mile; AND 2. Vessels retrofitted or upgraded are not dedicated to the transport of fossil fuels.	Updates pre-set (as defined in these TSC).
Tier 2 (Amber T2)	1. The Activity complies with the following criteria: a. Until 31 December 2030 vessels meet the same TSC as Green criterion (1.a); AND 2. Vessels are not dedicated to the transport of fossil fuels.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND 2. It must be shown that the Activity is necessary for the provision of transport security to consumers with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned: a. Operation of equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR b. Operation of monitoring and control equipment or other related IT systems to operate or maintain equipment in the event of projected flooding, storm conditions or higher temperatures; OR c. Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of equipment in scenarios of projected flooding, storm conditions or higher temperatures.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

5021[001] Inland passenger water transport

Activity Notes

- Includes:
 - Vehicles for transport through rivers, lakes, canals, and other inland water regions.
- Sector generic definitions are shown in Section C.3.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity complies with one of the following criteria: a. The vessels have zero direct (tailpipe) CO₂ emissions; OR b. Until 31 December 2027 hybrid and dual fuel vessels derive at least 50% of their energy from zero direct (tailpipe) CO₂ emission fuels or plug-in power for their normal operation; AND 2. Vessels are not dedicated to the transport of fossil fuels.	Updates pre-set (as defined in these TSC).
Tier 2 (Amber T2)	1. The Activity complies with the following criteria: a. Until 1 January 2030, vessels must be capable of using zero direct CO₂ tailpipe emission fuels; AND b. Will derive at least 50% of their energy from alternative fuels; AND 2. Vessels are not dedicated to the transport of fossil fuels.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND 2. It must be shown that the Activity is necessary for the provision of transport security to consumers with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned: a. Operation of equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR b. Operation of monitoring and control equipment or other related IT systems to operate or maintain equipment in the event of projected flooding, storm conditions or higher temperatures; OR c. Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of equipment in scenarios of projected flooding, storm conditions or higher temperatures.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

5022[001] Inland freight water transport

Activity Notes

- Sector generic definitions are shown in Section C.3.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	- The Activity complies with one or both of the following criteria: - The vessels have zero direct (tailpipe) CO₂ emission; - Where technologically and economically not feasible to comply with the criterion in point (a), until 31 December 2027, have direct (tailpipe) CO₂ emissions less than 21 gCO₂e/t-km³⁵; AND - Vessels are not dedicated to the transport of fossil fuels.	Updates pre-set (as defined in these TSC)
Tier 2 (Amber T2)	- Until 31 December 2030, have direct (tailpipe) CO₂ emissions less than 42 gCO₂e/t-km, and from 1 January 2031 onwards, less than 21 gCO₂e/t-km; AND - Vessels are not dedicated to the transport of fossil fuels.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	- Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND - It must be shown that the Activity is necessary for the provision of transport security to consumers with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned: - Operation of equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR - Operation of monitoring and control equipment or other related IT systems to operate or maintain equipment in the event of projected flooding, storm conditions or higher temperatures; OR - Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of equipment in scenarios of projected flooding, storm conditions or higher temperatures.	Enduring

³⁵ Based on the current difference between emissions projections for freight activity by the CBI (18 gCO₂e/t-km by 2050) and IEA NZE (18 gCO₂e/t-km by 2040), it is proposed to have a forward outlook with a horizon date of 2030; indicative of reviewing the TSC at the period and potentially amending the threshold based on new emissions data in the future.

Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

51[001] Airport infrastructure, including low-carbon assets and facilities

Activity Notes

- The criteria proposed for Green and Amber TSC are indicative of the fact that sustainable aviation fuel (SAF) is not a zero-tailpipe CO₂ emissions fuel; hence, should be recognised as a transitional measure. SAF blends above 50% and up to 99% are not commonly envisaged in practice and as a result, development of SAF blends above 50% is mainly focused on 100% supply; implying that airport fuel infrastructure should be capable of handling a pure supply of SAF.
- SAF must meet applicable TSC as laid down in 303[001] Manufacture of aircraft.
- Renewable diesel does not require changes to infrastructure as it is not a blended fuel. However, biodiesel blends in practice are typically in the range of 5-20%. Blends above this range (i.e., 20-100%) are not envisaged because they may require significant infrastructure changes as well as changes to ground assets or facilities using the relevant infrastructure.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	- The Activity complies with one or more of the following criteria: - The infrastructure is dedicated to the operation of aircraft with zero tailpipe CO₂ emissions: electricity charging and hydrogen refuelling; OR - The infrastructure is dedicated to the provision of fixed or mobile electrical ground power, handling vehicles and devices, and preconditioned air to stationary aircraft; OR - The infrastructure is dedicated to the zero direct tailpipe (CO₂) emissions performance of the airport's own operations, including ground handling vehicles and devices: electric charging points, electricity grid connection upgrades, hydrogen refuelling stations; OR - The infrastructure and installations are dedicated to transshipping freight with rail and water transport: terminal infrastructure and superstructures for loading, unloading and transshipment of goods; AND - The infrastructure is not dedicated to the transport or storage of fossil fuels.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	- The Activity complies with one or more of the following criteria: - The infrastructure is capable to handle aircraft fuels with low lifecycle CO₂ emissions: 100% SAF³⁶; OR - The infrastructure is dedicated to the operation of ground assets or facilities with low lifecycle CO₂ emissions: 100% renewable diesel; AND - The infrastructure is not dedicated to the transport or storage of fossil fuels.	

³⁶ In reference to infrastructure having the capability to handle 100% SAF supply.

Tier 3 (Amber T3)	3. The Activity complies with one or more of the following criteria: a. The infrastructure is capable to handle aircraft fuels and the operation of aircraft with low lifecycle CO₂ emissions: SAF; OR b. The infrastructure is dedicated to the operation of ground assets or facilities that are between 5% up to and including 100% biodiesel blends; AND 4. The infrastructure is not dedicated to the transport or storage of fossil fuels.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity, which can be demonstrated by a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND 2. It must be shown that the Activity is necessary for the provision of transport security to consumers with consideration to future possible climate-related disruptions. In the context of this Activity, the following examples may be regarded as aligned: a. Operation of equipment which has been built or upgraded to be better able to operate in projected flooding, storm conditions or higher temperatures; OR b. Operation of monitoring and control equipment or other related IT systems to operate or maintain equipment in the event of projected flooding, storm conditions or higher temperatures; OR c. Operation of facilities or equipment to provide support, storage or training related to the operations, maintenance or repair of equipment in scenarios of projected flooding, storm conditions or higher temperatures.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

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D. AGRICULTURE, FORESTRY AND FISHING

D.1. Bases for setting TSC

Environmental Objective 1: Climate Change Mitigation

Tier	Description / Definition
Tier 1 (Green)	1. TSC are aimed at achieving reduced or defined GHG emissions levels, which reference or can contribute to credible, 1.5°C-aligned science-based pathways, as aligned with the Paris Agreement. Note that a 'Green' Activity need not preclude use of fossil fuels; OR 2. TSC are capable of achieving an advanced level of certification supported by scientific evidence of GHG emissions reduction in credible national or international certification schemes.
Tier 2 (Amber T2)	1. Activity supports a transition towards a Green pathway within a defined time frame; OR 2. Activity is transitioning to achieve an advanced level of certification supported by scientific evidence of GHG emissions reduction in credible national or international certification schemes.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

Environmental Objective 2: Climate Change Adaptation

Tier	Description / Definition
Tier 1 (Green)	1. Activity where measures have been implemented to ensure its own resilience to climate change and thereby contribute to overall local, national or regional resilience; OR 2. Activity supports other Activities to increase resilience to climate change.
Tier 2 (Amber T2)	1. Activity supports a transition towards a Green pathway within a defined timeframe.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

Environmental Objective 3: Protection of Healthy Ecosystems and Biodiversity

Tier	Description / Definition
Tier 1 (Green)	1. Activity where practices have been implemented to enhance environmental sustainability and minimising/halting negative impacts on biodiversity, thereby contributing to the protection/recovery of healthy ecosystems. The Activity ensures prioritisation of: a. Restoring or enhancing natural habitats and/or native species; b. Improving natural resources management and efficiency activities to promote long-term protection of available natural resources; c. Substituting high-impact inputs with alternatives that reduce pressure on biodiversity without jeopardising the production levels of the Activity; OR 2. TSC are capable of achieving an advanced level of certification supported by scientific evidence of ecosystems and biodiversity enhancement in credible national or international certification schemes.
Tier 2 (Amber T2)	1. Activity where practices have been introduced to reduce/mitigate negative impacts on biodiversity and supporting consistent production levels; OR 2. Activity is transitioning to achieve an advanced level of certification supported by scientific evidence of ecosystems and biodiversity enhancement in credible national or international certification schemes.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

Environmental Objective 4: Resource Resilience and the Transition to a Circular Economy

Tier	Description / Definition
Tier 1 (Green)	1. Activity where measures have been implemented to minimise waste generation, maximise resource recovery and reuse, thereby contributing to resource resilience.
Tier 2 (Amber T2)	1. Activity supports a transition towards a Green pathway within a defined time frame.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

The principles for assessing Activity classification in this sector differ from other sectors. In all other sectors, as laid out in Section 4.2 of the Main Report, users may select the primary EO against which the Activity will be assessed, provided that TSC is available for said EO(s). Also, Activities may be assessed against multiple EOs.

However, in this sector, the TSC require a different approach:

- Agriculture and fishing Activities:
 - By default, these are classified under EO3 due to their critical primary function as food/feed, where natural resources must be optimised to minimise possible impact to biodiversity and ecosystems.
 - In addition to meeting EO3, users may classify the Activity under another EO if they can demonstrate that the Activity applies relevant core or non-core practices aligned with that EO.

- Hence, meeting EO3 is a minimum requirement for these Activities and is reflected in most of the practices listed.
- Forestry Activities:
 - Forests can contribute to multiple EOs. Users should define the primary EO based on the main purpose of the forest. Additional EOs can be selected as secondary EOs depending on the goals of the Activity.
 - For example: If a community forest's main purpose is ecotourism, users may select EO3, while if a commercial plantation's main purpose is for timber production, users may select EO4; in each case, Forest Management Activities will differ according to the primary EO identified in the FMP.
 - Regardless of which EO is chosen as primary, the generic TSC apply across all relevant EOs, ensuring that all applicable objectives are covered.

D.2. Current, Future TSC and Review Programmes

The TSC for Activities in this sector are review date pre-set as defined in Section 1.4. No sunset dates are specified in the TSC. TSC may be adjusted or sunset in accordance with the processes laid down in Annex 6.

D.3. Definitions of terms used in these TSC

Certification is a term used in the context of these TSC to refer to conformance with the requirements of credible international or national certification systems. Certifications whose accreditation body conforms to *ISO/IEC 17011:2017 Conformity assessment – Requirements for accrediting bodies conformity assessment bodies*, are considered Green due to their integrity in oversight, which safeguards the impartiality and quality of the compliance assessment. Examples of such certification schemes are provided in Table 8.

Table 8: Indicative Proxy green certification schemes

Activities	Proxy Certification
01[001] General perennial or non-perennial crops	● International standards including GLOBALG.A.P., Rainforest Alliance Sustainable Agriculture Standard, IFOAM Organic, Roundtable Sustainable Palm Oil (RSPO), Palm Oil Innovation Group (POIG), Sustainable Rice Platform (SRP), Proterra, Roundtable on Sustainable Soy (RTRS), Bonsucro, Roundtable for Sustainable Biomass (RSB), Fairtrade, Project level Carbon Accounting Certification that are either benchmarked against CORSIA, or Core Carbon Principles. ● National standards including National G.A.P. (accreditation body conforms to ISO/IEC 17011:2017), ISPO, MSPO, national carbon schemes (accreditation body conforms to ISO/IEC 17011:2017).
014[001] Livestock production	● International standards including GlobalS.L.P. (previously known as GLOBALG.A.P.'s Integrated Farm Assurance standard for livestock), IFOAM Organic, Roundtable on Responsible Soy Association (RTRS) for feed, Project level Carbon Accounting Certification that are either benchmarked against CORSIA, or Core Carbon Principles. ● National standards including National G.A.P. (accreditation body conforms to ISO/IEC 17011:2017), national carbon schemes (accreditation body conforms to ISO/IEC 17011:2017).

03[001] Fishing	• International standards including Marine Stewardship Council (MSC), MarinTrust for feed, Fairtrade, and other standards benchmarked against Global Sustainable Seafood Initiative (GSSI). • National standards including National G.A.P. (accreditation body conforms to ISO/IEC 17011:2017).
03[002] Aquaculture	• International standards including Aquaculture Stewardship Council (ASC), MarinTrust for feed, Fairtrade, and other standards benchmarked against Global Sustainable Seafood Initiative, Project level Carbon Accounting Certification that are either benchmarked against CORSIA, or Core Carbon Principles. • National standards including National Fishery Standards (accreditation body conforms to ISO/IEC 17011:2017), national carbon schemes (accreditation body conforms to ISO/IEC 17011:2017).
02[001] Sustainable forest management	• International standards including Forest Stewardship Council (FSC), Programme for the Endorsement of Forest Certification (PEFC), Global Sustainable Tourism Council, Project level Carbon Accounting Certification that are either benchmarked against CORSIA, or Core Carbon Principles. • National standards including PEFC-endorsed schemes: Thailand National Forest Certification System, IFCC Forest Certification Scheme, Vietnam Forest Certification System, Malaysian Timber Certification Scheme (MTCC), Indonesian Timber Legality and Sustainability Verification System (SVLK), Philippine Sustainable Forest Certification System, Myanmar National Forest Certification, Malaysia Forest Fund Forest Conservation Certificate.
02[002] Forestry plantation	
02[003] Conservation, restoration, and maintenance of natural forests	

For forestry activities, where certification is not feasible, the FMP may refer to the following practices or guidelines: Voluntary regional frameworks: ASEAN Criteria and Indicators for Sustainable Management of Tropical Forests, ITTO Voluntary Guidelines for the Sustainable Management of Natural Tropical Forests, Forest Conservation Protocol, IPCC Guidelines for AFOLU, National REDD+ or MRV, IUCN Green List of Protected and Conserved Areas

The classification of certification schemes for AFF under the ASEAN Taxonomy recognises both national and international certification systems as Green, subject to appropriate quality assurance standards. The rationale is twofold.

First, each certification scheme, whether national or international, develops its own unique criteria and processes. The central objective of the sustainable finance framework is to promote sustainable agricultural practices in line with EOs, not to endorse one particular system over another. While individual schemes may vary in stringency, those that contribute demonstrably to environmental goals should be equally valid in achieving Green classification. Further, reliance on accreditation bodies that comply with ISO/IEC 17011:2017 ensures that the audit and verification processes underpinning these schemes maintain credibility and integrity, mitigating risks of inconsistency or diminished oversight.

Second, existing national taxonomies in ASEAN already recognise both national and international certification schemes as Green. Aligning with this practice enhances interoperability within Southeast Asia, supporting convergence and market confidence. Excluding national certification

schemes from Green classification would undermine consistency across the region and create unnecessary barriers for agricultural producers who operate under national systems accredited in line with ISO 17011:2017 requirements. Adopting an approach that is inclusive of both national and international schemes under the Green classification aligns the ASEAN Taxonomy with its fundamental objective: to promote sustainable agricultural practices at scale. By leaving the choice of schemes to market participants, the ASEAN Taxonomy avoids prescriptive bias, enables flexibility, and leverages competitive forces to drive higher standards over time.

Environmental and climate-related technical assessments is a terminology commonly shared across all the AFF activities. Environmental and/or climate-related technical assessments are necessary for developing an Integrated Farm Management Plan (IFMP), a Forest Management Plan (FMP), or a Fishery Improvement Project (FIP) Action Plan. These assessments provide environmental information relevant to the farm or forest. Several certification schemes acknowledge that small-scale operators often lack the resources for comprehensive assessments. Therefore, simplified assessment methodologies with reduced costs or tools to address data deficiencies in such context, enabling precautionary evaluations, are available to support smallholders in demonstrating compliance with certification requirements. Examples of environmental assessments are provided in Table 9, and are non-exhaustive.

Table 9: Examples of environmental and climate-related technical assessments

	Non-small-scale operators	Small-scale operators	Preliminary methodologies (non-small-scale operators / small-scale operators)
Forest / farm carbon stock assessment	IPCC, UNFCCC CDM, Verra Verified Carbon Standard (VCS), Verra Gold Standard, Partnerships for Forests (4F) Forest Carbon Assessment (FCA) Methodology, Nationally Determined Contribution Expert Tool (NEXT) accounting system, High Carbon Stock (HCS) Approach Toolkit, REDD+ MRV	Participatory biomass sampling, FAO Environmental externalities accounting tool (EX-ACT Tool), Participatory Measurement, Reporting and Verification (PMRV) systems	• Baseline forest/farm inventory • Land tenure and boundary mapping • Carbon pool identification (aboveground, belowground, soil) • Forest typology classification (natural vs. planted; intact vs. degraded) • Stakeholder mapping for participatory MRV
Climate Risk and Vulnerability Assessment (CRVA)	IPCC AR5 or AR6 Framework, GCoM and CDP Guidance, ADB CRVA Protocols, FAO Vulnerability Assessment, ISO 14091:2021 - Adaptation to climate change. Guidelines on vulnerability, impacts	Community vulnerability profiling (e.g., AMIA CRVA), hazard mapping with local inputs	• Hazard identification based on historical climate data and projections. • Exposure mapping (location of assets, communities, forests). • Sensitivity analysis (crop types, livelihood dependence, slope gradients).

	and risk assessment, ISO 14090:2019 Adaptation to climate change. Principles, requirements and guidelines IPCC AR6 WGII Ch.5 (specific to Aquaculture/Fisheries)		• Institutional capacity assessment for implementing CRVA frameworks. • Stakeholder vulnerability profiling (esp. for Indigenous Peoples or smallholders). • Aquaculture adaptations (e.g., sea-level rise, storms).
Environmental and Social Impact Assessment (ESIA)	IFC Performance Standard including PS6 for biodiversity in aquaculture, IUCN ESIA Guidance, ISO 14001 & 14004, National ESIA Regulations, FAO Aquaculture EIA Guidelines, Fishery Performance Indicators (FPIs)	Roundtable Sustainable Palm Oil (RSPO) Smallholder SEIA Toolkit, Local Government Unit (LGU)-led modular ESIA templates, Marine Stewardship Council (MSC) Risk-Based Framework, Fishery Performance Indicators (FPIs)	• Scoping study to define project boundaries and potential impact zones (e.g., effluent plumes in ponds/cages for aquaculture). • Baseline ecological condition (habitat types, biodiversity levels, High Conservation Value (HCV) presence). • Social baseline mapping (tenure, livelihood systems, gender dynamics). • Free, Prior and Informed Consent (FPIC) readiness check and stakeholder identification (including coastal communities). • Legal and regulatory context review (national ESIA laws, safeguards). • Principle 2 Habitat/ESIA for ASC Certification.
Resource use and circularity assessments	ISO 14040 and 14044, GHG Protocol Product Standard	Farm-level input-output logs, lifecycle thinking tools (e.g., Cool Farm Tool), proxy-based resource productivity tracking	• Material flow mapping (inputs, outputs, waste streams, effluent/nutrient recycling in ponds for aquaculture). • Technology and infrastructure baseline (energy use, water systems, biomass processing, recirculation in hatcheries) • Baseline footprint assessments (carbon, water, land, nutrient loads) • Market access and resource recovery potential • Smallholder resource tracking readiness (availability of input-output logs) • ASC Criteria 3.1-3.3 on feed efficiency

Integrated Farm Management Plan (IFMP) is a term commonly shared across the following activities:

- 01[001] General perennial or non-perennial crops
- 014[001] Livestock production
- 03[002] Aquaculture

An IFMP is a document that demonstrates how a farm is intended to achieve results relevant to the EOs of the ASEAN Taxonomy. The IFMP may be prepared by the Farm Manager or, in the case of group operations, the Group Manager, in consultation with farm members and workers and is submitted to the investors/lenders. Portions of the IFMP that do not contain confidential information may be made publicly available. An IFMP is subject to annual reporting as required by the applicable sustainable finance standards and principles. Verification of an IFMP may be conducted by a Third-Party service provider as recommended by standards and principles, or as required in any agreements with investors or lenders. There is no established structure for the IFMP, but at a minimum, the IFMP must include the following information:

1. Current Farm Situation: This section provides a comprehensive overview of the farm's existing conditions, including:
 - a. Basic Information
 - i. A detailed map of the farm area, supported by GPS coordinates or polygons, to define its boundaries and layout.
 - ii. Land tenure or description of the legal status of the land.
 - iii. Resources input and output describing details of current input usage (e.g., fertiliser, pesticide, feed, seed, brood stock, water and therapeutants), full-time and seasonal workers, machineries, and output (e.g., harvest or production).
 - iv. Determination of whether the farm is considered large, medium or small.

All farms are expected to adopt as many core practices as possible. Adaptation of practices to meet the local regulations, social or environmental context is allowed providing that rationale for adaptation is clearly outlined. The distinction between large/middle/small farms is applicable to environmental and climate-related assessments and impact indicators. Small farms are permitted to use simplified environmental and climate-related assessments and proxy indicators for impact reporting due to their limited resources. Medium farms may use a combination of simplified and comprehensive environmental and climate-related assessments, and combined proxy and comprehensive indicators for impact reporting. Large farms are expected to use comprehensive environmental and climate-related assessments and comprehensive indicators for impact reporting. Selected assessments and indicators should be appropriate to the farm's scale and impact.

Determination of whether the farm is considered large, medium or small is based on the following hierarchy/priority:

- i. National law; or
- ii. The certification scheme the farm is aligned with or transitioning to; or
- iii. If no clear distinction is provided by national law or a certification scheme, a materiality assessment may be used to classify farms as small, medium or large, considering at least one of the following factors: farm size, number of full-time or seasonal workers, input use intensity, frequency and diversity of crop rotation, or land/labour use efficiency.

For clarity, a farm with an area smaller than 20 Ha per household may be classified as small, 20–100 Ha as medium, and a farm larger than 100 Ha per household may be classified as large by default, unless the materiality assessment indicates otherwise.

- b. Environmental and climate-related data: this section outlines an assessment of available on-farm natural resources. The environmental and climate-related data are acquired from environmental and climate-related technical assessments which should be adapted to the scale or intensity of the farm. The data required in this section include:
 - i. Description of farm resources, e.g., major features of the farm, soil quality, vegetation, water sources, species diversity, endangered species and plant community types, on-farm carbon, climate vulnerability, and other relevant sources on and around the farm. For aquaculture, detailed data on water sources and quality, effluent risks such as total suspended solids (TSS) and nutrient levels, biodiversity baselines, and hatchery-specific inputs including broodstock sourcing and feed usage.
 - ii. Identification of potential environmental risks, as outlined in the AFF DNSH (see Annex 2).
 - iii. Preventive and mitigation measures to address identified risks, ensuring alignment with EOs.
 - c. Social issues:
 - i. Description of social issues (e.g., consultation of stakeholders in accordance with the terms and conditions laid down in national law, existing social challenges affecting the farm or surrounding area) and co-benefits (e.g., local employment, community inclusion, land rights, community safeguards).
 - ii. Identification of potential social risks, as outlined in the Main Report, Chapter 4.5 Assessment of Social Aspects.
 - iii. Preventive and Mitigation Measures to address identified risks, ensuring alignment with Main Report, Chapter 4.5 Assessment of Social Aspects.
2. Expected Results: This section outlines the anticipated mid- and long-term outcomes or impacts, aligned with ASEAN Taxonomy EOs and selected core or non-core practices. It includes:
- a. Target certification: name(s) of national or international certification schemes the farm is aligned with or transitioning to (if applicable). Refer to Table 8 for a list of relevant certifications.
 - b. Mid- and long-term outcome(s) or impact(s): aligned to national or regional action plans with scheduled milestones relevant to ASEAN Taxonomy EOs. Smallholders may report proxy indicators if collection of data for key indicators is not feasible. A proxy indicator is acceptable when it is capable of showing measurable change over time. For aquaculture, examples include for core EO3: escape prevention measures, no operations in IUCN-protected areas; for non-core climate adaptation: resilient site siting against sea-level rise or extreme weather; for hatcheries under ISIC 032: effluent limits like pH 6-9 and BOD5 <30 mg/L, biosecurity protocols to minimise disease risks and support ecosystem protection.
 - c. Applicable and selected core and non-core practices: identification of applicable practices, referencing:

- i. National, regional, or international guidelines (e.g., ASEAN Regional Guidelines for Sustainable Agriculture, ASEAN Good Animal Husbandry Practices for Layers and Broilers – Food Safety Module, ASEAN Good Animal Husbandry Practices for Pigs, or national Good Agriculture Practices Guidelines/Standards, ASEAN Biodiversity Plan).
 - ii. Proxy certification guidelines, if applicable. If specific core practices are not applicable, a justification must be provided.
3. Project Implementation and Monitoring Plan: This section details the practical steps for achieving the IFMP's objectives, including timeline, eligible inputs, monitoring plan, and monitoring mechanisms. The monitoring indicator needs to be adapted to the scale or intensity of the farm. The plan should outline phased self-assessments to track progress on key environmental indicators (e.g., effluent quality, biodiversity protection), with milestones for initial compliance on essentials, followed by broader improvements. Include mechanisms for periodic independent verification to ensure objectivity and allow proxy indicators for small-scale operators to address resource constraints, supporting unified coverage of agriculture and aquaculture farms.

A Forest Management Plan (FMP) is a document that outlines the planned forestry activities, including inventory, harvesting, silviculture, and protection, within a specific forest area. It specifies objectives, actions, and control arrangements to achieve desired outcomes while ensuring the sustainable use and conservation of forest resources. The FMP may be prepared by the forest manager or, in the case of group operations, the group manager, in consultation with workers, and is submitted to the investors/lenders. Portions of the FMP that do not contain confidential information may be made publicly available. An FMP is subject to annual reporting as required by the applicable sustainable finance standards and principles. Verification of the FMP may be conducted by a third-party service provider as recommended by standards and principles, or as required in any agreements with investors or lenders. FMPs are set out in national laws, or where national law does not define an FMP, the FAO definition of forest³⁷ and natural forest³⁸, and the IUCN definition of protected area³⁹ shall be adopted.

Smallholders are defined by national law. Where national law does not contain such a definition, smallholders correspond to any small-scale farmers who manage a relatively small area of forest or land for timber or non-timber forest products, often for subsistence or commercial purposes. Specifically, smallholders:

- May potentially manage a forest management unit under 100 Ha.
- May potentially manage the forest for the production of non-timber forest products (NTFP) only.

Smallholders may also be defined where the rate of timber harvesting is less than 20% of the mean annual increment within the total production forest area of the unit and the harvest from the total production forest area is less than 5,000 m³/year.

While the Activity meets the minimum requirements of FMPs as stipulated in national law or has obtained a forest management certification, additions to the FMPs are prescribed and shall be

³⁷ Land spanning more than 0.5 ha with more than 10% tree canopy cover and trees higher than 5 m (or having the potential to reach a height of 5 m). Land predominantly under agricultural or urban land use regimes is not included as forest because the definition also considers land use (FAO, 2000)

³⁸ A forest composed of indigenous trees and not classified as forest plantation (FAO, 2000).

³⁹ A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values (IUCN, 2020)

provided where key components are not explicitly addressed within the submitted or certified plan. Where documentation is incomplete or ambiguous, the Activity must provide the required information to demonstrate compliance. This includes:

1. Current forest situation: This section provides basic information, including:
 - a. A detailed map of the forest area, supported by GPS coordinates or polygons, to define its boundaries and layout.
 - b. Forest tenure/description of the legal status of the land.
 - c. Forest resources and biophysical characteristics.
 - d. Social Aspects (e.g., FPIC, living wage, consultation of stakeholders in accordance with the terms and conditions laid down in national law, existing social challenges affecting the land or surrounding area) and co-benefits (e.g., local employment, community inclusion, land rights, community safeguards) in accordance with Main Report, Section 4.5.
 - e. Projections of annual harvest rate.

2. Environmental and climate-related data: This includes the results of at least one environmental and climate-related technical assessment relevant to its primary objective. The methodology applied must follow a methodological rigour consistent with internationally recognised guidelines/framework described in Table 9.

For smallholder operations, the assessment conducted may be acceptable provided that:

- a. The methodology is simplified but uses technically defensible approaches (e.g., use of validated proxy indicators, tiered estimation models).
- b. Visual, spatial, or narrative documentation including traceable records for audit is provided.
- c. It is explicitly linked to a reference methodology (e.g., IPCC, ISO, VCS, IFC) even if simplified or adapted locally.

For climate mitigation:

- A quantified forest carbon stock assessment (required).
- A lifecycle analysis of forest operations and product output.
- HCS assessment to identify forests with high carbon stocks

For climate change adaptation:

- A CRVA identifying exposure, sensitivity, and adaptive capacity of forest ecosystems and communities in accordance with the guidance set in Annex 3 (required).

For conservation and biodiversity:

- An ecological and social impact assessment (required).
- HCV assessment of areas (if any).
- Biodiversity surveys.
- An ecological/social assessment that demonstrates compliance with national biodiversity safeguards.

For sustainable production (any):

- A lifecycle analysis of forest product supply chains.
- Material flow analysis.

For 02[003] Conservation, restoration, and maintenance of natural forests:

- A quantified forest carbon stock assessment (required).

- A CRVA identifying exposure, sensitivity, and adaptive capacity of forest ecosystems and communities in accordance with the guidance set in Annex 3 (required).
- An ecological/social assessment that demonstrates compliance with national biodiversity safeguards (required).
- HCS assessment to identify forests with high carbon stocks (required if any).
- HCV assessment of areas (required if any).
- Biodiversity surveys.

Note that professional services, such as surveys and assessments, conducted to enable sustainable Activities may be classified as a sustainable Activity in themselves. See Appendix H of this Annex.

3. Sustainable forestry practices: This includes descriptions of sustainable forestry practices that will be implemented based on the conducted assessments. Selected practices must:
 - a. Collectively demonstrate substantial contributions to the primary objective; AND
 - b. Be consistent with national forest management guidelines ⁴⁰, targets, and biodiversity safeguards; AND
 - c. Provide evidence that only chemical inputs that are not listed under Annex A or B of the Stockholm Convention, not classified as Ia or Ib hazardous substances by WHO, and not restricted under the Rotterdam Convention, are used in forestry operations; AND
 - d. Documented in the FMP, including rationale for chosen combinations and expected outcomes.

Examples of sustainable forestry practices are provided in Table 20.

For 02[003] Conservation, restoration, and maintenance of natural forests:

- a. The Activity must be categorised under one or more of the following intervention types:
 - Avoided deforestation.
 - Active restoration.
 - Assisted natural regeneration.
 - Sustainable management of existing forests that maintain or enhance carbon stocks consistent with National Biodiversity Strategies and Action Plans. Consistency entails adherence to protected species lists, restoration priorities, or ecosystem service goals.
- b. Where multiple intervention types are implemented, they must be sequenced according to the following hierarchy:
 - First priority: Avoidance activities that prevent loss of existing forest resources
 - Second priority: Minimisation activities that reduce operational impact through improved practices.
 - Third priority: Restoration activities that restore degraded ecosystems.
 - Fourth priority: Compensation – Offset mechanisms that generate equivalent ecological outcomes elsewhere.
- c. Where deviation from this hierarchy is necessary due to local context or ecological constraints, the rationale shall be documented in the FMP and supported by field-based evidence.

⁴⁰ Examples of National Forest Management Guidelines include the Philippines' DENR Technical Bulletin on Forest Management Planning, Malaysia's National Forestry Policy, Vietnam's Forest Law (2017) and National REDD+ Action Plan, Thailand's Community Forestry Act (2019), Indonesia's Law No. 41/1999 on Forestry.

4. Management implementation plan: This section details the practical steps for achieving the FMP's objectives. This includes:
 - a. Quantitative performance targets aligned with national or regional action plans⁴¹ with scheduled milestones relevant to the EO.
 - b. An HCV management plan providing the basis for ecosystem services management where HCV and HCS areas are identified.
 - c. Appropriate measures identified to prevent negative impacts on species of conservation concern, critical habitats and the overall biodiversity in the FMU and the surrounding landscape consistent with National Biodiversity Safeguards⁴².
 - d. Where material changes in forest and/or climate risk conditions occur (e.g., timber harvest, major natural disturbances that alter the forest, prolonged drought, policy shifts, new hazard data, changes to information or scientific findings guiding management, changes to land manager's management objective, changes to the schedule for carrying out activities and tasks in the documented)—the Activity must:
 - i. Resubmit or update its implementation plan and CRVA within 12 months of the change.
 - ii. Include revised metrics, updated baselines, and adjusted milestones.
 - iii. Document the reassessment in the FMP and disclose it through the reporting mechanisms.
5. Monitoring, evaluation, and reporting program: This section details the strategy for tracking project progress, with implementation and monitoring recorded and verified at least annually. The program must demonstrate that it:
 - a. Explicitly links to the primary objective where quantifiable and verifiable key performance metrics⁴³ are identified to track progress towards its achievement.
 - b. Undertakes a monitoring method and sampling procedure that:
 - i. Is suited to operations/performance metrics being monitored.
 - ii. Follows minimum sampling standards and monitoring protocols in line with national or subnational guidelines. For smallholders, locally adapted procedures may also be used, provided they are transparent, replicable, and developed through inclusive stakeholder engagement.
 - iii. Describes procedures for analysing and presenting monitored information in line with the relevant monitoring protocol.
 - c. Includes a plan for at least an annual review of monitored information
 - d. Reports are annually published through annual reports, sustainability reports, or stakeholder briefings.

Fishery Improvement Project (FIP) Action Plan is a term used in Activity 03[001] Fishing. The FIP Action Plan may be developed by the fishery manager or, in the case of cooperative or group operations, the group manager, in consultation with fishery stakeholders including workers. The finalised FIP Action Plan is submitted to investors or lenders as part of sustainability reporting. Portions of the FIP Action Plan that do not contain confidential information may be made publicly

⁴¹ National action plans for forests may include 2030 FOLU Net Sink targets (Indonesia), CCMP Strategy 2 (Thailand), National REDD+ Strategies, PBSAP 2024–2030 (Philippines), Indonesian Biodiversity Strategy and Action Plan (IBSAP), Vietnam Forestry Development Strategy (VFDS), Forest Protection Plan (Thailand), National Adaptation Plans, Climate Adaptation Investment Planning, and Integration of Nature-based Solutions.

⁴² National Biodiversity Safeguards in ASEAN may include the ASEAN Criteria and Indicators for SFM, REDD+ Safeguards (UNFCCC), ASEAN Heritage Parks Programme, ASEAN Biodiversity Plan, ASEAN Guidelines for Agroforestry Development, NIPAS Act (Philippines)

⁴³ Performance metrics are verifiable when it is supported by objective and auditable data sources, and it is derived from clear data collection protocols.

available to enhance transparency. The FIP Action Plan is subject to annual reporting to demonstrate progress against defined milestones, in line with applicable sustainable finance standards and MSC program requirements. Verification of the FIP Action Plan progress may be conducted by an independent third-party service provider, as recommended by sustainable finance standards and MSC guidance, or as stipulated in agreements with investors or lenders. A fishery program that has not yet met the criteria for a basic FIP or comprehensive FIP under the MSC system but seeks to access green financing may submit an FIP Action Plan.

A Fishery Improvement Project (FIP) is a collaborative, multi-stakeholder program designed to improve the sustainability of a fishery through a structured work plan that addresses key performance indicators aligned with internationally recognised sustainable fisheries standards. A Basic FIP focuses on foundational improvements, such as initial stock assessments and basic management actions with annual progress reporting, while a Comprehensive FIP requires more rigorous, science-based measures, including detailed environmental impact analyses and third-party verification to achieve advanced outcomes. The FIP Action Plan is a term used in fishing activities to refer to this core workplan; a fishery that has not yet met the criteria for such sustainable fisheries standards but seeks to access green financing may submit an FIP Action Plan, which must include at least the following information:

FIP Action Plan must include at least the following information:

1. Current situation on the fishery, which includes:
 - a. Fishery name or Unit(s) of assessment;
 - b. Fishery location;
 - c. Fishing method/gear;
 - d. Target species of the fishery;
 - e. Scale of the fishery. The judgement of whether a fishery is large-scale or small-scale should be based on national law. In AMS, national laws provide definitions for small-scale fisheries typically based on criteria such as vessel length, engine power, gear type, or production capacity.
 - f. Existing environmental issues (e.g., stock status, primary and secondary species, ETP species, habitat, and ecosystem), including how available evidence falls short of key performance indicators under internationally recognised sustainable fisheries standards. These data inform pre-assessments to identify gaps and proposed actions to achieve compliance. For a small-scale fishery with limited access to such data, simplified tools like the MSC Risk-Based Framework or other relevant tools can be used. Where applicants seek green financing for practices aligned with climate change mitigation or adaptation, relevant climate-related data from “Environmental and climate-related technical assessments can be used. Identification of potential environmental risks, as outlined in the AFF DNSH, (see Annex 2).
 - g. Preventive and Mitigation Measures to address identified risks, ensuring alignment with EOs. Preventive and mitigation measures are appropriate to the risks, impact and scale.
2. Expected results which indicate mid- and long-term outcome(s) or impact(s) expected, ASEAN Taxonomy EOs. This includes identification of applicable core practices to protect healthy ecosystems and biodiversity and/or non-core practices that support other environmental goals. Where specific core practices are not applicable, justification must be provided in the FIP Action Plan. Identification of applicable core or non-core practices shall

refer to national, regional, or international guidelines, including those from proxy certification schemes.

3. Project Implementation and Monitoring Plan indicating the timeline, eligible inputs or investments for selected core and/or non-core practice(s), and the plan to monitor project implementation. Progress of project implementation is monitored and recorded at least on an annual basis. The intensity and frequency of progress monitoring/verification responds to FIP Type (Basic or Comprehensive). Refer to Guidelines for supporting Fishery Improvement Projects⁴⁴ for more detailed information on progress monitoring/verification.

The term outcomes and indicators as used in the context of these TSC may refer to EO-specific outcomes derived from forestry interventions and practices. An example of how it is applied in the ASEAN Taxonomy is illustrated in Table 10.

Key indicators refer to quantifiable measurements that demonstrate progress towards achieving objectives and outcomes. Proxy indicators are considered acceptable when they meets all of the following:

- It is supported by peer-reviewed literature or recognised methodologies.
- It is derived from verifiable sources.
- It includes documented data collection protocols.
- It is traceable to a baseline and capable of showing measurable change over time.

Table 10: Outcome and Indicators (non-exhaustive and illustrative)

Outcome	Key Indicators	Proxy Indicators	Verifiable Data Source/ Monitoring Protocol
Climate/environmental outcomes			
Forest cover retention, reduced deforestation	Forest cover change (net gain/loss in hectares), decline in slash-and-burn hotspots (mapped incidents/year).	- Biomass growth rate (t/Ha/year), tree density per hectare. - NDVI trends. - Biomass accumulation.	Maps zoning plans, legal designations, satellite imagery, forest stock calculations, GIS-based assessments, forest inventory.
Forest recovery and regeneration	Regeneration density.	- Sapling survival rate. - Natural regeneration index.	Ground surveys, restoration plot inventories, restoration protocols, species lists, site selection criteria.
Ecosystem integrity	Presence of HCV areas.	Species richness.	HCV assessments,

⁴⁴ <https://solutionsforseafood.org/wp-content/uploads/2023/04/FIP-Guidelines-Apr2023.pdf>

	• Species richness and abundance. • Water quality and quantity. • Soil conditions (chemical, physical, biological).	• River stage height; flow velocity. • Water: Water table fluctuation; spring discharge, rain gauge data; canopy drip rates, vegetation greenness index (such as NDVI), leaf wilting, wetland area extent; ponding frequency. • Soil: runoff patterns, feel tests, water retention, species richness in soil flora/fauna, enzyme activity.	biodiversity inventories, water quality tests, hydrology modelling, satellite imagery, GIS-based assessments.
Adherence to safeguards	• Compliance with buffer zones or harvest limits.	• No. of safeguard breaches. • Stakeholder grievances.	• Regulatory inspections, community monitoring protocols, FPIC records.
Adaptation outcomes			
Flood extent reduction (Ha)	• Historical flood extent. • % increase in vegetative buffer zones. • Reduction in flood prone areas (Ha).	• Change in flood peak discharge levels.	• Remote sensing, hydrological models, community reports
Increased resilience to disaster	• Disaster preparedness score. • Slope stabilisation coverage (Ha). • Vegetation density on vulnerable slopes. • Incidence of slope failure.	• Presence of DRR plans, risk mapping.	• Community surveys, DRR plan validation, training participation logs.
Ecological integrity and biodiversity			
Stable or increased native species populations (Ha, no.)	• Vegetation cover, biodiversity index.	• Species density/Ha. • Regeneration rate.	• Forest inventories, biodiversity plot monitoring, camera trap surveys,

			community species mapping.
Improved habitat connectivity and reduced fragmentation (Ha)	Patch size and connectivity.	Distance between core habitat, edge to core ratio.	Land use and satellite imagery analysis, GIS habitat corridor modelling, participatory landscape mapping
Reduced biodiversity threats	Incidents of illegal logging, biodiversity index.	- Poaching reports - Land conversion trends.	Enforcement agency records; REDD+ safeguard monitoring; satellite-based detection; participatory threat mapping.
Resource efficiency outcomes			
Reduced material input per unit of output	Material Intensity (kg/unit of product or service).	Resource productivity (GDP/kg DMC); Material Input Per Service (MIPS) unit	Economy-wide Material Flow Analysis (EW-MFA); national accounts; ISO 14051 Material Flow Cost Accounting.
Enhanced circularity	% of materials reused or recycled.	Product lifespan extension; remanufacturing rate; secondary material input ratio.	Lifecycle Assessment (LCA); ISO 14044; circularity audits; product tracking databases.
Minimised waste generation	Waste per unit of output (kg/unit).	Recycling rate; % of reused materials; landfill diversion rate.	Waste manifests; ISO 14001 audits; local government waste tracking systems; facility-level waste logs.

D.4. DNSH for Agriculture, Forestry and Fishing

Agriculture, Forestry and Fishing Activities are required to meet only the sector-specific DNSH criteria. This reflects the unique practice-based assessment applied in this sector, where practices from multiple EOs are evaluated simultaneously. As a result, DNSH considerations are already largely embedded within the classification process. These sector-specific rules are shown in Annex 2 of the ASEAN Taxonomy.

Notwithstanding the above, with respect to DNSH, it is important to note that in complying with all the requirements of the ASEAN Taxonomy, the entity being evaluated must first comply with all laws, regulations and requirements established by the law of the country where the Activity takes place.

D.5. TSC for Agriculture, Forestry and Fishing

01[001] General perennial or non-perennial crops

Activity Notes

- Includes
 - Growing of non-perennial crops (e.g., cereals, rice, vegetables, sugarcane, maize, and cassava), and perennial crops (e.g., palm oil, rubber, tropical and subtropical fruits) and mixed farming in open fields or in protected environments.
 - Service activities incidental to crops production such as fields preparation, treatment of crops, pest control, and irrigation operation.
- Sector generic definitions are shown in Section D.3.

EO1: Climate Change Mitigation TSC

This Activity is primarily classified under EO3, which is a minimum requirement. In addition, users may also classify it under this EO if they can demonstrate that the Activity implements relevant core or non-core practices aligned with this EO.

EO2: Climate Change Adaptation TSC

This Activity is primarily classified under EO3, which is a minimum requirement. In addition, users may also classify it under this EO if they can demonstrate that the Activity implements relevant core or non-core practices aligned with this EO.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	To meet the TSC, (1) OR (2) must be satisfied; criterion (3) applies in all cases. The Activity: 1. Has obtained certification at a national or international level that is aligned with internationally recognised standards (Certification is defined in Section D.3); OR 2. Provides an IFMP which demonstrates ongoing adoption of all applicable core practices, or as many as feasible, to ensure alignment with proxy certification. Adoption of non-core practices is voluntary; AND 3. Undertakes a self-assessment of GHG sources and sinks on the farm, following national or international carbon accounting standards for project-based or organisation-based carbon accounting⁴⁵. Verification of the GHG assessment is not required. Criterion 3 is satisfied if the GHG assessment is included in the IFMP under criterion 2 or in the certification under criterion 1.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	To meet the TSC, (1) OR (2) must be satisfied; criteria (3) AND (4) apply in all cases. The Activity:	

⁴⁵ Agricultural Activities should assess carbon impacts using project-based or organisation-based carbon accounting, such as ISO 14064-2, which focuses on quantifying emission reductions from specific projects and aligns with schemes like CORSIA or Core Carbon Principles.

	1. Provides a time-bound IFMP aiming to achieve a certification at a national or international level that is aligned with internationally recognised standards (Certification is defined in Section D.3); OR 2. Provides a time-bound IFMP aiming to adopt all applicable core practices, or as many as feasible, to ensure alignment with proxy certification. Adoption of non-core practices is voluntary; AND 3. Undertakes a self-assessment of GHG sources and sinks on the farm, following national or international carbon accounting standards for project-based or organisation-based carbon accounting⁴⁶. Verification of the GHG assessment is not required. Criterion 3 is satisfied if the GHG assessment is included in the IFMP under criterion (2) or in the certification under criterion (1); AND 4. The Activity may remain Amber for 5 calendar years after the assessment as Amber or until the Amber Tier is sunset, whichever time comes first. Within this time the Activity must transition to Green or will be reclassified as Red.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

Core and non-core practices for perennial and non-perennial crops

- The practices pathway is developed as an alternative to the certification pathway, with the intention to bring both pathways as closely aligned as possible.
- The schemes analysed are FSC and PEFC (for rubber), RSPO (for palm oil), GLOBALG.A.P. (for crops), IFOAM Organic Standard (for coffee, vegetables and fruits), and SRP (for rice) due to international market recognition and access, familiarity and adoption within ASEAN, and relevance to ASEAN's industry.
- Each scheme is unique. Some schemes are outcome-based, some schemes are practice-based. However, core practices are designed to meet environmental requirements of schemes as closely as possible.
- Non-core practices are voluntary as they are not commonly identified by the majority of the certification schemes listed in Table 8.

See details of core and non-core practices below.

Table 11: 9 core practices for all perennial and non-perennial crops

Practices	Definition	Output and example indicators	EO1	EO2	EO3	EO4
1. Environmental and social impact	Conduct a site-specific impact assessment to identify, evaluate, and manage ecological and social risks	• Protected ecosystem. • Key indicator: ESIA Report			Y	

⁴⁶ Agricultural Activities should assess carbon impacts using project-based or organisation-based carbon accounting, such as ISO 14064-2, which focuses on quantifying emission reductions from specific projects and aligns with schemes like CORSIA or Core Carbon Principles.

assessment (ESIA)	related to communities, water, soil, biodiversity, and cumulative ecosystem impacts. Include ecological siting criteria such as adequate buffer zones from sensitive habitats (e.g., mangroves, wetlands) and ensure compliance with relevant national regulations. ESIA should be integrated into farm design and updated when site conditions change. This practice may be classified as a sustainable Activity in itself. See Appendix H of this Annex.	- and mitigation plan. - Proxy indicator: simplified ESIA report and list of mitigation actions.				
2. Fertiliser management	Nutrient management (including N-P-K) is carried out efficiently according to the needs of each crop (fertiliser type, quantity, method, and timing) and in line with soil quality. Organic or bio-fertilisers, or soil amendments may be used with an appropriate balance between chemical and organic fertilisers. Practical considerations are also taken into account (sources, available nutrients, and related transportation). When feasible, use soil testing kits, training program on soil analysis. Optimising the use of chemical N fertiliser in conjunction with organic fertiliser (biological N-fixation such as cover crops or commercial organic N or zero-emission N fertiliser).	- Reduced emissions and/or Reduced pollution. - Key indicator: nutrient use efficiency (kg N-P-K applied per tonne of yield). - Proxy indicator: use of organic fertiliser or cover crops.	Y		Y	
3. Integrated pest management	Selection of pest control methods that are appropriate to the situation and area conditions, including pest and disease-resistant crop varieties, releasing natural enemies, using traps, applying	- Protected ecosystem. - Key indicator: % reduction in WHO Class Ia/Ib pesticide use.			Y	

	biological control agents, grafting techniques, rice seeds disinfection combined with pre-drying, etc. Use of bio-inputs and conservation biocontrol to avoid biodiversity loss. Minimum chemical pesticides are used. Chemical inputs such as those listed under Annex A or B of the Stockholm Convention, classified as Ia or Ib hazardous substances by WHO, or restricted under the Rotterdam Convention should not be encouraged.	• Proxy indicator: adoption of at least one non-chemical pest control (e.g., traps, natural enemies).				
4. Integrated weed management	Employ mulching and integrated weed management techniques to control weed growth without relying solely on herbicides. Chemical inputs such as those listed under Annex A or B of the Stockholm Convention, classified as Ia or Ib hazardous substances by WHO, or restricted under the Rotterdam Convention should not be encouraged.	• Protected ecosystem. • Key indicator: % reduction in herbicide application (kg/Ha). • Proxy indicator: visual check.			Y	
5. Farm residue utilisation	Optimisation of farm residue uses that avoids combustion/degradation and promotes circularity. Potential use of residues for composting and fertiliser, biogas, bioenergy, animal feed, paper. etc. Pyrolysis of agricultural residues to produce biochar. Production of unused oil palm biomass (trunks, empty FFBs, etc.) for fuel pellets and wood substitutes.	• Reduced emissions and/or enhanced resource circularity. • Key indicator: % of crop residue converted. • Proxy indicator: no burning of crop residues (visual check).	Y		Y	Y
6. Waste and wastewater management	A waste management plan covering waste reduction, pollution and recycling. Good management of containers of agrochemicals and other	• Reduced pollution and/or enhanced			Y	Y

	residues. Air, soil, and water contamination complies with national regulations.	resource circularity. • Key indicator: % of containers recycled or disposed. • Proxy indicator: presence of waste segregation (visual check).				
7. Improved water/irrigation efficiency	Employ efficient irrigation methods such as drip or micro-sprinkler irrigation to improve crop water productivity and optimise water use efficiency. Schedule irrigation based on crop water requirements, soil moisture levels, and weather conditions to optimise water use efficiency and prevent waterlogging or drought stress.	• Enhanced water efficiency. • Key indicator: water use efficiency (m³/tonne of yield). • Proxy indicator: use of efficient irrigation (visual check).	Y	Y	Y	
8. Soil conservation	Maintain soil biomass cover on the farm and prepare plots according to soil conservation principles such as windbreaks and cover cropping. On sloping soils, planting on contour lines through terracing, deep-rooting (e.g., vetiver) mulching, or other methods.	• Enhanced soil health. • Key indicator: % of farm area with permanent soil cover. • Proxy indicator: presence of cover crops (visual check).	Y	Y	Y	
9. Use of authorised seedlings	Combine high-yield authorised seedlings with ecological safeguards and equitable practices. Select authorised seedlings for quality assurance but also set aside space for planting well-adapted local varieties. Engage local communities in selecting	• Improved productivity • Key indicator: % yield change • Proxy indicator: use of climate-		Y	Y	

	varieties suited to their needs, allow some seed saving for future planting, and monitor performance.	resilient varieties				

Table 12: 2 additional core practices for cassava, maize and sugarcane

Practices	Definition	Outcome and example indicators	EO1	EO2	EO3	EO4
1. Conservation tillage	Practice minimum tillage or no-till farming to improve soil structure, reduce erosion, and enhance organic matter content. Minimising soil disturbance through techniques like no-till or reduced tillage helps to retain soil moisture, prevent erosion, and maintain soil structure, leading to improved soil health and reduced carbon emissions.	- Enhanced soil health. - Key indicator: % increase in soil organic matter. - Proxy indicator: use of no-till or reduced tillage (visual check).	Y	Y	Y	
2. Diverse crop rotations	Improve crop varieties, crop rotation, crop diversification. In short-cycle crops, rotations are carried out according to a periodic programme depending on the region. Establish associated crops (including nitrogen-fixing crops) for moisture management, fertility, and biological activity. Rotation with green manure to improve productivity can also be carried out.	- Enhanced soil health - Key indicator: % of farm area under crop rotation with nitrogen-fixing crops - Proxy indicator: inclusion of at least one nitrogen-fixing crop in rotation.	Y	Y	Y	

Table 13: 3 additional core practices for rice

Practices	Definition	Outcome and example indicators	EO1	EO2	EO3	EO4
1. Midseason drainage followed by intermittent irrigation (MiDi)	An irrigation method dependent on day number allowing the field to dry midway through the growing season to enhance soil health. The practice can be applied to rice-producing areas	- Enhanced soil health. - Key indicator: % reduction in methane emissions.	Y	Y	Y	

	using livestock biogas effluent as fertiliser. This practice is not applicable to non-irrigated land.	• Proxy indicator: use of MiDi.				
2. Alternative wetting and drying (AWD)	An irrigation method dependent on water alternating between wet and dry conditions to conserve water and improve rice quality. The practice can be applied to the rice-producing areas using livestock biogas effluent as fertiliser. This practice is not applicable to non-irrigated land.	• Improved water efficiency. • Key indicator: water use efficiency (m³/tonne of rice). • Proxy indicator: use of AWD practices with water level monitoring.	Y		Y	
3. Direct-seeded rice (DSR)	Planting rice directly in the field for improved establishment. The technology has a lower water requirement for crop establishment as puddling is not required in this method. The soil in DSR remains aerobic most of the time during the season, which reduces methane emissions as well as increases resilience to drought and high yields.	• Improved water efficiency and/or reduced emissions • Key indicator: water use efficiency (m³/tonne of rice), or reduction in methane emissions (kg CH₄/Ha). • Proxy indicator: adoption of direct seeding method.	Y	Y	Y	

Table 14: 1 additional core practice for rubber and oil palm

Practices	Definition	Outcome and example indicators	EO1	EO2	EO3	EO4
1. Biodiversity conservation	Preserving and restoring natural habitats within rubber or oil palm plantations to promote biodiversity and ecosystem resilience. This can	• Protected ecosystem. • Key indicator: biodiversity		Y	Y	

	include maintaining riparian buffers, establishing wildlife corridors, and planting native tree species as identified by ESIA results. Refer to regional/national regulations and certification guidance for biodiversity conservation management ⁴⁷ .	- monitoring records. - Proxy indicator: visual check.				

Table 15: 16 non-core practices for all perennial and non-perennial crops

Practices	Definition	Outcome and example indicators	EO1	EO2	EO3	EO4
1. Precision agriculture	Use technology to monitor and manage field variability such as GPS-guided equipment, drones, sensors, data analytics, or other advanced technologies, to optimise field-level management to ensure that crops receive the precise number of inputs needed. Examples include smart agricultural machinery in compliance with Common Communications Standard.	- Optimised resource use. - Key indicator: % reduction of input use. - Proxy indicator: use of precision tools.	Y	Y	Y	
2. Mixed farming	Mixed farming (ISIC 0150) includes the combined production of crops and animals. If production of crops or animals in a given unit exceeds 66% of standard gross margins, the Activity should be allocated to crop or animal farming. Mixed farming includes all forms of mixed farming: on-farm and between-farm mixing, mixing within crops and/or animal systems, diversified and integrated systems. Shifting from monocropping to mixed cropping systems (including agroforestry).	- Protected ecosystem. - Key indicator: biodiversity score, or % increase of soil organic carbon. - Proxy indicator: presence of mixed crops or livestock.	Y	Y	Y	

⁴⁷ E.g., <https://rspo.org/wp-content/uploads/riparian-management-guideline-english.pdf>

3. Energy emissions reduction/energy efficiency	Installation of renewable energy systems. Equipment maintenance services to improve efficiency. Examples include thermal energy irrigation canals and improved CO ₂ recovery. Procurement of electric, hybrid or biofuel-based agricultural machinery.	• Improved energy efficiency. • Key/proxy indicator: energy consumption, or renewable energy use.	Y			
4. Harvest, post-harvest and storage to reduce loss	Optimise harvest, post-harvest, and/or storage facilities before the point of sale to avoid production-level food loss. This includes energy-efficient storage.	• Minimised food loss. • Key indicator: % reduction in post-harvest loss. • Proxy indicator: logs of storage methods.	Y			
5. Biochar application	Application of biochar produced with biomass residues sourced from and not associated with deforestation or conversion of HCS or HCV.	• Carbon sequestration. • Key indicator: % increase of soil organic carbon. • Proxy indicator: use of biochar.	Y			
6. Climate risk assessment and adaptation planning	CRVAs using localised climate data and projections. Results should inform adaptation measures integrated into operations. Activities may include risk mapping, scenario planning, and stakeholder consultations. Adaptation plans should be documented and periodically reviewed in line with national climate strategies (e.g., NDCs) and ecosystem-based management approaches. Adapted measures include changes in cropping patterns, location (e.g., shifting planting schedules), water management (based on seasonal and spatial	• Resilient farm infrastructure. • Key indicator: infrastructure upgrades documented. • Proxy indicator: visual check.		Y		

	patterns) with proof of no maladaptation, and climate-proof infrastructure. This practice may be classified as a sustainable Activity in itself. See Appendix H of this Annex.					
7. Early warning Systems and risk communication	Strengthen preparedness of farmers through access to timely and reliable early warning systems. Eligible activities include monitoring saline intrusion to prevent saltwater intruding into rice fields, and disaster prevention support system for irrigation ponds to prevent flood risk and share disaster information. This practice may be classified as a sustainable Activity in itself. See Appendix G of this Annex.	- Improved disaster preparedness. - Key indicator: access to forecast systems. - Proxy indicator: logs of weather forecast use.		Y		
8. Parametric insurance	Adoption of parametric insurance based on climatic indexes to stipulate compensation based on occurrence of specified climatic events.	- Financial resilience to climate risks. - Key /Proxy indicator: % of farm area covered.		Y		
9. Indoor farming	Non open-field crop production (e.g., vertical farming, production of crops in the greenhouse or shade house) that represents a favourable strategy for increasing resilience through reducing vulnerability, improving resource efficiency e.g., in terms of electricity, water, land, productivity. Ensure efficient use of energy, water, and chemical inputs.	- Enhanced climate resilience. - Key/proxy indicator: % reduction in water and energy use.		Y		
10. Yield maximising and/or climate resilience traits	Selecting varieties that mature quickly while maximising yield improvement or climate change resilience. Examples include BNI-enabled wheat, F1 high-	- Improved productivity. - Key indicator: % yield change.		Y	Y	

	sugar, high-biomass sorghum variety, high-fibre sugarcane with high bagasse productivity.	• Proxy indicator: use of climate-resilient varieties.				
11. Nature-based water management	Nature-based water management for water resources management to improve water quantity and quality and resilience to climate change. This practice may be classified as a sustainable Activity in itself. See Appendix H of this Annex.	• Enhanced climate resilience, and/or protected ecosystem. • Key/proxy indicator: % of farm area using NbS water management.		Y	Y	
12. Smart production system	Smart agricultural technologies, such as automated rice transplanters, and drones which monitor crop health and production. These technologies contribute to significant improvements in productivity.	• Optimised production efficiency. • Key indicator: % yield change. • Proxy indicator: use of smart agricultural tools.			Y	
13. Land levelling	Removing soil from high points of the field and depositing it in low points of the field to improve crop establishment and enables crops to mature uniformly. It reduces greenhouse gas emissions by saving energy, reducing cultivation time, and improving input-use efficiency. In a level field, water is distributed evenly, thus reducing the amount of time and volume of water needed for irrigation. Fertiliser use is more efficient. This practice is applicable to upland fields.	• Optimised production efficiency. • Key indicator: % yield change. • Proxy indicator: implementation of land levelling.			Y	

14. Payment for Environmental Services (PES)	Payment for Environmental Services (PES) compensates landowners or resource managers for maintaining or enhancing ecosystem services, such as water purification, carbon sequestration, or biodiversity conservation.	- Protected ecosystem. - Key indicator: value of PES payments per conserved area. - Proxy indicator: participation in PES program.			Y	
15. Traceability for environmental assurance	Implement recordkeeping and/or digital systems that enable tracking of environmentally relevant inputs and outputs. Traceability supports verification of green claims. This practice may be classified as a sustainable Activity in itself. See Appendix G of this Annex.	- Verified environmental claims. - Key indicator: Traceability system records. - Proxy indicator: basic input/output logbooks or digital tracking.			Y	
16. Biodigester	Production of fertiliser and biogas from animal manure and/or other organic waste or wastewater. This practice may be classified as a sustainable Activity in itself. See Appendix H of this Annex.	- Reduced pollutions and emissions, and/or enhanced resource circularity. - Key indicator: biogas produced (m³). - Proxy indicator: use of biodigester.	Y		Y	Y

Table 16: 1 additional non-core practice for rice

Practices	Definition	Outcome and example indicators	EO1	EO2	EO3	EO4
1. Water storage/ drainage improvement for disaster mitigation	Paddy field dam that temporarily impounds stormwater in paddy fields has received attention as a countermeasure against flood damage. As the paddy field dam uses farmers' land to store water, the anxiety of farmers must be addressed. Underdrain-drilling machine is used to create deep drainage cavities without using pipes. This improves drainage in flat and clayey lands. A low-cost technology to reduce salt-damaged areas. Cut-soiler tractor to construct a shallow subsurface drainage system, mitigate salinisation.	- Enhanced climate resilience. - Key/proxy indicator: % reduction in flood-related crop loss (Ha).		Y		

Table 17: 1 additional non-core practice for sago palm

Practices	Definition	Outcome and example indicators	EO1	EO2	EO3	EO4
1. Improving germination rate	Removing seed coat tissues improves the germination rate, enabling seedling propagation to achieve the planned management of sago palms. This method increases the germination rate to over 90%.	- Increased productivity. - Key/proxy indicator: Germination rate (%).		Y		

EO4: Resource Resilience and the Transition to a Circular Economy TSC

This Activity is primarily classified under EO3, which is a minimum requirement. In addition, users may also classify it under this EO if they can demonstrate that the Activity implements relevant core or non-core practices aligned with this EO.

Do No Significant Harm

Refer to Section D.4 and the sector specific DNSH criteria in Annex 2.

014[001] Livestock production

Activity Notes

- Includes
 - Raising (farming) and breeding of all farm animals, except aquatic animals.
 - Service activities incidental to livestock production such as health care and control activities, herd testing, and activities to promote propagation, growth and output of animals.
- Sector generic definitions are shown in Section D.3.

EO1: Climate Change Mitigation TSC

This Activity is primarily classified under EO3, which is a minimum requirement. In addition, users may also classify it under this EO if they can demonstrate that the Activity implements relevant core or non-core practices aligned with this EO.

EO2: Climate Change Adaptation TSC

This Activity is primarily classified under EO3, which is a minimum requirement. In addition, users may also classify it under this EO if they can demonstrate that the Activity implements relevant core or non-core practices aligned with this EO.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	To meet the TSC, (1) OR (2) must be satisfied; criterion (3) applies in all cases. The Activity: 1. Has obtained certification at a national or international level that is aligned with internationally recognised standards (Certification is defined in Section D.3); OR 2. Provides an IFMP which demonstrates ongoing adoption of all applicable core practices, or as many as feasible, to ensure alignment with proxy certification. Adoption of non-core practices is voluntary; AND 3. Undertakes a self-assessment of GHG sources and sinks on the farm, following national or international carbon accounting standards for project-based or organisation-based carbon accounting⁴⁸. Verification of the GHG assessment is not required. Criterion 3 is satisfied if the GHG assessment is included in the IFMP under criterion 2 or in the certification under criterion 1.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	To meet the TSC, (1) OR (2) must be satisfied; criteria (3) AND (4) apply in all cases. The Activity: 1. Provides an IFMP to describe the nature of transformation. The IFMP provides a clear, timebound workplan to achieve a certification at a national or international level that is aligned	

⁴⁸ Agricultural Activities should assess carbon impacts using project-based or organisation-based carbon accounting, such as ISO 14064-2, which focuses on quantifying emission reductions from specific projects and aligns with schemes like CORSIA or Core Carbon Principles.

	with internationally recognised standards (Certification is defined in Section D.3); OR 2. Provides a time-bound IFMP aiming to adopt all applicable core practices, or as many as feasible, to ensure alignment with proxy certification. Adoption of non-core practices is voluntary; AND 3. Undertakes a self-assessment of GHG sources and sinks on the farm, following national or international carbon accounting standards for project-based or organisation-based carbon accounting. Verification of the GHG assessment is not required. Criterion 3 is satisfied if the GHG assessment is included in the IFMP under criterion 2 or in the certification under criterion 1; AND 4. The Activity may remain Amber for 5 calendar years after the assessment as Amber or until the Amber Tier is sunset, whichever time comes first. Within this time the Activity must transition to Green or will be reclassified as Red.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

Core and non-core practices for livestock production

- The practices pathway is developed as an alternative to the certification pathway, with the intention to align both pathways as closely as possible.
- The schemes analysed are GlobalSLP, Global Animal Partnership and National Good Agricultural Practices Guidelines due to their relevance to the ASEAN context.
- Each scheme is unique. Some schemes are outcome-based, some schemes are practice-based. However, core practices are designed to meet environmental requirements of the schemes as closely as possible.
- Non-core practices are voluntary as they are not commonly identified by the majority of the schemes.

See details of core and non-core practices below.

Table 18: 6 core practices for all livestock

Practices	Definition	Outcome and example indicators	EO1	EO2	EO3	EO4
1. Animal health planning	Disease prevention and control measures shall be documented and be under the supervision of a farm veterinarian or a person appointed by the farm veterinarian. Disease therapy and antimicrobial use shall be under supervision of farm veterinarian or person authorised by farm veterinarian, taking into	• Improved animal health. • Key/proxy indicator: % reduction in antimicrobial use (kg/animal).			Y	

	consideration the relevant international standards or regional standards such as ASEAN Guidelines for The Prudent Use of Antimicrobial in Livestock, OIE Terrestrial Animal Health Code. Chemical inputs such as those listed under Annex A or B of the Stockholm Convention, classified as Ia or Ib hazardous substances by WHO, or restricted under the Rotterdam Convention should not be encouraged.					
2. Sustainable feed input	Provide a well-balanced diet with locally available feed ingredients. When feed needs to be imported, choose the feed ingredients that are certified against credible standards or is free from deforestation or conversion of natural ecosystems (see 01[001] General perennial or non-perennial crops).	- Enhanced feed sustainability and animal nutrition. - Key/proxy indicator: % of feed sourced locally or certified deforestation-free.	Y		Y	
3. Waste and wastewater management	A waste management plan covers waste reduction, pollution and recycling. Good management of manure, urine and other residues. Manure can be composted and applied for soil conditioning or fertiliser. Management of air, soil, and water contamination complies with national regulations.	- Reduced pollution and/or enhanced resource circularity. - Key indicator: % of manure composted. - Proxy indicator: presence of composting facility.	Y		Y	
4. Efficient water management	Collect, store, and conserve water to provide livestock with a clean and reliable source during seasonal and climatic variations. Harvest water and build livestock aqueducts.	- Improved water efficiency. - Key indicator: water use			Y	

	Construction of water ponds, reservoirs, water storage tanks, or other systems that promote efficient water use, enabling production to continue during water shortages in the dry season.	efficiency (m³/animal). • Proxy indicator: presence of water storage systems.				
5. Animal welfare excluding health aspects	Provide livestock with a favourable environment such as sufficient and varied diet, space, ventilation, shade, accessible watering places, vaccination and outdoor space or access to pastures (as feasible). Well-ventilated housing reduces ammonia build-up, lowering the risk of infections and improving overall productivity. Appropriate stocking density guidelines are followed. Compliance with ISO/TS 34700:2016 animal welfare management is recommended.	• Improved productivity. • Key indicator: % compliance with G.A.P Step 4 welfare standards. • Proxy indicator: adequate space and water access (G.A.P. Step 1).			Y	
6. Environmental and Social Impact Assessment (ESIA)	Conduct a site-specific impact assessment to identify, evaluate, and manage ecological and social risks related to communities, water, soil, biodiversity, and cumulative ecosystem impacts. Include ecological siting criteria such as adequate buffer zones from sensitive habitats (e.g., mangroves, wetlands) and ensure compliance with relevant national regulations. ESIA should be integrated into farm design and updated when site conditions change. This practice may be classified as a sustainable Activity in itself. See Appendix H of this Annex.	• Protected ecosystem. • Key indicator: % of farm area with maintained HCV areas. • Proxy indicator: presence of buffer zones.			Y	

Table 19: 12 non-core practices for livestock production

Practices	Definition	Outcome and example indicators	EO1	EO2	EO3	EO4
1. Reducing methanogens and improving animal diet	Enhance feed quality for easier digestion. Feed additives such as dietary fats, nitrate, 3-NOP to reduce methanogens (enteric CH ₄ emissions from ruminants). Use of special feed additives (such as cattle methane suppression feed containing cashew nutshell liquid (CNSL) and general changes in a cow's diet. Feeding fattening pigs with a low-protein diet supplemented with amino acids reduces GHG emissions from the manure management process by 40% when compared with a conventional diet without affecting rearing performance. Precision and multi-phase feeding techniques.	- Reduced emissions. - Key indicator: % reduction in enteric methane emissions (kg CH₄/animal). - Proxy indicator: use of methane-reducing feed additive.	Y			
2. Apply nitrification inhibitor	Applying nitrification inhibiting microorganisms to compost to suppress the emission of nitrous oxide. Examples include utilising a carbon fibre reactor for a swine manure compost or wastewater treatment facility and adding nitrite-oxidising bacteria to livestock manure.	- Reduced emissions. - Key indicator: % reduction in N₂O emissions. - Proxy indicator: use of nitrification inhibitors	Y			
3. Mixed farming	Mixed farming (ISIC 0150) includes the combined production of crops and animals. If production of crops or animals in a given unit exceeds 66% of standard gross margins, the Activity should be allocated to crop or animal farming. Mixed farming includes all forms of mixed farming: on-farm and between-farm mixing, mixing within	- Protected ecosystem - Key indicator: biodiversity score, or % increase of soil organic carbon. - Proxy indicator: presence of	Y	Y	Y	

	crops and/or animal systems, diversified and integrated systems. Instant dung loads on grassland, together with fodder trees and shrubs, promote soil biodiversity (e.g., dung beetles, earthworms, etc.); incorporating faeces and urine fertilises and decompacts the soil.	mixed crops or livestock.				
4. Energy emissions reduction/energy efficiency	Installation of renewable energy systems. Equipment maintenance services to improve efficiency. Examples include biodigester-powered generators.	• Improved energy efficiency. • Key/proxy indicator: energy consumption, or renewable energy use.	Y			
5. Climate risk assessment and adaptation planning	CRVAs using localised climate data and projections. Results should inform adaptation measures integrated into operations. Activities may include risk mapping, scenario planning, and stakeholder consultations. Adaptation plans should be documented and periodically reviewed in line with national climate strategies (e.g., NDCs) and ecosystem-based management approaches. Adapted measures include rotational grazing, adjusting breeding calendars, and climate-proof infrastructure. This practice may be classified as a sustainable Activity in itself. See Appendix H of this Annex.	• Resilient farm infrastructure. • Key indicator: infrastructure upgrades documented. • Proxy indicator: visual check.		Y		
6. Early warning systems and risk communication	Strengthen preparedness of farmers through access to timely and reliable early warning systems. Eligible activities include monitoring saline intrusion to prevent	• Improved disaster preparedness. • Key indicator: access to		Y		

	saltwater intruding into rice fields, and disaster prevention support system for an irrigation pond to prevent flood risk and share disaster information. This practice may be classified as a sustainable Activity in itself. See Appendix G of this Annex.	forecast systems. • Proxy indicator: logs of weather forecast use.				
7. Parametric insurance	Adoption of parametric insurance based on climatic indices to stipulate compensation based on the occurrence of specified climatic events.	• Financial resilience to climate risks. • Key/Proxy indicator: % of farm area covered.		Y		
8. Pasture and fodder management	Ensure that livestock have access to pasture. Improve the quality and quantity of pastures and forages with nutritional and metabolic benefits for livestock (FAO principles / tailored to the type of livestock being raised). Stable native pastures allow natural regeneration through rotational grazing. Where conditions are more degraded, new grasses and varieties of grasses and legumes should be introduced to increase forage supply. Incorporate shrubs and trees that provide browsable (edible) fruits and leaves for livestock, accelerating soil recovery and favouring the wildlife population.	• Improved livestock health, and/or enhanced climate change resilience • Key indicator: % of pasture area under rotational grazing. • Proxy indicator: access to pasture.		Y	Y	
9. Yield maximising and/or climate resilience traits	Select varieties or improved breeds that mature quickly, maintain high productivity, and demonstrate resilience to climate-related stressors (e.g., salinity, temperature, or low oxygen). Genetic selection may include naturally resilient strains or selectively bred stocks. Proof of no	• Improved productivity. • Key indicator: % yield change. • Proxy indicator: use of climate-resilient varieties.	Y	Y	Y	

	maladaptation (e.g., disease vulnerability, ecological risk) is required. Note that the R&D aspect may be classified as a sustainable Activity in itself. See Appendix H of this Annex.					
10. Nature-based water management	Nature-based water resources management to improve water quantity and quality and resilience to climate change. This practice may be classified as a sustainable Activity in itself. See Appendix H of this Annex.	- Enhanced climate resilience, and/or protected ecosystem. - Key/proxy indicator: % of farm area using NbS water management.		Y	Y	
11. Traceability for environmental assurance	Implement record-keeping and/or digital systems that enable tracking of environmentally relevant inputs and outputs. Traceability supports verification of green claims. This practice may be classified as a sustainable Activity in itself. See Appendix G of this Annex.	- Verified environmental claims. - Key indicator: Traceability system records. - Proxy indicator: basic input/output logbooks or digital tracking.			Y	
12. Biodigester	Production of fertiliser and biogas from animal manure and/or other organic waste or wastewater. This practice may be classified as a sustainable Activity in itself. See Appendix H of this Annex.	- Reduced pollutions and emissions, and/or enhanced resource circularity. - Key indicator: biogas produced (m³) - Proxy indicator: use of biodigester	Y		Y	Y

EO4: Resource Resilience and the Transition to a Circular Economy TSC

This Activity is primarily classified under EO3, which is a minimum requirement. In addition, users may also classify it under this EO if they can demonstrate that the Activity implements relevant core or non-core practices aligned with this EO.

Do No Significant Harm

Refer to Section D.4 and the sector specific DNSH criteria in Annex 2.

02[001] Sustainable forest management

Activity Notes

- Includes
 - Commercial management of natural forests in a sustainable manner for the production of timber.
 - Service activities incidental to sustainable forest management such as nurseries, pest control, forest inventories, and forest management consulting services.
- Sector generic definitions are shown in Section D.3.

This Activity is applicable for all EOs.

Tiers	TSC	Review Programme
Tier 1 (Green)	For smallholders, the following criteria apply: • Criterion (2) applies in all cases; AND • Criterion (3), OR • If effective forest retention is not already demonstrated through legal guarantees under criterion (3), criterion (4) applies. For operations exceeding the defined thresholds for smallholders, the following criteria apply: • Criteria (1) and (2) apply in all cases; AND • Criterion (3), OR • If effective forest retention is not already demonstrated through legal guarantees under criterion (3), criterion (4) applies. The Activity complies with the following criteria: 1. Has obtained certification at a national or international level that is aligned with internationally recognised standards (Certification is defined in Section D.3); 2. Complies with all the requirements of the FMP (defined in Section D.3); 3. In accordance with national law, the forest status of the area in which the Activity takes place is guaranteed by any of the following measures: a. The area is legally designated to remain forest through instruments such as a government decree, forest land use plan, or statutory classification under national forestry law; OR b. The area is classified as a protected area under national or subnational legislation with clear legal restrictions on land conversion and forest clearance; OR c. The area is the subject of any legal or contractual guarantee issued by a competent authority (e.g., national government agency, subnational government, or legally recognised landowner), provided that:	Review date pre-set (see Annex 6).

	i. The instrument is one of the following: long-term lease, conservation easement, forest management agreement, or community-based forest management agreement, as recognised under national law; AND ii. The guarantee is legally enforceable, clearly stipulates forest maintenance obligations; AND iii. The guarantee has a minimum validity equal to or longer than the stipulated duration or monitoring period, and includes provisions for renewal or succession; AND iv. The agreement is subject to public disclosure; AND v. The jurisdiction provides legal recourse in case of breach or revocation; AND vi. Temporary or revocable guarantees shall not be considered compliant under this criterion unless additional safeguards (e.g., escrow mechanisms, performance bonds, or registry-based oversight) are provided. 4. The Activity must demonstrate forest retention and maintenance of ecological integrity where it meets all the following criteria: a. Key indicators substantially confirm the following outcomes, at a minimum: forest cover retention, reduced encroachment, and ecological integrity; b. Outcomes are supported by satellite-based evidence with as defined resolution threshold (e.g., <10 m spatial resolution), or community monitoring protocols for smallholders (Outcomes and Indicators and defined in Section D.3); c. It has a defined monitoring frequency (e.g., quarterly or biannual).	
Tier 2 (Amber T2)	For smallholders, the following criteria apply: • Criterion (2); AND • Criterion (3), OR • If effective forest retention is not already demonstrated through legal guarantees under criterion (3), criterion (4) applies. For operations exceeding the defined thresholds for smallholders, the following criteria apply: • Criteria (1), (2) AND (5) are mandatory in all cases; AND • Criterion (3), OR • If effective forest retention is not already demonstrated through legal guarantees under criterion (3), criterion (4) applies; AND • Criteria (6) and (7) apply in the situation-specific circumstances described.	

	The Activity complies with the following criteria: 1. Has a time-bound action plan to comply with internationally or nationally recognised certification standard. All of the following: a. Clearly specified intended certification; AND b. A sequenced roadmap (e.g. 3–5 years) detailing scheduled activities, each with defined interim milestones and associated deadlines to ensure structured implementation towards full certification; AND c. A gap analysis against target certification; AND d. Visual, spatial, or narrative evidence of progress (e.g., maps, logs, photos); AND e. A detailed description of monitoring, evaluation, reporting, and validation approach for implementation. 2. Has a basic FMP in place. 3. In accordance with national law, the forest status of the area in which the Activity takes place is guaranteed by any of the following measures: a. The area is legally designated to remain as forest in perpetuity through instruments such as a government decree, forest land use plan, or statutory classification under national forestry law; OR b. The area is classified as a protected area under national or subnational legislation with clear legal restrictions on land conversion and forest clearance; OR c. The area is the subject of any legal or contractual guarantee issued by a competent authority (e.g., national government agency, subnational government, or legally recognised landowner), provided that: i. The instrument is one of the following: long-term lease, conservation easement, forest management agreement, or community-based forest management agreement, as recognised under national law; AND ii. The guarantee is legally enforceable, clearly stipulates forest maintenance obligations; AND iii. The guarantee has a minimum validity equal to or longer than the stipulated duration or monitoring period, and includes provisions for renewal or succession; AND iv. The agreement is subject to public disclosure; AND v. The jurisdiction provides legal recourse in case of breach or revocation; AND vi. Temporary or revocable guarantees shall not be considered compliant under this Criterion unless additional safeguards (e.g., escrow mechanisms,	

	performance bonds, or registry-based oversight) are provided. 4. The Activity must demonstrate forest retention and maintenance of ecological integrity where it meets all the following criteria: a. Proxy indicators confirm the following outcomes, at a minimum: forest cover retention, reduced encroachment, and ecological integrity. b. Outcomes are supported by verifiable data sources (Outcomes and Indicators and as defined in Section D.3). c. It has a defined monitoring frequency (e.g., quarterly or biannual). 5. The Activity is considered Amber until it has obtained internationally or nationally recognised certifications and meets the requirements under the Green criteria. The transition must meet all the following criteria: a. Full verification must be conducted after five years of its Amber classification. b. It demonstrates consistent monitoring and reporting as set out in the guidance in the ASEAN Taxonomy. c. A mid-term review (e.g., at year 3)⁴⁹ to be conducted to assess whether the Activity is on track. The mid-term review must: i. Evaluate progress against interim milestones and proxy indicators defined in the FMP. ii. Include recommendations for corrective actions and update the remediation plan accordingly. 6. Where the Activity faces documented systemic delays, such as certification bottlenecks, institutional capacity constraints, or political disruptions, an extension of up to five additional years may be granted, provided that it meets all the following requirements: a. The Activity submits a justification report detailing the nature of the delay, supported by third-party evidence or government documentation. b. A time-bound remediation plan is in place, including interim milestones and monitoring indicators. c. The Activity continues to demonstrate credible progress through measurable metrics, including proxy indicators. 7. Activities that do not meet Green-tier requirements or fail to demonstrate credible progress within the extended timeframe will be reclassified as Red.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

⁴⁹ The ATB has taken into consideration viewpoints include real economy participants, and for simplicity, ATB has decided on the 5-year full verification deadline and associated approximate year 3 mid-term review.

Do No Significant Harm

Refer to Section D.4 and the sector specific DNSH criteria in Annex 2.

02[002] Forestry plantation

Activity Notes

- Includes:
 - Planted forest that is intensively managed, with at least one species, even age class and regular spacing
 - The commercial cultivation and/ or extraction of goods derived from forests that are tangible and physical objects of biological origin other than wood. Includes, amongst other things, the commercial cultivation and harvesting of amriso (broom grass), timur, bamboo stems, bamboo shoots, paper mulberry bark, rattan stems, gum, resin, nuts, mushrooms, fruits, herbs, spices, aromatic plants, game, fibres, medicinal, cosmetic or cultural produce.
 - This can be practised in either plantations or sustainably managed forests.
 - Service activities incidental to forestry plantation such as nurseries, pest control, forest inventories, and forest management consulting services.
- Sector generic definitions are shown in Section D.3.

This Activity is applicable for all EOs.

Tiers	TSC	Review Programme
Tier 1 (Green)	For smallholders, criterion (2) applies in all cases. For operations exceeding the defined thresholds for smallholder, criteria (1) and (2) apply in all cases. The Activity complies with the following criteria: 1. Has obtained certification at a national or international level that is aligned with internationally recognised standards (Certification is defined in Section D.3). 2. Complies with all the requirements of the FMP (defined in Section D.3).	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	For smallholders, criterion (2) applies. For operations exceeding the defined thresholds for smallholders, Criteria (1), (2), (3), (4) AND (5) are mandatory in all cases. The Activity complies with the following criteria: 1. Has a time-bound action plan to comply with internationally or nationally recognised certification standard. It must include all of the following: a. Clearly specified intended certification; b. A sequenced roadmap (e.g., 3–5 years) detailing scheduled activities, each with defined interim milestones and associated deadlines to ensure structured implementation towards full certification; c. A gap analysis against target certification; d. Visual, spatial, or narrative evidence of progress (e.g., maps, logs, photos); e. A detailed description of monitoring, evaluation, reporting, and validation approach to implement.	

	2. Has a basic FMP in place. 3. The Activity is considered Amber until it has obtained internationally or nationally recognised certifications and meets the requirements under the Green Criteria. The transition must meet all the following criteria: a. Full verification must be conducted after five years of its Amber classification. b. It demonstrates consistent monitoring and reporting as set out in the guidance in the ASEAN Taxonomy c. A mid-term review (e.g., at year 3) to be conducted to assess whether the Activity is on track. The mid-term review must: i. Evaluate progress against interim milestones and proxy indicators defined in the FMP. ii. Include recommendations for corrective actions and update the remediation plan accordingly. 4. Where the Activity faces documented systemic delays—such as certification bottlenecks, institutional capacity constraints, or political disruptions, an extension of up to five additional years may be granted, provided that it meets all the following requirements: a. The Activity submits a justification report detailing the nature of the delay, supported by third-party evidence or government documentation. b. A time-bound remediation plan is in place, including interim milestones and monitoring indicators. c. The Activity continues to demonstrate credible progress through measurable metrics, including proxy indicators. 5. Activities that do not meet Green-tier requirements or fail to demonstrate credible progress within the extended timeframe will be reclassified as Red.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

Do No Significant Harm

Refer to Section D.4 and the sector specific DNSH criteria in Annex 2.

02[003] Conservation, restoration, and maintenance of natural forests

Activity Notes

- Includes
 - Non-commercial forestry activities designed to maintain the existing forest habitat in both area and quality. Activities will range from minimal interventions to active management and could include protection from deforestation risk, voluntary and mandatory set-aside and active conservation efforts.
 - Non-commercial forestry activities designed to increase the area or improve the quality of existing forest habitat or to establish new forest stands. Activities will range from minimal interventions to active restoration including facilitating regeneration and restoration via natural or artificial means.
 - Conservation of non-commercially productive land to maintain the existing habitat in both area and quality. Activities could include the establishment of protected land or national parks which could be voluntary or mandatory set-aside areas.
 - Restoration or rehabilitation of non-commercially productive land to improve the quality or to increase the area of existing habitats or to establish new habitats.
 - Service activities incidental to conservation, restoration and maintenance of natural forests such as nurseries, pest control, forest inventories, and forest management consulting services.
- Sector generic definitions are shown in Section D.3.

This Activity is applicable for all EOs.

Tiers	TSC	Review Programme
Tier 1 (Green)	For smallholders, the following criteria apply: • Criterion (3) applies in all cases; AND • Criterion (4), OR • If effective forest retention is not already demonstrated through legal guarantees under criterion (4), criterion (5) applies. For operations exceeding the defined thresholds for smallholders, the following criteria apply: • Criterion (3) applies in all cases; AND • Either criterion (1) OR (2); AND • Criterion (4), OR • If effective forest retention is not already demonstrated through legal guarantees under criterion (4), criterion (5) applies. The Activity complies with the following criteria: 1. Has obtained certification at a national or international level on forest conservation outcomes that are aligned with internationally recognised standards (Certification is defined in Section D.3). 2. Valid certification status is maintained through certification renewal, independent third-party audit or government validation conducted at intervals no longer than five years.	Review date pre-set (see Annex 6).

	3. Complies with all the requirements of the FMP (defined in Section D.3). 4. In accordance with national law, the forest status of the area in which the Activity takes place is guaranteed by any of the following measures: a. The area is legally designated to remain forest through instruments such as a government decree, forest land use plan, or statutory classification under national forestry law; OR b. The area is classified as a protected area under national or subnational legislation with clear legal restrictions on land conversion and forest clearance; OR c. The area is the subject of any legal or contractual guarantee issued by a competent authority (e.g., national government agency, subnational government, or legally recognised landowner), provided that: i. The instrument is one of the following: long-term lease, conservation easement, forest management agreement, or community-based forest management agreement, as recognised under national law; AND ii. The guarantee is legally enforceable, clearly stipulates forest maintenance obligations, and includes provisions for renewal or succession; AND iii. The guarantee has a minimum validity equal to or longer than the stipulated duration or monitoring period, and includes provisions for renewal or succession; AND iv. The agreement is subject to public disclosure; AND v. The jurisdiction provides legal recourse in case of breach or revocation; AND vi. Temporary or revocable guarantees shall not be considered compliant under this criterion unless additional safeguards (e.g., escrow mechanisms, performance bonds, or registry-based oversight) are provided. 5. The Activity must demonstrate forest retention and maintenance of ecological integrity where it meets all the following criteria: a. Key indicators substantially confirm the following outcomes, at a minimum: forest cover retention, reduced encroachment, and ecological integrity. b. Outcomes are supported by satellite-based evidence with a defined resolution threshold (e.g., <10 m spatial resolution), or community monitoring protocols for	

	smallholders (Outcomes and Indicators as defined in Section D.3). c. It has a defined monitoring frequency (e.g., quarterly or biannual).	
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

Sustainable forestry practices is a term commonly shared across the following activities:

- 02[001] Sustainable forest management
- 02[002] Forestry plantation
- 02[003] Conservation, restoration, and maintenance of natural forests

It refers to managing forests in a way that will keep forests healthy and usable for local communities and society for generations to come. Table 20 provides an illustrative and non-exhaustive list of forestry practices typically implemented in various forestry activities.

Table 20: Sustainable forestry practices

Practice/s	Definition	EO1	EO2	EO3	EO4
Sustainable Harvesting					
Selective logging	A timber-harvesting method to fell the chosen trees. This method implies removing only the best timber and leaving the rest in the stand, this is why selective cutting has higher productivity. Typically, the choice is based on their diameter, height, species, and other parameters contributing to their merchant value.			Y	Y
Selective harvesting	Selective harvesting involves selecting individual trees to harvest, leaving at least 50% of the original forest, including large trees that provide animal habitat.			Y	Y
Non-destructive harvesting	Application of a needs-based approach to ensure sustainable and non-destructive harvesting of NTFPs.			Y	
Limiting maximum harvest intensity	Harvesting intensity refers to the extent or degree to which trees are removed from a forest during a logging operation. Harvesting a smaller area or removing fewer plants leaves a larger population of plants to grow or spread into the harvested gaps.			Y	Y
Selective rotation	Involves rotating harvesting activities across different areas of a forest over time. This approach aims to minimise the impact of harvesting on non-timber forest product			Y	Y

	populations and promote sustainable resource management.				
Silvicultural Practices					
Shelterwood system	A silvicultural system in which trees are removed in a series of cuts designed to achieve a new stand under the shelter of remaining trees.	Y	Y		
Thinning and pruning	Forest thinning and canopy pruning are traditional silvicultural practices to alleviate the competition between individual trees for light, water, and nutrients by providing more space for canopy expansion, reducing the crown rivalry for light absorption, and supplying more water and nutrients to each tree.	Y	Y		
Prescribed burning	A forestry management technique involving the intentional ignition of fires under carefully controlled conditions to achieve specific ecological or management objectives.	Y	Y	Y	
Seed tree method	A seed tree is a tree left standing (and alive) on purpose during a final harvest as a source of seed for natural regeneration of a new, even-aged forest. A seed tree harvest practice is the removal of all trees (or all merchantable trees in a forest) with the exception of a collection of seed trees. Seed tree harvests are a form of final harvest practice that promotes regeneration by leaving mature, live trees either scattered throughout a site or in clumps (about 15 trees per Ha) on the site.			Y	
Reforestation	Reforestation is the direct human-induced conversion of non-forested land to forested land through planting, seeding and/or the human-induced promotion of natural seed sources, on land that was forested but that has been converted to non-forested land. Selection of native trees as reforestation species is highly recommended.	Y	Y	Y	
Afforestation	Afforestation refers to the establishment of a forest on land that is considered not to have been previously a forest.	Y	Y	Y	
Biodiversity conservation and preserving ecological integrity					
Protection of endangered species and critical habitats	Measures to protect vulnerable species and their habitats, such as creating no-harvest zones or implementing specific management practices.			Y	

Adoption of an integrated pest management plan	A strategy that focuses on long-term pest prevention through a combination of techniques, minimising risks to human health and the environment. It involves monitoring pest populations, identifying pests, assessing damage, and implementing control measures, with pesticides used only when necessary and targeted at the specific pest.			Y	
Implementation of buffer zones	Buffer zones refer to a strip of land with natural or established vegetation which provides an added layer of protection to the forests. Buffer zones are designated areas used to protect sensitive landscape patches (e.g., wetlands, wildlife reserves) from negative external pressures.			Y	
Increasing resilience to climate-related impacts					
Use of climate-resilient species	Climate-resilient species that can withstand the effects of climate change, including extreme weather events, changes in temperature and rainfall patterns, and increased pest and disease pressure.	Y	Y		
Adaptive management	Involves a flexible approach that allows for adjustments based on monitoring and new information. Regular assessments of forest conditions, including ecological, economic, and social factors, enable adaptive management to respond to changing circumstances and improve the effectiveness of silvicultural processes over time.	Y	Y		
Riparian planting	The practice of establishing vegetation along the edges of waterways like rivers, streams, and lakes. This helps improve water quality, stabilise stream banks, and enhance wildlife habitat.	Y	Y		
Climate change mitigation					
Reduction of GHG emissions	GHG reductions refer to the decrease or prevention of GHG emissions from the forest to the atmosphere, achieved through sustainable forest management practices. These practices may include: a) Converting production areas to conservation areas.	Y	Y		

	b) Implementing reduced impact logging (such as reduced road width, directional felling, improved planning of road network etc.). c) Using techniques to improve resilience against pests, diseases, or fires. d) Using renewable energy and technology in forest operations (e.g., solar-powered equipment, biomass energy, hydropower). e) Using energy-efficient equipment as certified by local energy efficiency standards and labelling programmes based on the Minimum Energy Performance Standards (MEPS) and Energy Rating Labels (ERL)⁵⁰.				
Use of monitoring tools and technologies					
Use of monitoring technologies	Monitoring technologies provide valuable data on forest health, changes, and disturbances. Satellite-based remote sensing, drones, and Geographic Information Systems (GIS), drone surveillance are key tools used to track deforestation, monitor forest health, detect illegal logging, and assess the impact of various forest management practices.	Y	Y	Y	Y
Precision forestry	Precision Forestry is the use of tools and technology to collect data to make decisions for site-specific management. It aims to improve wood quality, protect the environment, reduce waste, and increase profits. Precision forestry can be used in all phases of forestry, such as planning, site operations, monitoring, processing, and marketing.	Y	Y	Y	Y

Do No Significant Harm

Refer to Section D.4 and the sector specific DNSH criteria in Annex 2.

⁵⁰ This may include Energy Efficiency Label No. 5 (Thailand), Mandatory Energy Labelling Scheme (MELS) (Singapore), the Philippine Energy Label (Philippines)

03[001] Fishing

Activity Notes

- Includes:
 - Fishing and taking of marine crustaceans and molluscs on a commercial basis in ocean, coastal or inland waters for consumption purposes.
 - Activities of vessels engaged both in fishing and in processing and preserving of fish.
 - Service activities incidental to marine and freshwater fishery, preserving of fish from fishing before sale, and fisheries control (fish guard).
- Excludes:
 - Fishing for ornamental purposes.
 - Fishing practiced for sport or recreation.
 - Capturing of marine mammals.
 - Distribution of fisheries products.
 - Processing of fish, crustaceans and molluscs.
- Sector generic definitions are shown in Section D.3.

EO1: Climate Change Mitigation TSC

This Activity is primarily classified under EO3, which is a minimum requirement. In addition, users may also classify it under this EO if they can demonstrate that the Activity implements relevant core or non-core practices aligned with this EO.

EO2: Climate Change Adaptation TSC

This Activity is primarily classified under EO3, which is a minimum requirement. In addition, users may also classify it under this EO if they can demonstrate that the Activity implements relevant core or non-core practices aligned with this EO.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	To meet the TSC, criteria (1) OR (2) OR (3) must be satisfied. The Activity: - Has obtained certification at a national or international level that is aligned with internationally recognised standards (Certification is defined in Section D.3); OR - Has published a Comprehensive Fishery Improvement Project (FIP) Action Plan; OR - Provides a FIP Action Plan which demonstrates ongoing adoption of all applicable core practices, or as many as feasible, to ensure alignment with proxy certification. Adoption of non-core practices is voluntary.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	To meet the TSC, criteria (1) OR (2) must be satisfied; criterion (3) applies in all cases. The Activity: Has published a Basic⁵¹ FIP Action Plan; OR	

⁵¹ Basic FIPs are a good entry point for fisheries to begin addressing specific environmental challenges to improve their performance against the Marine Stewardship Council Fisheries Standard. Basic FIPs complete a needs assessment to understand the challenges in the fishery. (Source: [CASS Guidelines for Supporting Fishery Improvement Projects](#)). A Basic FIP Action Plan can be accessed from www.fisheryprogress.org.

	2. Provides a time-bound FIP Action Plan aiming to adopt all applicable core practices, or as many as feasible, to ensure alignment with proxy certification. Adoption of non-core practices is voluntary (Certification is defined in Section D.3); AND 3. May remain Amber for 5 calendar years after the assessment as Amber or until the Amber Tier is sunset, whichever time comes first. Within this time, the Activity must transition to Green or will be reclassified as Red.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

Core and non-core practices for fishing

- The practices pathway is developed as an alternative to the certification pathway, with the intention to align both pathways as closely as possible.
- The scheme analysed is Marine Stewardship Council (MSC) due to its international market access and recognition, familiarity and adoption within ASEAN, and applicability to ASEAN's fishery context including overfishing, illegal, unreported, and unregulated (IUU) fishing, and ecosystem degradation.

See details of core and non-core practices below.

Table 21: 15 core practices for Fishing Activity

Practices	Definition	Outcome and example of indicators	EO1	EO2	EO3	EO4
1. Establish and maintain stock assessment system(s)	Conduct or participate in stock assessments that estimate stock status (biomass and fishing mortality) relative to biological reference points. Where formal assessments are not feasible, apply the MSC Risk-Based Framework, such as Productivity-Susceptibility Analysis (PSA), or other relevant tools to determine whether the stock is highly likely to remain above the point where recruitment would be impaired. Assessments must be documented, updated regularly, and used to inform fishery management decisions.	• Sustainable Stock Levels. • Key indicator: biomass of a fish stock allowed to produce the Maximum Sustainable Yield (BMSY). • Proxy indicator: PSA score for stock status.			Y	

2. Develop and implement a harvest strategy for target species	Develop or participate in, documenting, and implementing a harvest strategy that includes: (i) measurable stock management objectives (e.g., maintaining biomass above biologically safe limits), (ii) status indicators or suitable proxies, and (iii) pre-agreed tools to manage exploitation (e.g., catch limits, effort controls, seasonal closures). The strategy must be used in practice to guide decision-making, reviewed at least annually, and be appropriate to the stock's current status and data availability.	- Controlled fishing pressure - Key indicator: fishing mortality rate that produces the MSY - Proxy indicator: PSA-based exploitation risk			Y	
3. Develop and apply harvest control rules (HCRs)	Develop or participate in adopting and applying harvest control rules (HCRs) through a documented fishery management system. These rules must include specific, pre-agreed responses (e.g. catch reduction, area closures, effort limits) triggered when indicators show declining stock status. Rules must be applied at least once during the management cycle and reviewed annually for effectiveness.	- Responsive stock recovery. - Key indicator: hCR activation frequency. - Proxy indicator: PSA-triggered management actions.			Y	
4. Establish and operate a data collection and monitoring system	Collect verifiable, species-specific data on catch, effort, and all retained and discarded species, including primary and secondary non-target species, using logbooks, landing site monitoring, observer programmes, or electronic monitoring. For data-limited fisheries, use simplified methods like community-based monitoring or PSA. Data must be accurate,	- Robust fishery data. - Key indicator: monitoring logbooks. - Proxy indicator: community catch monitoring.			Y	

	systematically recorded, third-party verified, and used to assess impacts on non-target species and inform management.					
5. Develop and implement a stock rebuilding plan	Develop and implement a time-bound rebuilding plan for any target stock that is assessed to be below the point where recruitment could be impaired (PRI). The plan must include biological recovery targets, monitoring protocols, and defined management measures (e.g., effort reduction, closed seasons or areas, gear restrictions) to rebuild the stock to a safe level. Progress toward rebuilding must be reviewed periodically and adjustments made as necessary based on updated stock status or indicator trends.	- Rebuilt stock biomass. - Key & Proxy indicator: progress toward BMSY.			Y	
6. Assess and manage retained non-target species including bait fisheries	Conduct a risk assessment and implement management measures for any non-target species that are retained by the fishery. The assessment should identify whether these species are within biologically safe limits (e.g., through RBF or PSA). Based on the findings, apply controls such as catch limits, seasonal avoidance, or gear modifications to ensure these species remain at sustainable levels.	- Sustainable bycatch levels. - Key indicator: non-target species biomass. - Proxy indicator: PSA risk for bycatch species.			Y	
7. Minimise interactions with ETP species	Identify, monitor, and reduce interactions with endangered, threatened, or protected species (e.g., marine mammals, sea turtles, seabirds). This includes conducting an ETP interaction risk assessment, training	- Minimal ETP harm. - Key indicator: ETP interaction rate. - Proxy indicator: RBF			Y	

	fishers in safe handling and release, and implementing mitigation tools such as exclusion devices, pingers, or gear modifications. Records of interactions must be maintained and reviewed annually.	ETP interaction score.				
8. Assess and mitigate habitat impacts of fishing gear	Conduct a habitat impact assessment based on gear type, fishing area, and seafloor characteristics. Based on the findings, implement mitigation measures such as area/time closures, gear modification, or effort limits to minimise damage to sensitive habitats (e.g., coral reefs, seagrass beds). Documentation must demonstrate that the fishery does not reduce habitat structure or function beyond acceptable levels.	- Intact habitat structure. - Key indicator: habitat impact assessment score. - Proxy indicator: consequence analysis habitat risk.			Y	
9. Evaluate and manage broader ecosystem impacts	Assess the fishery's role in the wider ecosystem, including its effects on predator-prey relationships and trophic dynamics (e.g., forage fish role). Implement management actions, if needed, such as catch buffers, bycatch controls, or restrictions on removal of ecologically important species. Monitor ecosystem indicators periodically to ensure ecological balance is maintained.	- Stable ecosystem function. - Key indicator: Trophic level index. - Proxy indicator: RBF ecosystem risk assessment.			Y	
10. Participate in fishery-level consultation for environmental decision-making	Participate in or maintain structured consultation mechanisms to provide input on fishing rules, seasons, gear use, or effort controls. These consultations must involve fishers, local authorities, and other stakeholders. Documentation must show that	- Collaborative fishery governance. - Key/Proxy indicator: stakeholder consultation frequency.			Y	

	fisher input contributes to decisions affecting the environmental sustainability of the fishery (e.g., species protection, seasonal closures).					
11. Establish and operate a fishery-specific management system	Develop or participate in developing, documenting and implementing a Fisheries Management Plan (FMP) or equivalent system tailored to the target fishery. This must include: (i) clearly defined objectives for environmental sustainability, (ii) decision rules or harvest control tools, (iii) procedures for implementation and enforcement, and (iv) a review mechanism to assess performance. The system must be actively applied, appropriate to the scale and intensity of the fishery, and adaptable based on new information or monitoring results.	• Effective management system. • Key indicator: FMP performance metrics. • Proxy indicator: RBF management plan compliance.			Y	
12. Implement a monitoring, control, and surveillance (MCS) system	Design and implement MCS measures appropriate to the scale of the fishery to ensure compliance with management rules. This may include logbooks, landing inspections, observer programmes, patrols, vessel tracking (e.g., VMS or AIS), or port-based monitoring. The MCS system must generate verifiable compliance data, identify infractions, and be reviewed regularly to improve effectiveness.	• Compliance enforcement • Key indicator: VMS compliance rate • Proxy indicator: RBF community compliance logs			Y	
13. Ensure compliance with fishery rules and environmental measures	Demonstrate consistent compliance with fishery management measures, including gear restrictions, catch limits, seasonal closures, and reporting obligations. Activities may	• Compliance enforcement. • Key indicator: infraction detection rate. • Proxy indicator: RBF			Y	

	include implementing internal protocols for compliance tracking, peer-based rule monitoring, and fisher training on legal and environmental requirements. Evidence must show that non-compliance is rare, addressed when detected, and that fishers understand and follow environmental rules.	fisher compliance score.				
14. Review and adapt the fishery management system	Conduct or participate in regular reviews of the fishery-specific management system to assess whether objectives, harvest rules, and monitoring measures are achieving intended environmental outcomes. Reviews may involve internal assessments, external audits, or participatory evaluations with stakeholders. Based on findings, update or improve the management plan and associated protocols. Documentation must show that reviews occur at least annually and result in adjustments when needed.	- Adaptive management improvements. - Key/proxy indicator: annual review completion rate.			Y	
15. Comply with shark finning ban and retention practices	If sharks are retained (as target or bycatch), ensure that all individuals are landed with fins naturally attached, in compliance with shark finning bans. Implement traceable recording of shark landings, including logbooks, photos, or observer data. Train fishers on retention rules and identification of prohibited shark species.	- No shark finning. - Key indicator: shark landing records. - Proxy indicator: RBF shark retention compliance.			Y	

Table 22: 11 non-core practices for Fishing Activity

Practices	Definition	Outcome and example indicators	EO1	EO2	EO3	EO4
1. Fleet modernisation for energy efficiency	Implement fleet modernisation measures to reduce GHG emissions through energy audits and upgrades to low-emission propulsion systems (e.g., hybrid, electric, LNG). Investments should prioritise improved fuel efficiency and avoid increasing overall fishing capacity. Preference is given to systems that enable fuel monitoring and emissions tracking.	- Reduced vessel emissions. - Key/proxy indicator: fuel consumption per trip.	Y			
2. Energy-efficient cold storage for fish handling	Install or upgrade cold storage systems for fish handling that reduce greenhouse gas emissions through high-efficiency refrigeration, low-Global Warming Potential refrigerants, or integration with renewable energy (e.g., solar). Energy performance should be monitored and demonstrate reduced consumption per unit stored.	- Reduced storage emissions. - Key/proxy indicator: energy use per tonne stored.	Y			
3. Low-emission transport of fishery products	Use of transport vehicles or vessels with reduced greenhouse gas emissions, including adoption of fuel-efficient engines, hybrid or electric vehicles, and route optimisation to minimise fuel use. Transport practices should include basic temperature control to prevent spoilage and reduce product loss, with preference for systems that monitor fuel consumption or emissions.	- Reduced transport emissions. - Key/proxy indicator: fuel use per transport (l/km).	Y			
4. Fishing route optimisation software	Use digital tools to reduce fuel consumption by optimising fishing routes and travel time. Tools may include GPS-	- Optimised fuel efficiency. - Key/proxy indicator:	Y			

	enabled planning apps, weather alert systems, or software linked to vessel monitoring systems (VMS). Activities should result in measurable improvements in fuel efficiency or reduced engine hours per trip. This practice may be classified as a sustainable Activity in itself. See Appendix G of this Annex.	engine hours per trip.				
5. Climate risk assessment and adaptation planning	CRVAs using localised climate data and projections. Results should inform adaptation measures integrated into fisheries operations. Activities may include risk mapping, scenario planning, and stakeholder consultations. Adaptation plans should be documented and periodically reviewed in line with national climate strategies (e.g., NDCs) and ecosystem-based management approaches. Adapted measures include seasonal timing adjustments, and climate-proof infrastructure (e.g., harbour and landing sites). This practice may be classified as a sustainable Activity in itself. See Appendix H of this Annex.	- Enhanced climate resilience. - Key/proxy indicator: Climate Risk Score.		Y		
6. Early warning systems and risk communication	Strengthen preparedness of fishers through access to timely and reliable early warning systems. Eligible activities include implementation of climate and weather alert systems (e.g., SMS, radio, loudspeakers), installation of community information boards, and deployment of integrated information and communication platforms that combine high-	- Enhanced climate resilience. - Key/proxy indicator: alert system coverage.		Y		

	resolution forecasts with vessel alert systems (e.g., VMS). Systems must ensure accessibility for small-scale operators and remote communities. This practice may be classified as a sustainable Activity in itself. See Appendix G of this Annex.					
7. Livelihood diversification as climate adaptation	Support the design and implementation of alternative or supplementary income-generating activities for fishers affected by climate-related risks. Activities may include eco-tourism, gear repair services, fish processing, or aquaculture training. Projects must be grounded in local needs assessments and contribute to reducing economic vulnerability and dependency on climate-sensitive fisheries.	• Reduced economic vulnerability. • Key/proxy indicator: diversified income streams.		Y		
8. Fishing gear recovery and recycling	Recover and recycle used or abandoned fishing gear through participation in take-back schemes, community retrieval efforts, or cooperative-led programmes. Activities may include logbook documentation of recovered gear, coordination with retrieval services, and segregation for recycling. Supports marine litter reduction and responsible end-of-life gear management.	• Reduced marine litter. • Key/proxy indicator: recovered gear records.				Y
9. Refurbishment and reuse of vessels/gear	Extend the operational life of fishing vessels and gear through reconditioning, repair, or retrofitting. Activities may include gear refurbishment at local repair centres, welding, or reuse programmes that meet safety and hygiene standards. Supports material efficiency	• Extended gear lifespan. • Key/proxy indicator: refurbished gear usage rate.				Y

	and reduces demand for new inputs.					
10. Byproduct valorisation through community-level preservation methods	Utilise fishery by-products (e.g., heads, bones, skin, viscera) to produce fish silage, oil, collagen, or other value-added outputs. Activities should be implemented by fishers or cooperatives through artisanal or small-scale processing. Supports full biomass utilisation and reduction of biological waste.	• Reduced biological waste. • Key/proxy indicator: byproduct utilisation rate.				Y
11. Use of biodegradable or recyclable gear/devices	Adopt fishing gear made from biodegradable, recyclable, or mono-material components to reduce ghost fishing risks and reliance on virgin plastic materials. Activities may include sourcing eco-certified gear, using locally available biodegradable alternatives, or participating in gear innovation trials.	• Reduced marine litter. • Key/proxy indicator: biodegradable gear adoption rate.				Y

EO4: Resource Resilience and the Transition to a Circular Economy TSC

This Activity is primarily classified under EO3, which is a minimum requirement. In addition, users may also classify it under this EO if they can demonstrate that the Activity implements relevant core or non-core practices aligned with this EO.

Do No Significant Harm

Refer to Section D.4 and the sector specific DNSH criteria in Annex 2.

03[002] Aquaculture

Activity Notes

- Includes
 - Aquaculture on a commercial basis in ocean, coastal or inland waters for consumption purposes.
 - Operation of fish hatcheries (marine or freshwater) for production of fry, fingerlings, and seed stock.
 - Service activities incidental to marine, brackish or freshwater aquaculture such as net mending, gear maintenance, and vessel chartering for aquafarming operations, preservation of aquatic products from aquaculture (e.g., chilling, salting) before sale, aquaculture control services and protection from predators.
- Excludes:
 - Aquaculture for ornamental purposes.
 - Capture of wild aquatic organisms.
 - Breeding/farming of reptiles.
 - Operation of sport fishing preserves.
 - Distribution of aquaculture products.
 - Processing of fish, crustaceans, and molluscs.
- Sector generic definitions are shown in Section D.3.

EO1: Climate Change Mitigation TSC

This Activity is primarily classified under EO3, which is a minimum requirement. In addition, users may also classify it under this EO if they can demonstrate that the Activity implements relevant core or non-core practices aligned with this EO.

EO2: Climate Change Adaptation TSC

This Activity is primarily classified under EO3, which is a minimum requirement. In addition, users may also classify it under this EO if they can demonstrate that the Activity implements relevant core or non-core practices aligned with this EO.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	To meet the TSC, (1) OR (2) must be satisfied; criterion (3) applies in all cases. The Activity: 1. Has obtained certification at a national or international level that is aligned with internationally recognised standards (Certification is defined in Section D.3); OR 2. Provides an IFMP which demonstrates ongoing adoption of all applicable core practices, or as many as feasible, to ensure alignment with certification. Adoption of non-core practices is voluntary; AND 3. Undertakes a self-assessment of GHG sources and sinks on the farm, following national or international carbon accounting standards for project-based or organisation-	Review date pre-set (see Annex 6).

	based carbon accounting ⁵² . Verification of the GHG assessment is not required. Criterion 3 is satisfied if the GHG assessment is included in the IFMP under criterion (2) or in the certification under criterion (1).	
Tier 2 (Amber T2)	To meet the TSC, (1) OR (2) must be satisfied; criteria (3) and (4) apply in all cases. The Activity: 1. Provides an IFMP to describe the nature of transformation. IFMP provides a clear, timebound work plan to achieve a certification at a national or international level that is aligned with internationally recognised standards (Certification is defined in Section D.3); OR 2. Provides a time-bound IFMP aiming to adopt all applicable core practices, or as many as feasible, to ensure alignment with proxy certification. Adoption of non-core practices is voluntary; AND 3. Undertakes a self-assessment of GHG sources and sinks on the farm, following national or international carbon accounting standards for project-based or organisation-based carbon accounting. Verification of the GHG assessment is not required. Criterion 3 is satisfied if the GHG assessment is included in the IFMP under criterion (2) or in the certification under criterion (1); AND 4. The Activity may remain Amber for 5 calendar years after the assessment as Amber or until the Amber Tier is sunset, whichever time comes first. Within this time the Activity must transit to Green or will be reclassified as Red.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

Core and non-core practices for aquaculture

- The practices pathway is developed as an alternative to the certification pathway, with the intention to align both pathways as closely as possible.
- The schemes analysed are Aquaculture Stewardship Council (ASC) and Best Aquaculture Practices (BAP) due to international market recognition and access, familiarity and adoption within ASEAN, and relevance to ASEAN's industry. ASC and BAP are tailored to address the region's key challenges, including water quality management, feed sustainability, and disease control. Both ASC and BAP support improvement projects which provide clear roadmaps for small-scale and large-scale producers to achieve certification.
- Core practices are designed to align closely with ASC and BAP environmental requirements.
- Non-core practices are voluntary as they are not commonly identified by ASC or BAP.

See details of core and non-core practices below.

⁵² Agricultural Activities should assess carbon impacts using project-based or organisation-based carbon accounting, such as ISO 14064-2, which focuses on quantifying emission reductions from specific projects and aligns with schemes like CORSIA or Core Carbon Principles.

Table 23: 14 core practices for Aquaculture Activity

Practices	Definition	Output and Example indicators	EO1	EO2	EO3	EO4
1. Environmental and social impact assessment (ESIA)	Conduct a site-specific impact assessment to identify, evaluate, and manage ecological and social risks related to communities, water, soil, biodiversity, and cumulative ecosystem impacts. Include ecological siting criteria such as adequate buffer zones from sensitive habitats (e.g., mangroves, wetlands) and ensure compliance with relevant national regulations. ESIA should be integrated into farm design and updated when site conditions change. This practice may be classified as a sustainable Activity in itself. See Appendix H of this Annex.	• Sustainable site selection and operation. • Key indicator: completion of ESIA/ERA. • Proxy indicator: simplified risk assessment.			Y	
2. GHG Emissions and energy monitoring	Calculate GHG emissions from on-farm energy use (e.g., electricity, fuel) and from off-farm feed production as part of the farm's indirect footprint. Implement a GHG management plan with reduction targets and actions across both areas.	• Reduced emissions. • Key indicator: emissions calculation. • Proxy indicator: records of energy use.	Y			
3. Effluent and sediment monitoring	Install an effluent treatment system that captures at least 65% of total suspended solids (TSS); regularly monitor water discharge for total nitrogen (TN), total phosphorus (TP), TSS, and BOD. Conduct sediment sampling and benthic analysis to demonstrate no deterioration in benthic status or downstream impact, using methods aligned with ASC protocols.	• Reduced pollution. • Key indicator: effluent monitoring results. • Proxy indicator: visual sediment check.			Y	

4. Waste and pollution management	Implement systems for proper handling, storage, and disposal of all farm-generated waste, including mortalities, biosolids (sludge), plastics, chemical containers, and gear-cleaning residues. Avoid discharging solid or hazardous waste into the environment. Reuse or recycle uncontaminated materials where feasible. Ensure antifouling and net-cleaning activities are conducted responsibly with effluent treatment if required. Maintain a waste management plan covering reduction, reuse, and pollution control.	• Reduced Pollution and/or Increased resource circularity. • Key indicator: waste management plan • Proxy indicator: inventory of waste types and disposal methods.			Y	Y
5. Escape and biodiversity risk management	Install and maintain escape prevention structures appropriate to species and site; conduct a site-specific risk assessment; train staff in escape prevention; record and report escape incidents where required. Implement a predator interaction plan using non-lethal methods and avoid harm to protected species except for human safety or animal welfare.	• Protected ecosystem. • Key indicator: zero escape incident. • Key indicator: visual checks of containment.			Y	
6. Chemical spill and infrastructure control	Maintain proper chemical storage, spill prevention measures, and regularly inspect infrastructure to prevent contamination and pollution.	• Reduced Pollution. • Key indicator: records of chemical storage inspections. • Proxy indicator: spill kit availability.			Y	
7. Responsible feed use and sourcing	Use feed that is traceable and sourced from certified sustainable origins (e.g., MarinTrust, RTRS soy, other relevant national certification	• Sustainable feed use. • Key indicator: feed traceability records.	Y		Y	

	schemes); monitor and control Feed Conversion Ratio (FCR).	• Proxy indicator: supplier invoices.				
8. Biosecurity and animal health	Implement a farm-level biosecurity plan with quarantine procedures for new stock, veterinary oversight for disease prevention, and measures to restrict prophylactic chemical use. Monitor animal health regularly and adjust management as needed.	• Enhanced animal health. • Key indicator: biosecurity plan. • Proxy indicator: quarantine log.			Y	
9. Disease and mortality management	Develop and implement a Health and Welfare Management Plan (HWMP) covering routine disease monitoring, mortality recording, and classification of causes. Apply mortality thresholds (e.g., traffic light system) to trigger corrective actions and define annual reduction targets. Engage a registered veterinarian or aquatic animal health professional for plan oversight and incident response. Aim to reduce outbreak risk and related environmental discharge. Chemical inputs such as those listed under Annex A or B of the Stockholm Convention, classified as Ia or Ib hazardous substances by WHO, or restricted under the Rotterdam Convention should not be encouraged.	• Reduced disease impact. • Key indicator: hWMP with mortality thresholds. • Proxy indicator: mortality logs.			Y	
10. Responsible use of veterinary therapeutants	Use veterinary therapeutants only under prescription by a registered professional. Maintain treatment records, follow withdrawal periods, and avoid prophylactic antibiotic use. Do not use Critically Important Antimicrobials (CIAs)	• Reduced pollution. • Key indicator: treatment records. • Proxy indicator:			Y	

	unless strictly justified. Track antibiotic use and disclose CIA use if applied.	prescription logs.				
11. Management of stock reuse	Implement a site-level biosecurity plan that includes disinfection protocols, control of stock movement, and fallowing periods. Ensure the plan is reviewed by qualified staff to prevent pathogen persistence and transmission.	- Prevented pathogen spread. - Key indicator: biosecurity plan. - Proxy indicator: disinfection logs.		Y	Y	
12. Low-impact marine aquaculture (seaweed and bivalves)	Operate seaweed or bivalve farming systems that do not require external feed inputs or chemical treatments; ensure site selection, stocking, and harvesting practices minimise impacts on water quality, benthic habitats, and surrounding biodiversity. Maintain production and site monitoring records in line with ASC indicators.	- Low-impact production. - Key indicator: site monitoring records. - Proxy indicator: presence of the farm.	Y			
13. Water source and use management	Implement water conservation practices, minimise intake water usage, and maintain natural buffer zones to control erosion and runoff.	- Improved water efficiency. - Key indicator: water usage records - Proxy indicator: water metre reading.			Y	
14. Groundwater protection	Prevent contamination of wells and groundwater through sealed boreholes, setbacks from discharge points, and regular well inspections.	- Protected groundwater quality. - Key indicator: well inspection records. - Proxy indicator: presence of preventive mechanism.			Y	

Table 24: 13 non-core practices for Aquaculture Activity

Practices	Definition	Output and Example indicators	EO1	EO2	EO3	EO4
1. Biodiversity monitoring	Conduct regular biodiversity monitoring to assess potential impacts of farm operations on nearby habitats and species. Methods may include visual checklists, photo records, or indicator species tracking (e.g., waterbirds, macroinvertebrates, water quality). Use results to inform adaptive management. External review is encouraged but not required.	- Protected ecosystem. - Key indicator: biodiversity monitoring records. - Proxy indicator: visual check.			Y	
2. Habitat restoration or offset measures	Participate in or support restoration of previously degraded ecosystems linked to aquaculture development (e.g., mangrove replanting, wetland rehabilitation). Restoration may be on-farm or in surrounding areas. Demonstrate ecological benefit through basic monitoring or community involvement.	- Protected ecosystem. - Key indicator: restoration project record. - Proxy indicator: visual check.			Y	
3. Low-GHG & integrated farming systems	Adopt aquaculture systems that reduce greenhouse gas emissions and enhance nutrient recycling, such as Recirculating Aquaculture Systems (RAS), Biofloc, or Integrated Multi-Trophic Aquaculture (IMTA). IMTA combines species like fish with seaweed, bivalves, or snails to optimise water use and minimise waste discharge. These systems lower energy consumption, reduce the need for water exchange, and improve water quality, contributing to more climate-friendly production models.	- Reduced environmental footprint. - Key indicator: reduced GHG emissions. - Proxy indicator: records of multi-species production.	Y		Y	

4. Byproduct valorisation (on-farm)	Increase the reuse of aquaculture by-products by processing them into usable products before the point of sale. Small-scale examples include manual oil extraction, composting shells, or drying waste protein for local use. On-farm valorisation must be conducted by the producer and show alignment with environmental goals such as circularity or nutrient recovery. External factory-based processing is excluded.	• Reduced environmental footprint and/or Increased resource circularity. • Key indicator: records of byproduct reuse. • Proxy indicator: inventory of byproducts processed.	Y			Y
5. Circular economy Practices: feed and infrastructure	Use recycled feed inputs and extend the life of farm infrastructure through reuse or repair. Feed may include agro-industrial waste or on-farm scraps like rice bran and vegetable trimmings. Reuse examples include farmer-led repair of cages, nets, and shelters, or shared infrastructure within cooperatives. These measures support material circularity and reduce demand for virgin inputs without requiring formal certification.	• Increased resource circularity. • Key indicator: records of recycled feed use. • Proxy indicator: receipts for recycled feed inputs.				Y
6. Harvest, post-harvest and storage to reduce loss	Optimise harvest, post-harvest, and/or storage facilities before the point of sale to avoid production-level food loss. This includes energy-efficient storage. Use of solar cool boxes, efficient blowers shared at landing or harvest points, energy efficient cold chain, aerators.	• Minimised food loss • Key indicator: records of energy-efficient storage use. • Proxy indicator: logs of storage methods.	Y			
7. FCR improvement without certified feed	Improve Feed Conversion Ratio (FCR) or reduce grow-out time using non-certified feed. Maintain FCR records	• Improved feed efficiency. • Key indicator: FCR records.	Y			

	and demonstrate efficiency gains over historical baselines through logbooks, visual records, or feed trials. While this reduces emissions, feed inputs are not traceable to verified sustainable sources. Monitor the environmental impact to ensure that improved FCR does not increase waste or pollution.	Proxy indicator: logbooks of feed use.				
8. Use of circular or recycled feed	Use feed inputs derived from circular or recycled sources such as agro-industrial waste, fish by-products, or on-farm scraps (e.g., rice bran, vegetable trimmings). This reduces demand for virgin inputs and supports circular economy goals but does not guarantee sustainability unless inputs are verified.	- Sustainable feed use. - Key indicator: records of circular feed use. - Proxy indicator: invoices of recycled feed sources.	Y			Y
9. Climate risk assessment and adaptation planning	CRVAs using localised climate data and projections. Results should inform adaptation measures integrated into operations. Activities may include risk mapping, scenario planning, and stakeholder consultations. Adaptation plans should be documented and periodically reviewed in line with national climate strategies (e.g., NDCs) and ecosystem-based management approaches. Adapted measures include adjusted stocking schedules, strategic site selection, and climate-proof infrastructure. This practice may be classified as a sustainable Activity in itself. See Appendix H of this Annex.	- Enhanced climate resilience. - Key indicator: CRVA completed and adaptation plan implemented. - Proxy indicator: simplified risk mapping and adaptation action list.		Y		
10. Climate-resilient infrastructure	Design, upgrade, or maintain aquaculture infrastructure (e.g., ponds, cages, hatcheries, supply depots) to withstand	Resilient farm infrastructure.		Y		

	climate-related hazards such as floods, storms, droughts, or salinity intrusion. This may include raised pond bunds, reinforced cage moorings, cyclone-resistant hatcheries, or backup water and energy systems. The implementation of measures to provide flood resilience may in themselves be classified under Activity 37[003] Flood or drought risk prevention and protection, including nature-based solutions. The design aspect of this practice may be classified as a sustainable Activity in itself. See Appendix H of this Annex.	• Key indicator: infrastructure upgrades documented. • Proxy indicator: visual check.				
11. Climate services	Improved weather forecasting and early warning systems. Making forecast information available in an appropriate format to the target audiences which contributes to a disaster risk reduction management and accuracy in decision-making on farms. Examples of technology include monitoring saline intrusion and disaster prevention support system to prevent flood risk and share disaster information. This practice may be classified as a sustainable Activity in itself. See Appendix H of this Annex.	• Improved disaster preparedness. • Key indicator: access to forecast systems. • Proxy indicator: logs of weather forecast use.		Y		
12. Yield maximising and/or climate resilience traits	Select aquaculture varieties or improved breeds that mature quickly, maintain high productivity, and demonstrate resilience to climate-related stressors (e.g., salinity, temperature, or low oxygen). Genetic selection may include naturally resilient strains or selectively bred stocks. Proof of no maladaptation (e.g.,	• Resilient stock. • Key/Proxy indicator: records of resilient stock use and no maladaptation evidence.		Y		

	disease vulnerability, ecological risk) is required. Note that the R&D aspect may be classified as a sustainable Activity in itself. See Appendix H of this Annex.					
13. Traceability for environmental assurance	Implement record-keeping and/or digital systems that enable tracking of environmentally relevant inputs (e.g., circular feed, certified seed) and outputs. Traceability supports verification of green claims. This practice may be classified as a sustainable Activity in itself. See Appendix G of this Annex.	• Verified environmental claims. • Key indicator: Traceability system records. • Proxy indicator: basic input/output logbooks or digital tracking records.			Y	

EO4: Resource Resilience and the Transition to a Circular Economy TSC

This Activity is primarily classified under EO3, which is a minimum requirement. In addition, users may also classify it under this EO if they can demonstrate that the Activity implements relevant core or non-core practices aligned with this EO.

Do No Significant Harm

Refer to Section D.4 and the sector specific DNSH criteria in Annex 2.

E. MANUFACTURING

E.1. Bases for setting TSC

Environmental Objective 1: Climate Change Mitigation

Tier	Description / Definition
Tier 1 (Green)	1. TSC are aimed at achieving defined GHG emissions levels, which refer to credible, 1.5°C-aligned science-based pathways, as aligned with the Paris Agreement. 2. Note that a Green Activity need not necessarily preclude use of fossil fuels. Activities which can achieve these targets while using fossil fuels may be aligned. 3. In practice, unless otherwise specified with carbon intensity (i.e., gCO₂e/kWh) this definition usually takes the form of quantitative thresholds which limit the emission of GHG for given units of product manufactured. For example, tCO₂e per tonne of product produced; where the product can be cement, iron, nitric acid, hydrogen, etc.
Tier 2 (Amber T2)	1. Activity supports a transition towards a Green pathway within a defined time frame; AND 2. Results in a contribution to the EO which is at least as good as the lowest carbon emitting technology currently that is technologically feasible for widespread use in ASEAN, with a prescribed sunset date; OR 3. Enables or promotes the implementation of a Green Activity in the context of this EO.
Tier 3 (Amber T3)	1. Activity is in line with supporting the meeting of Nationally Determined Contribution (NDC) reduction targets of AMS that do not have a net-zero 2050 timeline; OR 2. Activity meets the TSC of Amber (Tier 2) or Green but has been assessed that it will do some level of significant harm to other EOs, which will be remediated within 5 years.

Environmental Objective 2: Climate Change Adaptation

Tier	Description / Definition
Tier 1 (Green)	1. Activity where measures have been implemented to ensure own resilience to climate change and thereby contribute to overall local, national or regional resilience; OR 2. Activity supports other Activities to increase resilience to climate change.
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

Environmental Objective 3: Protection of Healthy Ecosystems and Biodiversity

Tier	Description / Definition
Tier 1 (Green)	- Activity where measures have been implemented to ensure prioritisation of: - Sourcing materials from production practices that enhance biodiversity, ensuring alignment with sustainability standards across other related sectors; OR - Inputs to the production process that contribute to the conservation of critical, endangered, or vulnerable species, supporting ecosystem resilience; OR - Substituting high-impact raw materials with alternatives that reduce pressure on biodiversity, considering lifecycle impacts and ensuring alignment with other related sectors.
Tier 2 (Amber T2)	- Activity where practices have been introduced to reduce / mitigate negative impacts on biodiversity and supporting consistent production levels; OR - Activity is undergoing a transition toward recognised sustainability performance levels, in accordance with credible national or international standards, strategies, or best practices relevant to the sector.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

Environmental Objective 4: Resource Resilience and the Transition to a Circular Economy

Tier	Description / Definition
Tier 1 (Green)	Activity where measures have been implemented to ensure: - Products are designed for reuse and recycling in practice, enabling real-world circularity; OR - Minimising product loss and waste throughout the value chain, optimising production efficiency and extending product lifespans as best as possible; OR - Prioritising the use of recycled and/or renewable feedstock to reduce the reliance on high-impact raw materials in order to enhance resource resilience; OR - Alignment with industry-recognised sustainability criteria, including certifications, material standards, and process guidelines (such as, but limited to C2C, FSC, ISO 14000s series, and related standards) to ensure interoperability across other sectors and enable practical implementation of circular economy principles.
Tier 2 (Amber T2)	- Activity where measures have been implemented to ensure: - Transition to a Green pathway in alignment with nationally or internationally recognised sustainability frameworks, sectoral benchmarks, or regulatory trajectories; OR - Partial implementation of circularity measures that result in measurable improvements in resource efficiency, waste reduction, or material substitution, and align with sectoral best practices or transition benchmarks.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

E.2. Current, Future TSC and Review Programmes

The TSC for most Activities in this sector are review date pre-set as defined in Section 1.4. These may be adjusted in accordance with the processes laid down in Annex 6.

The TSC for some Activities in this sector are linked to the TSC of other Activities, e.g., 271[001] Manufacture of renewable energy technologies. In these cases, the TSC review is dependent on those Activities. The alignment of these dependent manufacturing Activities is contingent upon the current and future TSC of the Activities on which they rely.

E.3. Definitions of terms used in these TSC

Due to the wide variation in Activities, definitions of terms are provided on an Activity-by-Activity basis.

E.4. TSC for Manufacturing

10[001] Manufacture and processing of food products

Activity Notes

- Definitions:
 - By weight is indicative of raw ingredient mass – this excludes added water and salts.
 - Lifecycle Environmental Performance refers to the overall environmental impacts of a feedstock across its entire lifecycle – from extraction, production, and use to end-of-life disposal – measured against factors such as GHG emissions, biodiversity impacts, land and water use, and waste generation.
 - EN ISO 13432: European standard for compostable and biodegradable packaging.
 - Extended Producer Responsibility (EPR): a policy approach that assigns producers responsibility for the entire lifecycle of their products, especially end-of-life management.

EO1: Climate Change Mitigation TSC

TSC are presently not available for the Activity Tiers defined.

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Source at least 95% of ingredients (by weight) from farming or production methods that support biodiversity and reduce pressure on the ecosystem and land use, where: a. For plant-based ingredients, their production practices are classified under Activity 01[001] General perennial or non-perennial crops. All plant-based ingredients must be sourced from production systems that meet the Tier 1 (Green) criteria defined under Activity 01[001]; AND/OR b. For animal-based ingredients, their production practices are classified under Activity 014[001] Livestock production and Activity 03[001] Fishing. All animal-based ingredients must be sourced from production systems that meet the Tier 1 (Green) criteria defined under Activity 014[001] and/or Activity 03[001]; OR 2. At least 70% of high-impact feedstock must be replaced with alternative materials that demonstrate lower pressure on biodiversity, based on lifecycle environmental performance.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	1. Source at least 95% of ingredients (by weight) from farming or production methods that support biodiversity and reduce pressure on the ecosystem and land use, where: a. For plant-based ingredients, their production practices are classified under Activity 01[001] General perennial or non-perennial crops. All plant-based ingredients must be sourced from production systems that meet the Tier 2	

	(Amber T2) criteria defined under Activity 01[001]; AND/OR b. For animal-based ingredients, their production practices are classified under 014[001] Livestock production and Activity 03[001] Fishing. All animal-based ingredients must be sourced from production systems that meet the Tier 2 (Amber T2) criteria defined under Activity 014[001] and/or Activity 03[001]; OR 2. At least 40% of high-impact feedstock must be replaced with alternative materials that demonstrate lower pressure on biodiversity, based on lifecycle environmental performance.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO4: Resource Resilience and the Transition to a Circular Economy TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	- At least 70% by weight of non-primary inputs (e.g., packaging, additives, and auxiliary materials) used in the manufacturing process are sourced from recycled, recovered, or renewable materials; OR - Product and packaging design enables practical reuse or recycling, demonstrated by compliance with national or international systems aligned with globally recognised schemes or frameworks (e.g., ISO EN 13432 or Extended Producer Responsibility (EPR) programmes); OR - The processing of products demonstrates a reduction in avoidable waste of at least 30% compared to a predefined baseline; OR - At least 50% of by-products and production waste must be diverted from landfills or incineration without energy recovery, and valorised into new products (e.g., animal feed, fertiliser, compost, bioenergy/fuels, etc.).	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	- At least 40% by weight of non-primary inputs (e.g., packaging, additives, and auxiliary materials) used in the manufacturing process is sourced from recycled, recovered, or renewable materials; OR - At least 30% of by-products and production waste must be diverted from landfills or incineration without energy recovery, and valorised into new products (e.g., animal feed, fertiliser, compost, bioenergy/fuels, etc.).	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

11[001] Manufacture of beverages

Activity Notes

- Definitions:
 - By weight is indicative of raw ingredient mass – this excludes added water and salts.
 - Lifecycle Environmental Performance refers to the overall environmental impacts of a feedstock across its entire lifecycle – from extraction, production, and use to end-of-life disposal – measured against factors such as GHG emissions, biodiversity impacts, land and water use, and waste generation.
 - EN ISO 13432: European standard for compostable and biodegradable packaging.
 - Extended Producer Responsibility (EPR): a policy approach that assigns producers with responsibility for the entire lifecycle of their products, especially end-of-life management.

EO1: Climate Change Mitigation TSC

TSC are presently not available for the Activity Tiers defined.

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Source at least 95% of ingredients (by weight) from farming or production methods that support biodiversity and reduce pressure on the ecosystem and land use, where: a. For plant-based ingredients, their production practices are classified under Activity 01[001] General perennial or non-perennial crops. All plant-based ingredients must be sourced from production systems that meet the Tier 1 (Green) criteria defined under Activity 01[001]; AND/OR b. For animal-based ingredients, their production practices are classified under Activity 014[001] Livestock production and Activity 03[001] Fishing. All animal-based ingredients must be sourced from production systems that meet the Tier 1 (Green) criteria defined under Activity 014[001] and/or Activity 03[001]; OR 2. At least 70% of high-impact feedstock must be replaced with alternative materials that demonstrate lower pressure on biodiversity, based on lifecycle environmental performance.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	1. Source at least 95% of ingredients (by weight) from farming or production methods that support biodiversity and reduce pressure on the ecosystem and land use, where: a. For plant-based ingredients, their production practices are classified under Activity 01[001] General perennial or non-perennial crops. All plant-based ingredients must be sourced from production systems that meet the Tier 2 (Amber T2) criteria defined under Activity 01[001]; AND/OR	

	b. For animal-based ingredients, their production practices are classified under Activity 014[001] Livestock production and Activity 03[001] Fishing. All animal-based ingredients must be sourced from production systems that meet the Tier 1 (Green) criteria defined under Activity 014[001] and/or Activity 03[001]; OR 2. At least 40% of high-impact feedstock must be replaced with alternative materials that demonstrate lower pressure on biodiversity, based on lifecycle environmental performance.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO4: Resource Resilience and the Transition to a Circular Economy TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. At least 70% by weight of non-primary inputs (e.g., packaging, additives, and auxiliary materials) used in the manufacturing process are sourced from recycled, recovered, or renewable materials; OR 2. Product and packaging design enables practical reuse or recycling, demonstrated by compliance with national or international systems aligned with globally recognised schemes and/or frameworks (e.g., EN ISO 13432 or Extended Producer Responsibility (EPR) programmes); OR 3. The processing of products demonstrates a reduction in avoidable waste of at least 30% compared to a predefined baseline; OR 4. At least 50% of by-products and production waste must be diverted from landfills or incineration without energy recovery, and valorised into new products (e.g., animal feed, fertiliser, compost, bioenergy/fuels, etc.).	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	1. At least 40% by weight of non-primary inputs (e.g., packaging, additives, and auxiliary materials) used in the manufacturing process are sourced from recycled, recovered, or renewable materials; OR 2. At least 30% of by-products and production waste must be diverted from landfills or incineration without energy recovery, and valorised into new products (e.g., animal feed, fertiliser, compost, bioenergy/fuels, etc.).	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

13[001] Manufacture of textiles

Activity Notes

- Definitions:
 - EN ISO 13432: European standard for compostable and biodegradable packaging.
 - Extended Producer Responsibility (EPR): a policy approach that assigns producers responsibility for the entire lifecycle of their products, especially end-of-life management.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity complies with one of the following criteria: a. Facilities source and utilise onsite renewable energy - such as rooftop solar PV or other onsite sources - to cover at least 35% of total facility energy consumption; OR b. Steam generation equipment and machinery must operate on either 100% electrification, 100% sustainably sourced biomass, or a blend of both, provided that all biomass is sourced from industrial crops or food waste and/or forest-based products certified as a renewable feedstock; AND 2. Natural raw materials (e.g., cotton, wool, etc.) must be sourced from production systems that meet the Tier 1 (Green) criteria defined under Activity 01[001] General perennial or non-perennial crops and/or Activity 014[001] Livestock production, and synthetic raw materials (e.g., polyester) must be sourced from production systems that meet the Tier 1 (Green) criteria defined under Activity 192[001] Manufacture of refined petroleum products.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	1. Have a transition plan that aligns with the Paris Agreement commitments or a credible net-zero GHG emissions reduction target, following an internationally recognised framework for consistency and accountability, where the plan includes a switch to low-carbon process technologies; OR 2. The Activity complies with one of the following criteria: a. Facilities source and utilise onsite renewable energy - such as rooftop solar PV or other onsite sources - to cover at least 10% of total facility energy consumption; OR b. At least 50% of biomass burned on site is sourced from industrial crops or food waste and/or forest-based products certified as a renewable feedstock.	
Tier 3 (Amber T3)	1. The Activity must have a transition plan that aligns with supporting the NDC reduction targets of the AMS jurisdiction in which it operates, if that jurisdiction does not have a net-zero by 2050 timeline.	
TSC applicable to all Tiers	1. Waste fabric must not be burned on site for energy and/or heat generation purposes.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. At least 70% of raw fabric inputs used in the manufacturing process are from recycled, recovered, or renewable sources; OR 2. Product and packaging design enables practical reuse or recycling, demonstrated by compliance with national or international systems aligned with globally recognised schemes and/or frameworks (e.g., EN ISO 13432 or Extended Producer Responsibility (EPR) programmes); OR 3. The processing of textiles demonstrates a reduction in avoidable fabric waste of at least 30% compared to a predefined baseline.	Review date pre-set (see Annex 6)
Tier 2 (Amber T2)	1. At least 40% of raw fabric inputs used in the manufacturing process are from recycled, recovered, or renewable sources.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	
TSC applicable to all Tiers	1. Waste fabric must not be burned on site for energy and/or heat generation purposes.	

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

14[001] Manufacture of wearing apparel

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	- The Activity complies with either of the following criteria: - Facilities source and utilise onsite renewable energy - such as rooftop solar PV or other onsite sources - for at least 35% of total facility energy consumption; OR - Steam generation equipment and machinery must operate on either 100% electrification, 100% sustainably sourced biomass, or a blend of both, provided that all biomass is sourced from industrial crops or food waste and/or forest-based products certified as a renewable feedstock; AND - Natural raw materials (e.g., cotton, wool, etc.) must be sourced from production systems that meet the Tier 1 (Green) criteria defined under Activity 01[001] General perennial or non-perennial crops and/or Activity 014[001] Livestock production and synthetic raw materials (e.g., polyester) must be sourced from production systems that meet the Tier 1 (Green) criteria defined under Activity 192[001] Manufacture of refined petroleum products.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	- Have a transition plan that aligns with the Paris Agreement commitments or a credible net-zero GHG emissions reduction target, following an internationally recognised framework for consistency and accountability, where the plan includes a switch to low-carbon process technologies; OR - The Activity complies with one of the following criteria: - Facilities source and utilise onsite renewable energy - such as rooftop solar PV or other onsite sources - to cover at least 10% of total facility energy consumption; OR - At least 50% of biomass burned on site is sourced from industrial crops or food waste and/or forest-based products certified as a renewable feedstock.	
Tier 3 (Amber T3)	The Activity must have a transition plan that aligns with supporting the NDC reduction targets of the AMS jurisdiction in which it operates, if that jurisdiction does not have a net-zero by 2050 timeline.	
TSC Applicable to all Tiers	Waste fabric must not be burned on site for energy and/or heat generation purposes.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	- At least 70% of raw material inputs used in the manufacturing process are from recycled, recovered, or renewable sources; OR - Product and packaging design enables practical reuse or recycling, demonstrated by compliance with national or international systems aligned with globally recognised schemes and/or frameworks (e.g., EN ISO 13432 or Extended Producer Responsibility (EPR) programmes); OR - The processing of garments and wearing apparel demonstrates a reduction in avoidable fabric waste of at least 30% compared to a predefined baseline.	Review date pre-set (see Annex 6)
Tier 2 (Amber T2)	At least 40% of raw material inputs used in the manufacturing process are from recycled, recovered, or renewable sources.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	
TSC Applicable to all Tiers	Waste fabric must not be burned on site for energy and/or heat generation purposes.	

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

15[001] Manufacture of leather and related products

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	- The Activity complies with one of the following criteria: - Leather products made from animal hides that would otherwise be disposed of as waste, and where the total lifecycle GHG emissions of the leather production is demonstrably lower than the emissions that would result from landfilling or incinerating those hides, are automatically aligned; OR - Facilities source and utilise onsite renewable energy - such as rooftop solar PV or other onsite sources - for at least 35% of total facility energy consumption; OR - Steam generation equipment and machinery must operate on either 100% electrification, 100% sustainably sourced biomass, or a blend of both, provided that all biomass is sourced from industrial crops or food waste and/or forest-based products certified as a renewable feedstock; AND - Animal hides must be sourced from production systems that meet the Tier 1 (Green) criteria defined under Activity 014[001] Livestock production and synthetic raw materials to produce leather must be sourced from production systems that meet the Tier 1 (Green) criteria defined under Activity 192[001] Manufacture of refined petroleum products.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	- Have a transition plan that aligns with the Paris Agreement commitments or a credible net-zero GHG emissions reduction target, following an internationally recognised framework for consistency and accountability, where the plan includes a switch to low-carbon process technologies; OR - The Activity complies with one of the following criteria: - Facilities source and utilise onsite renewable energy - such as rooftop solar PV or other onsite sources - to cover at least 10% of total facility energy consumption; OR - At least 50% of biomass burned on site is sourced from industrial crops or food waste and/or forest-based products certified as a renewable feedstock.	
Tier 3 (Amber T3)	The Activity must have a transition plan that aligns with supporting the NDC reduction targets of the AMS jurisdiction in which it operates, if that jurisdiction does not have a net-zero by 2050 timeline.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	- Source at least 95% of animal products from farming or production methods that support biodiversity and reduce pressure on the ecosystem and land use, where: - For animal-based ingredients, their production practices are classified under Activity 014[001] Livestock production. All animal-based ingredients must be sourced from production systems that meet the Tier 1 (Green) criteria defined under Activity 014[001]; AND - At least 70% of high-impact feedstock must be replaced with alternative materials that demonstrate lower pressure on biodiversity, based on lifecycle environmental performance.	Review date pre-set (see Annex 6)
Tier 2 (Amber T2)	- Source at least 95% of raw ingredients and animal products from farming or production methods that support biodiversity and reduce pressure on the ecosystem and land use, where: - For animal-based ingredients, their production practices are classified under Activity 014[001] Livestock production. All animal-based ingredients must be sourced from production systems that meet the Tier 2 (Amber T2) criteria defined under Activity 014[001]; AND - At least 40% of high-impact feedstock must be replaced with alternative materials that demonstrate lower pressure on biodiversity, based on lifecycle environmental performance.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

162[001] Manufacture of products of wood, cork, straw and plaiting materials

Activity Notes

- Definitions:
 - GHG-neutral or GHG-negative, in the context of wood as feedstock, refers to the process where the carbon naturally sequestered and stored by trees during growth is roughly equal to (i.e., neutral) or greater than (i.e., negative) the total GHG released over the product's full lifecycle (from harvesting, processing, transport, disposal).
 - Natural forests refer to forests composed of indigenous trees, not planted by humans and which excludes forest plantations (see Section D.3).

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity complies with one of the following criteria: a. Products made from wood that demonstrate GHG-neutral or GHG-negative lifecycle – i.e., where the amount of carbon sequestered and stored is equal to or greater than the total emissions released during the product's entire lifecycle – are automatically aligned; OR b. Onsite fuel combustion must use at least 50% energy input from low-carbon gaseous fuels (e.g., biogas), hydrogen, biomass certified as a renewable feedstock or be partially substituted with electrification; AND 2. Wood must be sourced from production systems that meet the Tier 1 (Green) criteria defined under Activity 02[001] Sustainable forest management.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	1. Have a transition plan that aligns with the Paris Agreement commitments or a credible net-zero GHG emissions reduction target, following an internationally recognised framework for consistency and accountability, where the plan includes a switch to low-carbon process technologies.	
Tier 3 (Amber T3)	1. The Activity must have a transition plan that aligns with supporting the NDC reduction targets of the AMS jurisdiction in which it operates, if that jurisdiction does not have a net-zero by 2050 timeline.	
TSC Applicable to all Tiers	1. Activities must comply with all of the following criteria: a. Wood sourced from natural forests is only aligned if it complies with the certification criteria for timber products under Activity 02[001] Sustainable forest management; AND b. Products manufactured must demonstrate viable waste management plans which encourage wood waste being diverted from landfills.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	- Source at least 95% of wood or wood-based products from farming or production methods that support biodiversity and reduce pressure on the ecosystem and land use, where: - For wood or wood-based products, their production practices are classified under Activity 02[001] Sustainable forest management or Activity 02[002] Forestry plantation. All wood or wood-based products must be sourced from production systems that meet the Tier 1 (Green) criteria defined under Activity 02[001] or Activity 02[002]; AND - At least 70% of high-impact feedstock must be replaced with alternative materials that demonstrate lower pressure on biodiversity, based on lifecycle environmental performance.	Review date pre-set (see Annex 6)
Tier 2 (Amber T2)	- Source at least 95% of wood or wood-based products from farming or production methods that support biodiversity and reduce pressure on the ecosystem and land use, where: - For wood or wood-based products, their production practices are classified under Activity 02[001] Sustainable forest management or Activity 02[002] Forestry plantation. All wood or wood-based products must be sourced from production systems that meet the Tier 2 (Amber T2) criteria defined under Activity 02[001] or Activity 02[002]; AND - At least 40% of high-impact feedstock must be replaced with alternative materials that demonstrate lower pressure on biodiversity, based on lifecycle environmental performance.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

17[001] Manufacture of paper and paper products

Activity Notes

- Definitions:
 - Natural forests refer to forests composed of indigenous trees, not planted by humans and which excludes forest plantations (see Section D.3).
 - EN ISO 13432: European standard for compostable and biodegradable packaging.
 - Extended Producer Responsibility (EPR): a policy approach that assigns producers responsibility for the end-of-life management of their products, incentivising sustainable waste management strategies.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity complies with one of the following criteria: a. Facilities source and utilise onsite renewable energy - such as rooftop solar PV or other onsite sources - for at least 35% of total facility energy consumption; OR b. Steam generation equipment and machinery must operate on either 100% electrification, 100% sustainably sourced biomass, or a blend of both, provided that all biomass is sourced from industrial crops or food waste and/or forest-based products certified as a renewable feedstock; AND 2. Wood must be sourced from production systems that meet the Tier 1 (Green) criteria defined under Activity 02[001] Sustainable forest management.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	1. Have a transition plan that aligns with the Paris Agreement commitments or a credible net-zero GHG emissions reduction target, following an internationally recognised framework for consistency and accountability, where the plan includes a switch to low-carbon process technologies; OR 2. The Activity complies with the following criteria: a. Facilities source and utilise onsite renewable energy - such as rooftop solar PV or other onsite sources - for at least 10% of total facility energy consumption.	
Tier 3 (Amber T3)	1. The Activity must have a transition plan that aligns with supporting the NDC reduction targets of the AMS jurisdiction in which it operates, if that jurisdiction does not have a net-zero by 2050 timeline.	
TSC Applicable to all Tiers	1. Wood sourced from natural forests is only aligned if it complies with the certification criteria for timber products under Activity 02[001] Sustainable forest management.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	- At least 80% of raw material inputs used in the manufacturing process are from recycled, recovered, or renewable sources; OR - Product and packaging design enables practical reuse or recycling, demonstrated by compliance with national or international systems aligned with globally recognised schemes and/or frameworks (e.g., EN ISO 13432 or Extended Producer Responsibility (EPR) programmes); OR - The processing of paper products demonstrates a reduction in avoidable waste of at least 30% compared to a predefined baseline.	Review date pre-set (see Annex 6)
Tier 2 (Amber T2)	At least 50% of raw material inputs used in the manufacturing process are from recycled, recovered, or renewable sources.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	
TSC Applicable to all Tiers	Wood sourced from natural forests is only aligned if it complies with the certification criteria for timber products under Activity 02[001] Sustainable forest management.	

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

192[001] Manufacture of refined petroleum products

Activity Notes

- Definitions:
 - GHG-neutral or GHG-negative, in the context of feedstock from crops, refers to crops where the carbon absorbed during growth is roughly equal to (i.e., neutral) or greater than (i.e., negative) the total GHG released over their full lifecycle (from planting, harvesting, processing, transport, disposal).
 - Tier 1 (Green), criterion (2.b.i) is in reference to Activity 353 under Appendix A Electricity, Gas, Steam and Air Conditioning Supply.
 - Tier 1 (Green), criterion (2.b.ii) is in reference to Activity 351 under Appendix A Electricity, Gas, Steam and Air Conditioning Supply.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Products made using feedstock from crops with a demonstrated GHG-neutral or GHG-negative lifecycle, i.e., where the amount of carbon absorbed and stored in the ground is equal to or greater than the total emissions released during the feedstock's entire lifecycle, are automatically aligned; OR 2. The Activity complies with all of the following criteria: a. At least 70% by weight of the feedstock used for the production of energy-driven products or fuels (i.e., products mainly used for their energy content) shall be biomass-based; AND b. The refining process complies with the following criteria: i. For process heating and/or cooling, lifecycle GHG emissions <28 gCO₂e/MJ per unit of heat and/or cooling produced; AND ii. For electricity use or sourcing, lifecycle GHG emissions <100 gCO₂e/kWh; OR If hydrogen is used in the process, it complies with the Tier 1 (Green) criteria for hydrogen production as established under Activity 2011[001] Manufacture of low-carbon gases, including hydrogen.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	1. Have a transition plan that aligns with the Paris Agreement commitments or a credible net-zero GHG emissions reduction target, following an internationally recognised framework for consistency and accountability, where the plan includes a switch to low-carbon process technologies; OR 2. For energy-driven products or fuels (i.e., products that are mainly used for their energy content), the production shall use at least 30% by weight biomass-based feedstock.	
Tier 3 (Amber T3)	1. The Activity must have a transition plan that aligns with supporting the NDC reduction targets of the AMS jurisdiction	

	in which it operates, if that jurisdiction does not have a net-zero by 2050 timeline.	
TSC applicable to all Tiers	1. Use of fossil gas and oil as feedstock and/or for energy generation is only aligned for facilities prior to 2040; AND/OR 2. Use of biomass as a feedstock is only aligned if facilities comply with the following criteria: a. Source of biomass is dedicated fuel/energy crops that are certified as a renewable feedstock; emissions associated with fuel crops harvesting and processing, including land use change, feedstock growth and transport and fuel production shall be <40 gCO₂e per MJ of fuel produced; OR b. Source of biomass is plantation wood that is in accordance with the TSC set out in Activity 02[001] Sustainable forest management; OR c. Source of biomass is waste from industrial crops or food; OR d. Biomass feedstock utilised for electricity generation complies with the criteria applicable for biomass sourcing as established under Activity 351[014] Electricity generation from bioenergy, including co-firing with fossil fuels; AND/OR 3. For all facilities using CCS/CCUS, the CO₂ captured is not used for products that release CO₂ immediately after being used (such as in urea, carbonated beverages, or fuels), nor for enhanced oil recovery and/or the production of other forms of fossil energy sources.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

201[001] Manufacture of organic and inorganic basic chemicals

Activity Notes

- Definitions:
 - High-value Chemicals (HVC) include ethylene, propylene, benzene, toluene, and xylene – representing roughly 70% of direct emissions from the sector according to SBTi⁵³.
 - Complex weighted throughput refers to a system of measurement in chemicals production, where different chemical compounds or reactions are processed, and the final output is calculated based on the relative importance of each process. This method of measurement is used for determining efficiency of chemical processes relative to the complexity of each step or compound involved.
 - In terms of ammonia production through wastewater treatment and recovery, partial recovery is acceptable and considered to be green under the Activities' classification. Any form of ammonia recovery from wastewater is known to be less carbon intensive than primary production of ammonia. Full recovery from wastewater treatment (i.e., 100%) is cost-prohibitive under most conditions.
 - A high-impact feedstock is a carbon-intensive and/or environmentally damaging raw material, such as non-certified timber or wood products, coal, or natural gas, whose production or use may have significant negative environmental effects.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. For the production of the below listed basic chemicals, GHG emissions are measured on a weighted basis and the Activity must comply with the following criteria, as applicable: a. For HVC, ≤ 0.693 tCO₂e / tonne of HVC produced; OR b. For aromatic compounds (benzene, toluene, xylene), ≤ 0.0072 tCO₂e / tonne of complex weighted throughput produced; OR c. For nitric acid, ≤ 0.038 tCO₂e / tonne of nitric acid produced; OR d. For carbon black, ≤ 1.141 tCO₂e / tonne of carbon black produced; OR e. For soda ash (i.e., disodium carbonate), ≤ 0.789 tCO₂e / tonne of soda ash produced; OR 2. For the production of ammonia, the Activity must comply with either of the following criteria: a. Is recovered from wastewater; OR b. Is produced from hydrogen as the feedstock, which complies with the Tier 1 (Green) criteria for hydrogen production as set out in Activity 2011[001] Manufacture of low-carbon gases, including hydrogen; OR 3. For the production of chlorine, the Activity must comply with either of the following criteria:	Review date pre-set (see Annex 6).

⁵³ <https://sciencebasedtargets.org/sectors/chemicals>

	a. Consumes ≤ 2.45 MWh of electricity per tonne of chlorine produced; OR b. Meets the carbon intensity threshold (Tier 1 (Green)) for the electricity generation Activity corresponding to the type of electricity used to produce the chlorine, Appendix A; OR 4. For the production of methanol, the Activity must comply with the following criterion: a. Is produced from hydrogen as the feedstock, which complies with the Tier 1 (Green) criteria for hydrogen production as set out in Activity 2011[001] Manufacture of low-carbon gases, including hydrogen.	
Tier 2 (Amber T2)	1. For the production of the listed basic chemicals, ammonia, and methanol, the Activity must meet either of the criteria below: a. Have a transition plan that aligns with the Paris Agreement commitments or a credible net-zero GHG emissions reduction target, following an internationally recognised framework for consistency and accountability, where the plan includes a switch to low-carbon process technologies; OR b. Implement energy efficiency measures that achieve at least a 25% improvement in energy efficiency compared to a predefined baseline reflecting current business-as-usual practices; OR 2. For the production of chlorine, the Activity must meet either of the following criteria: a. Consumes ≤ 2.80 MWh of electricity per tonne of chlorine produced; OR b. Meets the carbon intensity threshold (Tier 2 (Amber T2)) for the electricity generation Activity corresponding to the type of electricity used to produce the chlorine, as defined in Appendix A.	
Tier 3 (Amber T3)	1. The Activity must have a transition plan that aligns with supporting the Nationally Determined Contribution (NDC) reduction targets of the AMS jurisdiction in which it operates, if that jurisdiction does not have a net-zero by 2050 timeline.	
TSC applicable to all Tiers	Facilities must satisfy either (2) OR (3); criterion (1) is mandatory in all applicable cases: 1. Regarding the production of the listed organic and inorganic chemicals, the Activity complies with all of the following criteria: a. At least 50% of production by volume is on the list of chemicals in scope; AND b. Any biomass used as feedstock must be sourced either from, (i) plantation wood that is in accordance with the TSC set out in Activity 02[001] Sustainable forest	

	management, (ii) food or feed crops that are in accordance with the TSC set out in Activity 01[001] General perennial or non-perennial crops or Activity 02[002] Forestry plantation; or (iii) waste from industrial crops or food; AND 2. If facilities are using fossil gas, hydrogen, CO₂ or biomass as feedstock they are aligned only if they meet the following criteria: a. Fossil gas or naphtha: Only aligned for facilities prior to 2040; OR b. Hydrogen: Complies with the criteria for hydrogen production as established under Activity 2011[001] Manufacture of low-carbon gases, including hydrogen; OR c. Biomass: Complies with the criteria applicable for biomass sourcing as established under Activity 351[014] Electricity generation from bioenergy, including co-firing with fossil fuels; OR d. CO₂ used complies with the criteria described under Activity 000[010] Transport of CO₂ and Activity 000[020] Underground permanent geological storage of CO₂. CO₂ from ammonia production should not be used for urea production; OR 3. If facilities are using fossil gas, hydrogen, biomass, or heat supplied from alternative sources as a fuel source they are aligned only if they meet the following criteria: a. Fossil gas or naphtha: Only aligned for facilities prior to 2040; OR b. Hydrogen: Complies with the criteria for hydrogen production as established under Activity 2011[001] Manufacture of low-carbon gases, including hydrogen; OR c. Biomass: Complies with the criteria applicable for biomass sourcing as established under Activity 351[014] Electricity generation from bioenergy, including co-firing with fossil fuels; OR d. Facilities using heat supplied from alternative sources, such as geothermal, solar thermal, and waste heat recovery: The heat source must comply with the applicable criteria for each source of energy.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

2011[001] Manufacture of low-carbon gases, including hydrogen

Activity Notes

- Includes
 - Low-carbon gas, including, but not limited to, hydrogen.
- Definitions
 - Hydrogen production exclusively from renewable sources or feedstock is indicative of Green Hydrogen production. It is usually the process of electrolysis powered by renewable energy sources such as solar, wind, hydro, or geothermal, resulting in near-zero GHG emissions across its production lifecycle.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The production of hydrogen exclusively from renewable sources or feedstock is automatically aligned; OR 2. For hydrogen production using non-renewable sources or feedstock, the Activity complies with all of the following criteria: a. The lifecycle GHG emissions are lower than 3 tCO₂e per tonne of hydrogen produced; AND b. Where the CO₂ that would otherwise be emitted from the manufacturing process is captured for the purpose of underground storage, the CO₂ is transported and stored underground, in accordance with the TSC set out in Activity 000[010] Transport of CO₂ and Activity 000[020] Underground permanent geological storage of CO₂; OR 3. For the production of other low-carbon gases, the Activity complies with the Tier 1 (Green) lifecycle GHG emissions TSC for the operation of facilities using low-carbon gases, as set out in Appendix A. (352[010] Transmission and distribution networks for renewable and low-carbon gases; 352[030] Storage of renewable and low-carbon gases.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	1. Have a transition plan that aligns with the Paris Agreement commitments or a credible net-zero GHG emissions reduction target, following an internationally recognised framework for consistency and accountability, where the plan includes a switch to low-carbon process technologies; OR 2. Implement energy efficiency measures that achieve at least a 25% improvement in energy efficiency compared to a predefined baseline reflecting current business-as-usual practices.	
Tier 3 (Amber T3)	1. The Activity must have a transition plan that aligns with supporting the NDC reduction targets of the AMS jurisdiction in which it operates, if that jurisdiction does not have a net-zero by 2050 timeline.	

TSC applicable to all Tiers	1. Any biomass used as feedstock must be sourced either from, (i) plantation wood that is in accordance with the TSC set out in Activity 02[001] Sustainable forest management, (ii) food or feed crops that are in accordance with the TSC set out in Activity 01[001] General perennial or non-perennial crops or Activity 02[002] Forestry plantation, or (iii) waste from industrial crops or food.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

2013[001] Manufacture of plastics and synthetic rubber in primary form

Activity Notes

- Definitions:
 - Synthetic rubber in primary form includes virgin polymerisation from petrochemical feedstocks as well as recovered rubber produced through the devulcanisation process.
 - Conventional polymerisation is through fossil-based monomers such as butadiene, styrene, isoprene, and ethylene-propylene, typically derived from fossil-based products.
 - Devulcanisation is a mechanical, thermal, or chemical process that breaks the sulphur cross-links in vulcanised rubber (i.e., synthetic rubber), allowing the material to be reprocessed into its primary form.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The plastic or synthetic rubber in primary form is fully manufactured by mechanical recycling of plastic or rubber waste; OR 2. Where mechanical recycling is not technically feasible or economically viable, the plastic or synthetic rubber in primary form is fully manufactured by chemical recycling or through devulcanisation of the plastic or rubber waste, and the lifecycle GHG emissions of the manufactured plastic or rubber, excluding any calculated credits from the production of fuels, are lower than the lifecycle GHG emissions of the equivalent plastic or synthetic rubber in primary form manufactured from fossil fuel feedstock; OR 3. Plastic or synthetic rubber is derived wholly or partially from renewable feedstock and its lifecycle GHG emissions are lower than the lifecycle GHG emissions of the equivalent plastic or synthetic rubber in primary form manufactured from fossil fuel feedstock.	Review date pre-set (see Annex 6)
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	
TSC applicable to all Tiers	1. Any biomass used as feedstock must be sourced either from, (i) plantation wood that is in accordance with the TSC set out in Activity 02[001] Sustainable forest management, (ii) food or feed crops that is in accordance with the TSC set out in Activity 01[001] General perennial or non-perennial crops or Activity 02[002] Forestry plantation, or (iii) waste from industrial crops or food.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

21[001] Manufacture of pharmaceuticals and medicinal products

Activity Notes

- The Activity is the manufacture of pharmaceutical and medicinal products, which is included due to its strategic importance to AMS, its potential environmental footprint, and the need for evaluation within this environmental framework.
- The ASEAN Taxonomy focuses on substantial contribution to EOs; it is a classification system designed to evaluate Activities based on their environmental impact, as well as DNSH and other EC.
- The highly regulated nature of this Activity provides assurance that compliance with DNSH and other EC requirements is sufficient to demonstrate this Activity's environmental alignment with the ASEAN Taxonomy.
- At minimum, this Activity must meet national and/or international regulations and guidelines, where applicable, such as Good Manufacturing Practice⁵⁴, Pharmaceutical Inspection Co-operation Scheme⁵⁵, controlled drugs and cosmetics regulations⁵⁶, as well as meeting ASEAN Taxonomy DNSH and other EC requirements. This approach ensures alignment with the ASEAN Taxonomy's EOs and EC including DNSH without requiring specific EO assessments.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

⁵⁴ World Health Organisation <https://www.who.int/teams/health-product-policy-and-standards/standards-and-specifications/norms-and-standards/gmp>

⁵⁵ <https://picscheme.org/en/picscheme>

⁵⁶ According to national pharmaceutical regulators

22[001] Manufacture of rubber and plastic products, including plastic packaging goods

Activity Notes

- Definitions:
 - EN ISO 13432: European standard for compostable and biodegradable packaging.
 - Extended Producer Responsibility (EPR): a policy approach that assigns the producers responsibility for the entire lifecycle of their products, especially end-of-life management.

EO1: Climate Change Mitigation TSC

TSC are presently not available for the Activity Tiers defined.

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. At least 35% of the packaging product consists of recycled post-consumer material; OR 2. Product and packaging design enables practical reuse or recycling, demonstrated by compliance with national or international systems aligned with globally recognised schemes and/or frameworks (e.g., EN ISO 13432 or Extended Producer Responsibility (EPR) programmes); OR 3. At least 65% by weight of the packaging product is manufactured from bio-waste feedstock.	Review date pre-set (see Annex 6)
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	
TSC applicable to all Tiers	1. Use of bio-waste as a feedstock is only aligned if facilities comply with the following criteria: a. Forest-based bio-waste is in accordance with the TSC set out in Activity 02[001] Sustainable forest management; OR b. Source of biomass is waste from industrial crops or food; OR c. Source of biomass is food or feed crops that meet the eligibility criteria classified under Activity 01[001] General perennial or non-perennial crops or Activity 02[002] Forestry plantation.	

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

2394[001] Manufacture of cement

Activity Notes

- Definitions:
 - Credible and recognised framework is to be a clear, time-bound strategy outlining a net-zero target following science-based trajectories.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Manufactures grey clinker where the specific GHG emissions are lower than 0.800 tCO₂e per tonne of grey clinker produced; OR 2. Manufactures cement from grey clinker or an alternative hydraulic binder, where the specific GHG emissions from the production are lower than 0.520 tCO₂e per tonne of cementitious product.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	1. Have a transition plan that aligns with the Paris Agreement commitments or a credible net-zero GHG emissions reduction target, following an internationally recognised framework for consistency and accountability, where the plan includes a switch to low-carbon process technologies; OR 2. Manufactures grey clinker where the specific GHG emissions are lower than 0.900 tCO₂e per tonne of grey clinker produced; OR 3. Manufactures cement from grey clinker or an alternative hydraulic binder, where the specific GHG emissions from the production are lower than 0.585 tCO₂e per tonne of cementitious product.	
Tier 3 (Amber T3)	1. The Activity must have a transition plan that aligns with supporting the NDC reduction targets of the AMS jurisdiction in which it operates, if that jurisdiction does not have a net-zero by 2050 timeline.	
TSC applicable to all Tiers	1. If facilities are using biomass, hydrogen, or waste as a fuel source, they are aligned only if they meet the following criteria: a. Hydrogen: Complies with the criteria for hydrogen production as established under Activity 2011[001] Manufacture of low-carbon gases, including hydrogen; OR b. Biomass: Complies with the criteria applicable for biomass sourcing as established under Activity 351[014] Electricity generation from bioenergy, including co-firing with fossil fuels; OR c. Waste: Complies with the criteria applicable for waste-derived fuels as established under Activity 3821[001] Anaerobic digestion of bio-waste; AND	

	i. All waste of recycling potential must be removed prior to burning; AND ii. Municipal solid waste is not aligned as a fuel type after 2040.	
	2. If facilities implement CCS / CCUS, CO₂ that is captured must be transported and stored in accordance with the TSC: a. Activity 000[010] Transport of CO₂; AND b. Activity 000[020] Underground permanent geological storage of CO₂.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

241[001] Manufacture of ferrous metals and materials

Activity Notes

- Definitions
 - A single performance-based threshold is proposed for steel production (i.e., per tonne of steel produced) in order to push for broader efficiency in the manufacturing process.
 - The rationale for not including differentiated carbon intensity thresholds based on steel category is as follows:
 - Tracking and verifying the exact steel category for every batch is extremely difficult. Detailed emissions accounting per product line is required, which many producers, especially in developing markets, are unable to provide.
 - Differentiated thresholds may unintentionally preserve high-carbon production methods, whereas single thresholds incentivise more use of scrap steel and electrification in the process.
 - A credible and recognised framework is to be a clear, time-bound strategy outlining a net-zero target following science-based trajectories.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Facilities operating exclusively with Electric Arc Furnaces (EAF) are automatically aligned; OR 2. Facilities operating with Direct Reduced Iron (DRI), DRI-EAF, or Blast Furnace-Basic Oxygen Furnace (BF-BOF), comply with the following criteria: a. 100% green hydrogen-based DRI; OR b. Manufactures steel from iron ore, where the specific GHG emissions from the production are lower than 1.24 tCO₂e per tonne of steel produced.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	1. Have a transition plan that aligns with the Paris Agreement commitments or a credible net-zero GHG emissions reduction target, following an internationally recognised framework for consistency and accountability, where the plan includes a switch to low-carbon process technologies; OR 2. Where the facility currently operates BF-BOF technology to manufacture steel from iron ore, the specific GHG emissions from the production are lower than 2.30 tCO ₂ e per tonne of steel produced.	
Tier 3 (Amber T3)	1. The Activity must have a transition plan that aligns with supporting the NDC reduction targets of the AMS jurisdiction in which it operates, if that jurisdiction does not have a net-zero by 2050 timeline.	
TSC applicable to all Tiers	1. If facilities implement CCS / CCUS, CO ₂ that is captured must be transported and stored in accordance with the TSC: a. Activity 000[010] Transport of CO₂; AND b. Activity 000[020] Underground permanent geological storage of CO₂.	

	2. Use of fossil gases or coal as a reducing agent and/or for energy generation is only aligned for facilities prior to 2040. To qualify after 2040, the facilities must comply with the following criteria: a. Must be combined with CCS/CCUS measures in accordance with the TSC set out in Activity 000[010] Transport of CO₂ and Activity 000[020] Underground permanent geological storage of CO₂; AND b. Direct CO₂ captured is not utilised for enhanced oil recovery and/or the production of other forms of fossil energy sources; AND c. Appropriate on-site activities for the monitoring and mitigation of methane leakage are implemented; AND 3. Use of biomass as a reducing agent is only eligible if facilities comply with the following criteria: a. Source of biomass is food or feed crops that meet the eligibility criteria classified under Activity 01[001] General perennial or non-perennial crops or Activity 02[002] Forestry plantation; OR b. Source of biomass is plantation wood that is in accordance with the TSC set out in Activity 02[001] Sustainable forest management; OR c. Source of biomass is from industrial crops.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

242[001] Manufacture of non-ferrous metals and materials

Activity Notes

- Definitions
 - Secondary production refers to the manufacturing of products exclusively from scrap metals and materials (i.e., 100% recycled).
 - A credible and recognised framework is to be a clear, time-bound strategy outlining a net-zero target following science-based trajectories.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Secondary production of non-ferrous metals and materials is automatically aligned; OR 2. For primary production of non-ferrous metals and materials, the average carbon intensity for the indirect GHG emissions does not exceed 100 gCO₂e/kWh; OR 3. For primary production of aluminium, complies with any two of the following criteria: a. The specific GHG emissions does not exceed 1.484 tCO₂e per tonne of aluminium produced; b. The average carbon intensity for the indirect GHG emissions does not exceed 100 gCO₂e/kWh; c. The electricity consumption for the manufacturing process does not exceed 14.86 MWh per tonne of aluminium produced.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	1. Have a transition plan that aligns with the Paris Agreement commitments or a credible net-zero GHG emissions reduction target, following an internationally recognised framework for consistency and accountability, where the plan includes a switch to low-carbon process technologies; OR 2. For primary production of non-ferrous metals and materials, the average carbon intensity for the indirect GHG emissions complies with the Tier 2 (Amber T2) criteria for the relevant electricity sources used, as set out in Appendix A.	
Tier 3 (Amber T3)	1. The Activity must have a transition plan that aligns with supporting the NDC reduction targets of the AMS jurisdiction in which it operates, if that jurisdiction does not have a net-zero by 2050 timeline.	
TSC applicable to all Tiers	1. If facilities implement CCS / CCUS, CO₂ that is captured must be transported and stored in accordance with the TSC: a. Activity 000[010] Transport of CO₂; AND b. Activity 000[020] Underground permanent geological storage of CO₂. 2. Use of fossil gases or coal as a reducing agent and/or for energy generation are only aligned for facilities prior to 2040.	

	To qualify after 2040, the facilities must comply with the following criteria: a. Must be combined with CCS/CCUS measures in accordance with the TSC set out in Activity 000[010] Transport of CO₂ and Activity 000[020] Underground permanent geological storage of CO₂; AND b. Direct CO₂ captured is not utilised for enhanced oil recovery and/or the production of other forms of fossil energy sources; AND c. Appropriate on-site activities for the monitoring and mitigation of methane leakage are implemented; AND 3. Use of biomass as a reducing agent is only aligned if facilities comply with the following criteria: a. Source of biomass is food or feed crops that meet the eligibility criteria classified under Activity 01[001] General perennial or non-perennial crops or Activity 02[002] Forestry plantation; OR b. Source of biomass is plantation wood that is in accordance with the TSC set out in Activity 02[001] Sustainable forest management; OR c. Source of biomass is from industrial crops.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

231[001] Manufacture of glass and glass products

Activity Notes

- Definitions:
 - To date, there is limited information on transition measures as industry groups are still trying to develop a decarbonisation plan for the glass industry. Electric furnaces, in practice, are mostly capable of operating on smaller scales.
 - Secondary glass refers to glass manufacturing 100% from recycled glass.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Facilities operating exclusively to produce secondary glass are automatically aligned; OR 2. For facilities with conventional furnaces for the primary production of glass and glass products, comply with one of the following criteria a. Operates exclusively with electric furnaces; OR b. Operates a hybrid furnace, where at least 50% of heat generation is through electrification, low-carbon gases, and/or hydrogen; OR c. Meets the equivalent direct GHG emissions set under the Tier 1 (Green) criteria for heat generation from fossil gases, as established under Activity 353[014] Production of heating/cooling from fossil gas.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	1. Have a transition plan that aligns with the Paris Agreement commitments or a credible net-zero GHG emissions reduction target, following an internationally recognised framework for consistency and accountability, where the plan includes a switch to low-carbon process technologies; OR 2. For facilities with conventional furnaces for the primary production of glass and glass products, meets the equivalent direct GHG emissions set under the Tier 2 (Amber T2) criteria for heat generation from fossil gases, as established under Activity 353[014] Production of heating/cooling from fossil gas.	
Tier 3 (Amber T3)	1. The Activity must have a transition plan that aligns with supporting the NDC reduction targets of the AMS jurisdiction in which it operates, if that jurisdiction does not have a net-zero by 2050 timeline.	
TSC Applicable to all Tiers	1. Use of fossil gases or coal as a reducing agent and/or for heat generation is only aligned for facilities prior to 2040. To qualify after 2040, the facilities must comply with the following criteria: a. Must be combined with CCS/CCUS measures in accordance with the TSC set out in Activity 000[010] Transport of CO₂ and Activity 000[020] Underground permanent geological storage of CO₂; AND	

	b. Direct CO₂ captured is not utilised for enhanced oil recovery and/or the production of other forms of fossil energy sources; AND c. Appropriate on-site activities for the monitoring and mitigation of methane leakage are implemented; AND 2. For all facilities using CCS/CCUS, the CO₂ captured is not used for products that release CO₂ immediately after being used (such as in urea, carbonated beverages, or fuels), nor for enhanced oil recovery and/or the production of other forms of fossil energy sources.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

26[001] Manufacture of electrical and electronic equipment

Activity Notes

- Definitions:
 - EN ISO 13432: European standard for compostable and biodegradable packaging.
 - Extended Producer Responsibility (EPR): a policy approach that assigns producers responsibility for the end-of-life management of their products, incentivising sustainable waste management strategies.

EO1: Climate Change Mitigation TSC

TSC are presently not available for the Activity Tiers defined.

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. At least 70% of the plastics, metals, and critical raw materials used in the manufacturing process are from recycled, recovered, or renewable sources; OR 2. Product and packaging design enables practical reuse or recycling, demonstrated by compliance with national or international systems aligned with globally recognised schemes and/or frameworks (e.g., EN ISO 13432 or Extended Producer Responsibility (EPR) programmes); OR 3. The processing of equipment demonstrates a reduction in avoidable waste (e.g., cuttings, misassembled components, off-spec materials) by at least 90% and is diverted from landfills.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	1. At least 40% of the plastics, metals, and critical raw materials used in the manufacturing process are from recycled, recovered, or renewable sources; OR 2. The processing of equipment demonstrates a reduction in avoidable waste (e.g., cuttings, misassembled components, off-spec materials) by at least 60% and is diverted from landfills.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

27[001] Manufacture of energy efficiency equipment for buildings

Activity Notes

- Includes:
 - Manufacturing of any technology which is critical to the alignment of an Activity with Tier 1 (Green) under EO1 as defined in Appendix A of this Annex.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity manufactures energy efficient equipment for buildings that is compliant with the Tier 1 (Green) TSC set out in Activity 68[002] Energy efficient equipment.	Dependent on reference Activity.
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

271[001] Manufacture of renewable energy technologies

Activity Notes

- Includes:
 - Manufacturing of any renewable energy technology which is critical to the alignment of an Activity with Tier 1 (Green) under EO1 as defined in Appendix A of this Annex.
- Excludes:
 - Any energy technology which is not specifically renewable; refer to Activity 28[001] Manufacture of other low-carbon technologies.
- Definitions
 - Renewable energy technologies are systems and processes that generate energy from naturally replenishing sources, including but not limited to sunlight, wind, water, biomass, and geothermal heat.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity manufactures renewable energy technologies.	Dependent on reference Activities.
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

272[001] Manufacture of batteries

Activity Notes

- Includes:
 - Manufacturing of any battery technology which is critical to the alignment of an Activity with Tier 1 (Green) under EO1.
 - Such Activities may be, but are not necessarily limited to, provision of low-carbon transportation and/or energy services, as defined in Appendices A, B and C of this Annex.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity manufactures rechargeable batteries, battery packs and accumulators (and their respective components), including from secondary raw materials, that result in that result in enabling low-carbon activities for transportation, stationary, on-grid and off-grid energy storage, as well as other industrial applications in transport, stationary, on-grid and off-grid energy storage and other industrial applications; AND 2. The Activity enables recycling and recovery of critical materials for end-of-life batteries.	Dependent on reference Activities.
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

28[001] Manufacture of other low-carbon technologies

Activity Notes

- Includes:
 - Manufacturing of any low-carbon technology which is critical to the alignment of any other Activity with Tier 1 (Green) under EO1 as defined in this Annex.
- Excludes:
 - Activities for which TSC are defined in another place in this Annex:
 - 27[001] Manufacture of energy efficiency equipment for buildings;
 - 271[001] Manufacture of renewable energy technologies;
 - 272[001] Manufacture of batteries;
 - 29[001] Manufacture of low-carbon technologies for transport.
- Definition:
 - Low-carbon technologies are systems and processes that support other Activities which result in reduced greenhouse gas emissions, including but not limited to grid flexibility solutions, technologies that reduce process-related emissions, and carbon capture and storage.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity manufactures technologies that are specifically designed to achieve and demonstrate lifecycle GHG emission savings compared to the best-performing alternative technology, product, or solution currently available on the market.	Dependent on reference Activities.
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

28[002] Manufacture of equipment for the production and use of hydrogen

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity manufactures equipment and components to produce hydrogen, in accordance with the TSC set out in Activity 2011[001] Manufacture of low-carbon gases, including hydrogen.	Dependent on reference Activities
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

29[001] Manufacture of low-carbon technologies for transport

Activity Notes

- Includes:
 - Manufacturing of any transport technology which is critical to the alignment of an Activity under EO1.
 - Such Activities are provision of low-carbon transportation services, as defined in Appendix C of this Annex.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity involves the manufacture, repair, maintenance, retrofitting, repurposing, upgrading and/or assembly of vehicles or vehicle components that are essential to delivering and improving the environmental performance of the transport modes listed in Appendix C corresponding with Tier 1 (Green).	Dependent on reference Activities.
Tier 2 (Amber T2)	1. The Activity involves the manufacture, repair, maintenance, retrofitting, repurposing, upgrading and/or assembly of vehicles or vehicle components that are essential to delivering and improving the environmental performance of the transport modes listed in Appendix C corresponding with Tier 2 (Amber T2).	
Tier 3 (Amber T3)	1. The Activity involves the manufacture, repair, maintenance, retrofitting, repurposing, upgrading and/or assembly of vehicles or vehicle components that are essential to delivering and improving the environmental performance of the transport modes listed in Appendix C corresponding with Tier 3 (Amber T3).	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

303[001] Manufacture of aircraft

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity manufactures, repairs, maintains, overhauls, retrofits, designs, repurposes or upgrades aircraft or components with exclusive application to aircraft with zero tailpipe CO ₂ emissions: electric battery or hydrogen fuelled.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	1. The Activity manufactures, repairs, maintains, overhauls, retrofits, designs, repurposes or upgrades aircraft or components with exclusive application to aircraft certified to operate with low lifecycle CO ₂ emissions: 100% SAF; AND 2. The aircraft produced are not dedicated for private or commercial business aviation; AND 3. For new aircraft production, excluding aircraft components, the aircraft meets the margins specified below; - Having maximum take-off mass greater than 5.7 t and less than or equal to 60 t and a certified metric value of CO₂ emissions of at least 11% less than the New Type limit of the International Civil Aviation Organisation (ICAO) standard; AND - Having a maximum take-off mass greater than 60 t and less than or equal to 150 t and a certified metric value of CO₂ emissions of at least 2% less than the New Type limit of the ICAO standard; AND - Having a maximum take-off mass greater than 150 t and a certified metric value of CO₂ emissions of at least 1.5% less than the New Type limit of the ICAO standard; AND - In the absence of a certificate on the metric values of CO₂ emissions confirming the required margin to the New Type limit of the ICAO standard, the aircraft manufacturer shall deliver a declaration that the aircraft meets the required level of performance and margins of improvement with the condition that the aircraft is certified by 31 December 2027.	
Tier 3 (Amber T3)	1. The Activity manufactures, repairs, maintains, overhauls, retrofits, designs, repurposes or upgrades aircraft or components with exclusive application to aircraft certified to operate with low lifecycle CO ₂ emissions: SAF; AND 2. Aircraft meet the TSC set out in criteria (2) and (3) of Amber Tier 2.	
TSC Applicable to all Tiers	1. Activity complies with one of the following: Volume 3 (CO₂ emissions) of the environmental protection standard of the ICAO contained in Annex 16 to the Chicago Convention, first edition; OR	

	b. ASEAN member's equivalent (e.g., CAAM Civil Aviation Directive (CAD) 16 Volume III – Environmental Protection); AND 2. SAF complies with the criteria applicable for Activity 192[001] Manufacture of refined petroleum products.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

31[001] Manufacture of furniture

Activity Notes

- Definitions
 - Natural forests refer to forests composed of indigenous trees, not planted by humans and which excludes forest plantations (see Section D.3).
 - EN ISO 13432: European standard for compostable and biodegradable packaging.
 - Extended Producer Responsibility (EPR): a policy approach that assigns producers responsibility for the end-of-life management of their products, incentivising sustainable waste management strategies.

EO1: Climate Change Mitigation TSC

TSC are presently not available for the Activity Tiers defined.

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity manufactures, designs, remanufactures and/or repairs furniture in accordance with either of the following criteria: a. Any wood or wood-based products sourced, are compliant with the Tier 1 (Green) criteria set out in Activity 162[001] Manufacture of products of wood, cork, straw and plaiting materials; AND/OR b. Any leather or leather-related products sourced, are compliant with the Tier 1 (Green) criteria set out in Activity 15[001] Manufacture of leather and related products.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	1. The Activity manufactures, designs, remanufactures and/or repairs furniture in accordance with either of the following criteria: a. Any wood or wood-based products sourced, are compliant with the Tier 2 (Amber T2) criteria set out in Activity 162[001] Manufacture of products of wood, cork, straw and plaiting materials; AND/OR b. Any leather or leather-related products sourced, are compliant with the Tier 2 (Amber T2) criteria set out in Activity 15[001] Manufacture of leather and related products.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	
TSC Applicable to all Tiers	1. Wood sourced from natural forests is only aligned if it complies with the certification criteria for timber products under Activity 02[001] Sustainable forest management.	

EO4: Resource Resilience and the Transition to a Circular Economy TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. At least 70% of material inputs used in the manufacturing process are from recycled, recovered, or renewable sources; OR 2. Product and packaging design enables practical reuse or recycling, demonstrated by compliance with national or international systems aligned with globally recognised schemes and/or frameworks (e.g., EN ISO 13432 or Extended Producer Responsibility (EPR) programmes).	Review date pre-set (see Annex 6)
Tier 2 (Amber T2)	1. At least 40% of material inputs used in the manufacturing process are from recycled, recovered, or renewable sources.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	
TSC Applicable to all Tiers	1. Wood sourced from natural forests is only aligned if it complies with the certification criteria for timber products under Activity 02[001] Sustainable forest management.	

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

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F. WATER SUPPLY, SEWERAGE, WASTE MANAGEMENT AND REMEDIATION ACTIVITIES

F.1. Bases for setting TSC

Environmental Objective 1: Climate Change Mitigation

Tier	Description / Definition
Tier 1 (Green)	1. TSC are aimed at achieving defined GHG emissions levels, which refer to credible, 1.5°C-aligned science-based pathways, or in certain specific cases where a 1.5°C-aligned target is not viable, are compatible with a 2-degree decarbonisation trajectory. 2. Note that a Green Activity need not necessarily preclude the use of fossil fuels. Activities which can achieve these targets while using fossil fuels may be aligned. 3. In practice, unless otherwise specified with carbon intensity (example, gCO₂e/kWh) this definition usually takes the form of quantitative thresholds which limit the emission of GHG for given units of waste managed or water produced. For example, tCO₂e per tonne of water produced.
Tier 2 (Amber T2)	1. Activity supports a transition towards a Green pathway within a defined time frame; AND 2. Results in a contribution to the EO which is at least as good at the lowest carbon emitting technology currently that is technologically feasible for widespread use in ASEAN, with a prescribed sunset date; OR 3. Enables or promotes the implementation of a Green Activity in the context of this EO.
Tier 3 (Amber T3)	1. Activity is in line with supporting the meeting of Nationally Determined Contribution (NDC) reduction targets of AMS that do not have a net-zero 2050 timeline; OR 2. Activity meets the TSC of Amber (Tier 2) or Green but has been assessed that it will do some level of significant harm to other EOs; which will be remediated within 5 years.

Environmental Objective 2: Climate Change Adaptation

Tier	Description / Definition
Tier 1 (Green)	1. Activity where measures have been implemented to ensure own resilience to climate change and thereby contribute to overall local, national or regional resilience; OR 2. Activity supports other Activities to increase resilience to climate change.
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

Environmental Objective 3: Protection of Healthy Ecosystems and Biodiversity

Tier	Description / Definition
Tier 1 (Green)	1. Activities aimed at rehabilitating degraded land and restoring ecological integrity, while promoting biodiversity, ensuring the prioritisation of: a. Restoring or enhancing natural habitats. b. Reintroducing native vegetation and species to improve ecological functions. c. Implementing green infrastructure solutions that promote ecological connectivity and water retention; OR 2. Activities that support ecosystem-based adaptation and resilience, ensuring the prioritisation of: a. Utilising nature-based solutions (e.g., constructed wetlands, permeable surfaces, bioswales) to mitigate the impacts of extreme weather events, such as floods and droughts. b. Enhancing soil and water retention capacity while preventing erosion and sedimentation in water bodies. c. Supporting the natural purification and filtration functions of ecosystems to maintain water quality.
Tier 2 (Amber T2)	1. Activities aimed at maintaining ecological integrity and preventing further degradation, while supporting biodiversity, ensuring the prioritisation of: a. Maintaining existing natural habitats to prevent further loss of biodiversity and ecological function. b. Supporting the persistence of native vegetation and species to sustain ecological stability. c. Implementing infrastructure solutions that maintain ecological connectivity and maintain natural hydrological cycles.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

Environmental Objective 4: Resource Resilience and the Transition to a Circular Economy

Tier	Description / Definition
Tier 1 (Green)	1. Activity where measures have been implemented to: a. Promote waste segregation; b. Maximise material/resource recovery and reuse c. Reduce landfill disposal; OR 2. Activity where measures have been implemented to: a. Improve sanitation and hygiene; b. Optimise water efficiency; c. Reduce non-revenue water losses; d. Reduce water stress.
Tier 2 (Amber T2)	1. The Activity supports a transition towards a Green pathway within a defined time frame; AND 2. Results in a contribution to the EO which is at least as good as the technology currently that is technologically feasible for widespread use in ASEAN, with a prescribed sunset date; OR 3. Enables or promotes the implementation of a Green Activity in the context of this EO.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

F.2. Current, Future TSC and Review Programmes

The EO1 TSC for most Activities in this sector are review date pre-set as defined in Section 1.4. These may be adjusted in accordance with the processes laid down in Annex 6. Some Activities also include criteria clauses which will be sunset on an update pre-set basis. All EO2 TSC in this sector are on an enduring basis as defined in Section 1.4. EO3 and EO4 TSC in this sector are on an enduring basis, except where Amber Tiers exist for that Activity, in which case, these are review date pre-set as defined in Section 1.4.

F.3. Definitions of terms used in these TSC

Definitions that apply across multiple Activities are provided here for easy reference. Terms specific to a particular Activity are included within the relevant Activity Notes.

Term	Definition
Distribution Loss	An aspect of Non-revenue Water (NRW) that represents actual physical water loss from the distribution system. It does not include broader NRW features such as apparent losses like water theft and inaccurate metering, which are not directly related to the physical state of the distribution system.
Electrical and Electronic Equipment (EEE)	EEE encompasses a wide range of devices that require electric currents or electromagnetic fields to operate. Below are some common examples: • Household appliances; • IT and telecommunications equipment; • Consumer electronics (e.g., televisions, cameras); • Lighting equipment; • Medical devices.
Own Baseline	In the context of this Activity 'own baseline' refers to the historical energy performance of the specific wastewater treatment plant being assessed, averaged over a 3-year rolling basis ⁵⁷ .

Evidence is required for all Activities to demonstrate that the criteria have been met. The following provides a non-exhaustive list of the types of evidence that may be requested:

Environmental Permits and Licenses: Copies of all relevant environmental permits and licences including (but not limited to):

- Factory operation permits, licences and approvals.
- Fertiliser or soil improver registration certificate issued by the relevant regulatory authority if the fertiliser or soil improver is for commercialisation purposes.
- Proof of annual vehicle inspection as evidence of compliance of national emission regulations.
- Valid operating permits for the collection, transportation, handling, recovery and/or treatment of specific types of waste, for example hazardous waste and electrical and electronic equipment (WEEE).

Standard Operating Procedures (SOPs): Documentation of all relevant SOPs for all aspects of the Activity including (but not limited to):

- Waste acceptance, segregation, tracking procedures.
- Rejects handling procedure.
- Leachate leakage prevention and control procedure.
- Biogas utilisation procedure.
- Digestate or compost utilisation procedure ensuring material recovery is prioritised.
- Methane leakage prevention procedure.
- Safe handling, transport, and storage of WEEE procedure.

⁵⁷ Exceptional 'anomaly' years, such as those during the COVID-19 period, may be substituted with adjacent years from 'normal' periods. Any such replacements must be clearly disclosed and documented.

Records or Documentation: Records or documentation to evidence the performance of SOPs implemented including (but not limited to):

- Records of employee training on relevant environmental regulations, safety procedures, and best practices.
- Contractual documentation that demonstrates that recovered materials are used as substitutes for primary raw materials.
- Contractual documentation that demonstrates that transported waste will be sent to a facility for reuse or recycling.
- Records of quantities of waste collected and destinations of waste according to waste stream.
- Updated photos of waste transport, storage and collection facilities.
- For WtE or waste treatment facilities, reports on the type and quantity of pollutants discharged from industrial factories.
- Climate risk and vulnerability assessment (CRVA).
- Water or river basin management plan for wastewater related Activities.
- Operational logs showing daily or hourly wastewater flow rates, records of influent and effluent water quality parameters.
- Detailed energy consumption breakdown showing the consumption of individual units within the wastewater treatment plant. Documentation of energy generation within the system.
- GHG Emissions Assessment Report.

Audits and Inspections: Records of internal and/or external audits and inspections conducted at the facility including (but not limited to):

- ISO 14001:2015 Environmental management systems.
- Third-party inspection results of discharge water quality.
- Independent assurance of GHG emissions and energy savings.

F.4. TSC for Water Supply, Sewerage, Waste Management, and Remediation Activities

36[001] Construction, extension and operation of water collection, treatment and supply systems

Activity Notes

- Includes:
 - Construction, extension and operation of new water collection and treatment systems, including for the provision of potable water.
 - Construction, extension, operation and renewal of facilities for producing reclaimed water, facilities for harvesting rain and stormwater and facilities for collection and treatment of greywater.
 - These alternative water resources are used to replace water from abstraction or from the drinking water supply systems and can be used for aquifer recharge, irrigation, industrial reuse, recreation and any other municipal use.
 - Activity only includes the facilities and processes that make it possible for the water to be reused, such as facilities for recharging aquifers or surface water storages, and does not include the previous steps, such as primary and secondary steps in the wastewater treatment plant or the subsequent steps, necessary for the final reuse of these alternative water resources, such as irrigation systems.
- Excludes:
 - Desalination (see 36[003] Desalination).
- The following terms have these meanings in this Activity:
 - A segment of the network refers to a defined section or part of the overall water distribution system, typically bounded by physical, operational, or administrative limits, over which distribution losses are measured and reported.
 - Non-revenue Water (NRW) refers to the volume of water that has been produced and is lost before it reaches the customer or is otherwise unbilled. This includes physical losses, commercial losses and unbilled/unauthorised consumption.
 - Distribution loss is an aspect of NRW that represents actual physical water loss from the distribution system.
- Non-exhaustive list of relevant standards and guidelines:
 - ISO 31000: Risk Management – Principles and guidelines.
 - ISO 24513:2019 Vocabulary for drinking water, wastewater, and stormwater systems.
 - ISO 5667 Series: Water Quality Sampling.
 - ISO 24516-1:2016 Asset management for drinking water distribution networks.
 - ISO 24516-2:2019 Asset management for treatment plants, pumping stations, reservoirs, dosing, and associated infrastructure.
 - ISO 24528:2021 Guideline for water loss investigation in drinking water distribution networks.
 - ISO 24523:2017 Guidelines for benchmarking performance of water and wastewater utilities.
 - ISO 9001:2015 Quality Management Systems.
 - ISO 14001:2015 Environmental Management Systems.
 - ISO 45001:2018 Occupational health and safety management systems – requirements with guidance for use.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	- The Activity must comply with either of the following criteria: - The net average energy consumption for abstraction and treatment is equal to or is lower than 0.5 kWh/m³ produced water supply over a twelve-month period; OR - The distribution loss (%) is less than 15% for the segment of the network; AND - Monitoring systems to measure data for energy consumption and water loss must be in place.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	- The Activity must comply with either of the following criteria: - The net average energy consumption for abstraction and treatment is equal to or is lower than 0.7 kWh/m³ produced water supply over a twelve-month period; OR - The distribution loss (%) is less than 20% for the segment of the network; AND - Monitoring systems to measure data for energy consumption or water loss must be in place.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	- The Activity complies with the following criteria: - Where data is available, the physical climate risks that are material to the Activity have been identified by performing a robust Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance provided in Annex 3; AND - The Activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks that are material to that Activity; AND - Acceptable residual risk thresholds should be defined for the Activity; AND - Specific and measurable key performance indicators (KPIs) must be developed to track the reduction of material climate risks; AND - It must be shown that the Activity is necessary for the provision of water security.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. For production of reclaimed water for purposes other than human consumption, the Activity complies with the following criteria: a. The reclaimed water is suitable for reuse. The final quality of reclaimed water is fit for purpose and compliant with existing national legislation and standards; AND b. The water reuse project has been authorised by the competent authority, in the framework of integrated water management, with priority given to viable water demand management and efficiency measures, in consultation with the water management authorities. This may be proven by its inclusion in a water management plan or drought management plan; AND c. For reuse in agriculture, the assessments of the environmental risks, including those related to the quantitative status of water bodies, are fully taken into account and documented in risk management plans; AND d. For agricultural reuse of reclaimed water or treated wastewater, relevant internationally recognised risk-based water quality guidelines and standards must be followed; examples include the WHO Guidelines for the Safe Use of Wastewater in Agriculture, ISO 16075 series, FAO Guidelines on Wastewater Use in Agriculture; AND 2. Where facilities are for harvesting rain and stormwater, the Activity complies with the following criteria: a. The resource (rain or stormwater) is segregated at source and does not include wastewater; AND b. The water is suitable for use after proper treatment depending on the level of contamination and subsequent use; AND c. The facility is included in an instrument of urban planning or permitting, such as master plan or municipal planning; AND d. Where applicable, compliance with national rainwater harvesting standards should be followed; AND e. For reuse of rain and stormwater, relevant internationally recognised guidelines and standards must be followed, examples include ISO 30500, ISO 24521, UNEP guidance for Wastewater Reuse, IWA Water Reuse; AND	Enduring

	3. For facilities for collection and treatment of greywaters, the Activity complies with the following criteria: Greywater refers to domestic wastewater from households or office dwellings, including wastewater from baths, showers, bathroom sinks, laundries and washing machines. Importantly greywater does not include effluent wastewater from bathrooms and kitchens that contain faecal matter, urine, pathogens and grease. These are classified under blackwater and addressed under Activities 37[001] Construction, extension and operation of wastewater collection and treatment; and 37[002] Renewal of wastewater collection and treatment; AND a. The resource (greywater) is segregated at source; AND b. The water is suitable for reuse after proper treatment depending on the level of contamination and subsequent reuse; AND c. The performance is attested by a building certification or is available in the technical design documents; AND d. Where applicable, compliance with national greywater standards should be followed; AND e. Relevant internationally recognised guidelines and standards must be followed, examples include WHO Guidelines for the Safe Use of Wastewater, ISO 30500, ISO 24521, UNEP guidance for Wastewater Reuse, IWA Water Reuse.	
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

36[002] Renewal of water collection, treatment and supply systems

Activity Notes

- Renewal of water collection, treatment and supply systems including renewals to water collection, treatment and distribution infrastructure for domestic and industrial needs, including potable water.
- It implies no material changes to the volume of flow collected, treated or supplied.
- The Activity only includes the facilities and processes that make it possible for the water to be reused, such as facilities for recharging aquifers or surface water storages, and does not include the previous steps, such as primary and secondary steps in the wastewater treatment plant or the subsequent steps, necessary for the final reuse of these alternative water resources, such as irrigation systems.
- Definitions:
 - Distribution Loss: Distribution loss is an aspect of NRW that represents actual physical water loss from the distribution system. It does not include broader NRW features such as apparent losses like water theft and inaccurate metering, which are not directly related to the physical state of the distribution system.
 - Produced Water Supply: Refers to the total volume of potable or treated water that has been abstracted, processed through the treatment system, and is ready for distribution or delivery to end users.
 - Own Baseline: In the context of this Activity 'own baseline' refers to the historical energy performance of the specific water treatment facilities being assessed, averaged over a 3-year rolling basis⁵⁸. It represents the average annual energy calculated over a defined reference period, prior to the renewal or upgrade.
 - Other Appropriate Methods: Valid and recognised approaches for calculating water leakage levels in a distribution system, apart from the distribution loss method. These may include techniques such as:
 - Minimum night flow analysis: Measuring water flow during low-use night-time hours to estimate leakage.
 - Water balance auditing: Using the IWA (International Water Association) Water Balance methodology.
 - Component analysis: Estimating losses based on physical characteristics of the network (e.g., pipe length, age, material).
 - Advanced metering and monitoring systems: Using smart metres or pressure loggers to identify and quantify leaks.
 - These methods must be consistent, repeatable, and supported by adequate data and industry practices.
 - Completion of Commissioning and Optimisation Phase: Refers to the point at which a renewed or newly installed water collection, treatment, and/or supply system has undergone all required testing, calibration, and performance verification to ensure it is operating safely, efficiently, and in line with design specifications and regulatory standards.
- Non-exhaustive list of relevant standards and guidelines:
 - ISO 31000: Risk Management: Principles and guidelines.
 - ISO 24513:2019 Vocabulary for drinking water, wastewater, and stormwater systems.
 - ISO 5667 Series: Water Quality Sampling.
 - ISO 24516 1:2016 Asset management for drinking water distribution networks.

⁵⁸ Exceptional 'anomaly' years, such as those during the COVID-19 period, may be substituted with adjacent years from 'normal' periods. Any such replacements must be clearly disclosed and documented.

- ISO 24516 2:2019 Asset management for treatment plants, pumping stations, reservoirs, dosing, and associated infrastructure.
- ISO 24528:2021 Guideline for water loss investigation in drinking water distribution networks.
- ISO 24523:2017 Guidelines for benchmarking performance of water and wastewater utilities.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	- The renewal of the water supply system leads to improved energy efficiency in one of the following ways: - The renewal results in the net annual average energy consumption for abstraction and treatment being equal to or lower than 0.5 kWh/m³ produced water supply; OR - By decreasing the net annual average energy consumption of the system by at least 20% compared to own baseline performance, including abstraction and treatment, measured in kWh per cubic metre produced water supply; OR - By closing the gap by at least 20% between the current leakage level averaged over three years, calculated using distribution loss. The current leakage level averaged over three years is calculated across the extent of water supply (distribution) network where the works are carried out, i.e., for the renewed water supply (distribution) network at district metered area(s) (DMAs) or pressure managed area(s) (PMAs); AND - The efficiency for either criterion (1.a), (1.b) or (1.c) must be achieved after the completion of commissioning and optimisation phase.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	- The renewal of the water supply system leads to improved energy efficiency in either of the following ways: - The renewal results in the net annual average energy consumption for abstraction and treatment being equal to or lower than 0.7 kWh/m³ produced water supply; OR - By closing the gap by at least 15% between the current leakage level averaged over three years, either calculated using distribution loss, or calculated using another appropriate method. The current leakage level averaged over three years is calculated across the extent of water supply (distribution) network where the works are carried out, i.e. for the renewed water supply (distribution) network at district metered area(s) (DMAs) or pressure managed area(s) (PMAs); AND - In addition to satisfying either of the above, the following criteria must also be satisfied:	

	a. The efficiency for either criterion (1.a) or (1.b) must be achieved after the completion of commissioning and optimisation phase.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

36[003] Desalination

Activity Notes

- Includes:
 - Construction, extension, operation and renewal of facilities designed to remove salts and other impurities from saline water, including seawater and brackish water to produce freshwater suitable for human consumption, agricultural use or industrial applications requiring high-quality water.
- Examples of emissions to water include, but may not be limited to:
 - Brine
 - Heat
 - Residual chemicals
- Examples of emissions to air include, but may not be limited to:
 - Nitrogen oxides (NO_x)
 - Sulphur oxides (SO_x)
 - Carbon monoxide (CO)
- Substantial reductions in material physical climate risks can be demonstrated through quantitative or qualitative evidence.
- Non-Exhaustive List of Relevant Standards:
 - ISO 31000: Risk Management - Principles and guidelines.
 - ISO 13205:2024 Marine technology - Seawater desalination – vocabulary.
 - ISO 23446:2021 Marine technology - Product water quality of seawater reverse osmosis (RO) desalination - guidelines for municipal water supply.
 - ISO 23044:2020 Guidelines for softening and desalination of industrial wastewater for reuse.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	To meet the TSC below, either criteria (1), (2), OR (3) must be satisfied; criterion (4) is mandatory in all cases: 1. The average carbon intensity of energy used to power the plant must be at or below 350 gCO₂e/m³ of potable water produced; OR 2. The energy used for the desalination plant must have carbon intensity less than 100 gCO₂e/kWh over the remaining lifetime of the asset; OR 3. The carbon intensity threshold is based on the trajectory established in the relevant national-level trajectories which are aligned to science-based pathways; AND 4. Technology used and plant discharges, including emissions to air and emissions to waterways, comply with the relevant national regulations and emission standards.	Review date pre-set (see Annex 6), with some criteria update pre-set.
Tier 2 (Amber T2)	1. The energy consumption of desalination plants must be less than 3.5 kWh/m³ of potable water produced until 31 December 2025. Between 1 January 2026 and 31 December 2030, energy consumption must be less than 3 kWh/m³; and	

	between 1 January 2031 to 31 December 2035, energy consumption must be less than 2.5 kWh/m³; AND 2. The sunset date for Tier 2 (Amber T2) for this Activity is 31 December 2035. Sunset dates will be reviewed and possibly revised periodically based on emerging science and technology; AND 3. The Activity must demonstrate that it has a roadmap in place for the plant to meet Green criteria beyond 2035; AND 4. Technology used and plant discharges, including emissions to air and emissions to waterways, comply with the relevant national regulations and emission standards.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity complies with the following criteria: a. Where data is available, the physical climate risks that are material to the Activity have been identified by performing a robust Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance provided in Annex 3; AND b. The Activity has implemented physical and non-physical ('adaptation solutions') that substantially reduce the most material physical climate risks identified through the project-specific CRVA, in accordance with the project's defined thresholds of acceptable residual risk; AND 2. Specific measurable key performance indicators (KPIs) must be developed to track the reduction of material climate risks; AND 3. Acceptable residual risk thresholds should be defined for the Activity; these thresholds shall be established using a structured risk management process consistent with recognised international frameworks, such as ISO 31000; AND 4. It must be shown that the Activity is necessary for the provision of water security and/or drought risk prevention and protection.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

37[001] Construction, extension and operation of wastewater collection and treatment

Activity Notes

- Construction, extension and operation of centralised wastewater systems including collection (sewer network) and treatment.
- This Activity also includes the construction, extension, upgrade, and operation of decentralised wastewater infrastructure including treatment plants, sewer networks, connections to the wastewater infrastructure, decentralised wastewater treatment facilities, including individual and other appropriate systems, and discharge structures for treated effluent. The Activity may include innovative and advanced treatments, including the removal of micropollutants.
- Decentralised treatment plants consist of on-site and cluster wastewater treatment plants. Sources of wastewater include human, industrial, and agricultural wastewater.
- Definitions:
 - Net Energy Consumption: Refers to the total amount of energy used by the wastewater treatment plant for all treatment processes and supporting systems, minus any on-site renewable energy or energy recovered and reused within the facility.
 - Population Equivalent (p.e.): A standardised unit of measurement used in wastewater treatment to express the organic biodegradable load (primarily from human waste) generated by one person per day.
 - Source Control: Refers to measures implemented at or near the point where wastewater or stormwater is generated, aimed at reducing the volume or pollutant load entering the wastewater treatment system.
 - Good Status of Water Bodies: Good status is a classification for surface and groundwater bodies that reflects both ecological and chemical or quantitative health. Achieving good status means that the water body meets the minimum requirements for supporting aquatic life, safe use, and natural ecosystem functioning.
 - Ecological Potential: Refers to the best achievable ecological condition of an affected water body.
- Non-exhaustive List of relevant standards and guidelines:
 - ISO 31000: Risk Management – Principles and Guidelines.
 - ISO 24513:2019 Vocabulary for drinking water, wastewater, and stormwater systems.
 - ISO 24516-3:2017 Guidelines for the management of assets of water supply and wastewater systems — Part 3: Wastewater collection networks.
 - ISO 24516-4:2019 Guidelines for the management of assets of water supply and wastewater systems — Part 4: Wastewater treatment plants, sludge treatment facilities, pumping stations, retention and detention facilities.
 - ISO 5667: Series: Water Quality Sampling.
 - ISO 24516 2:2019 Asset management for treatment plants, pumping stations, reservoirs, dosing, and associated infrastructure.
 - ISO 24523:2017 Guidelines for benchmarking performance of water and wastewater utilities.
 - ISO 30500:2018 Non-sewered sanitation systems — Prefabricated integrated treatment units — General safety and performance requirements for design and testing.
 - WHO Guidelines for the Safe Use of Wastewater.
 - UNEP Guidance for Wastewater Reuse.
 - IWA Water Reuse.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	- The net energy consumption of the wastewater treatment plant is equal to or is lower than: 35 kWh per population equivalent (p.e.) per annum for treatment plant capacity below 10,000 p.e.; 25 kWh per population equivalent (p.e.) per annum for treatment plant capacity between 10,000 p.e and 100,000 p.e.; 20 kWh per population equivalent (p.e.) per annum for treatment plant capacity above 100,000 p.e.; Net energy consumption of the operation of the wastewater treatment plant may take into account measures decreasing energy consumption due to source control (reduction of stormwater or pollutant load inputs), and as appropriate, energy generation within the system (such as hydraulic, solar, thermal and wind energy); AND - For the construction and extension of a wastewater treatment plant or a wastewater treatment plant with a collection system, which are substituting more GHG-intensive treatment systems (such as septic tanks, anaerobic lagoons), an assessment of the direct GHG emissions is performed. The results are disclosed to investors and clients on demand.	Review date pre-set (see Annex 6), with some criteria update pre-set.
Tier 2 (Amber T2)	- The net energy consumption of the wastewater treatment plant is equal to or is lower than 68 kWh/p.e. per annum and is applicable for all treatment plant capacities. Net energy consumption of the operation of the wastewater treatment plant may take into account measures decreasing energy consumption due to source control (reduction of stormwater or pollutant load inputs), and as appropriate, renewable energy generation; AND - The sunset date for this Activity under the Tier 2 (Amber T2) criteria is 31 December 2035 after which the facilities must meet the Green Criteria. Criteria and sunset dates are not fixed and will be reviewed and possibly revised periodically based on emerging science and technology.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The wastewater treatment system does not result in a deterioration of the good status and good ecological potential of any of the affected water bodies and it contributes significantly to the achievement of good status and potential of the affected water bodies; AND a. The wastewater treatment system complies with the: i. Relevant, size-specific requirements for discharges from wastewater treatment plants as set out in local and/or national regulations; AND ii. Fulfils the discharge requirements set up by the competent local and/or national authorities; AND b. The information related to the status of water bodies, to the activities potentially impacting the status and to the measures taken to avoid or minimise such impacts, is included in a river basin management plan or an equivalent water use and protection management plan; AND 2. The wastewater treatment system has a collection system and the provision of secondary treatment; AND 3. Where the wastewater treatment plant has a capacity of 100,000 population equivalent (p.e.) or more, or of a daily inflow of a five-day biochemical oxygen demand (BOD5) load of more than 6,000 kg, it uses a sludge treatment such as anaerobic digestion or a technology with the same or a lower net energy demand (considering both energy generation and consumption), to stabilise the sludge.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	1. The wastewater treatment system contributes to the achievement of good status of water bodies, in accordance with applicable national law or international standards which pursue objectives of good water status and good ecological potential, through a water use and protection management plan; AND 2. Sludge is treated in accordance with national requirements, provided these meet or exceed a minimum environmental threshold aligned with recognised regional or international best practices.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO4: Resource Resilience and the Transition to a Circular Economy TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	- For facilities for collection and treatment of wastewater for the production of water, the Activity complies with the following criteria: - Water is for purposes other than human consumption; AND - Water is suitable for reuse after proper treatment depending on the level of contamination and subsequent reuse purposes in accordance with national regulations; AND - Fit for purpose treatment targets, appropriate to the intended reuse application must be established. Targets must be developed in line with relevant national regulations and international best practices; AND - Relevant national and internationally recognised guidelines and standards must be followed.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

37[002] Renewal of wastewater collection and treatment

Activity Notes

- Renewal of centralised wastewater systems including collection (sewer network) and treatment. It implies no material change related to the load or volume of flow collected or treated in the wastewater system.
- This Activity also includes the renewal of wastewater infrastructure including treatment plants, sewer networks, connections to the wastewater infrastructure, decentralised wastewater treatment facilities, including individual and other appropriate systems, and discharge structures for treated effluent. The Activity may include innovative and advanced treatments, including the removal of micropollutants.
- Definitions:
 - Material Change: In the context of this Activity, a 'material change' is any alteration in external conditions that could reasonably be expected to cause a measurable or meaningful impact on energy consumption, independent of any internal efficiency improvements.
 - Own Baseline: In the context of this Activity 'own baseline' refers to the historical energy performance of the specific wastewater treatment plant being assessed, averaged over a 3-year rolling basis⁵⁹. It represents the average annual energy calculated over a defined reference period, prior to the renewal or upgrade. This baseline is unique to the plant and serves as the benchmark against which future improvements in energy efficiency (such as a 20% reduction) are measured.
 - Agglomeration: An agglomeration refers to a population centre (including residential, industrial, and commercial zones) where wastewater is collected and conveyed to a treatment facility, either through a centralised sewerage system or a network of collection systems.
- Non-exhaustive list of relevant standards and guidelines:
 - ISO 31000 Risk Management: Principles and guidelines.
 - ISO 24513:2019 Vocabulary for drinking water, wastewater, and stormwater systems.
 - ISO 24516-3:2017 Guidelines for the management of assets of water supply and wastewater systems - Part 3: Wastewater collection networks.
 - ISO 24516-4:2019 Guidelines for the management of assets of water supply and wastewater systems: Part 4: Wastewater treatment plants, sludge treatment facilities, pumping stations, retention and detention facilities.
 - ISO 5667 Series: Water Quality Sampling.
 - ISO 24516 2:2019 Asset management for treatment plants, pumping stations, reservoirs, dosing, and associated infrastructure.
 - ISO 24523:2017 Guidelines for benchmarking performance of water and wastewater utilities.
 - ISO 30500:2018 Non-sewered sanitation systems - Prefabricated integrated treatment units - General safety and performance requirements for design and testing.
 - WHO Guidelines for the Safe Use of Wastewater.
 - UNEP Guidance for Wastewater Reuse.

⁵⁹ Exceptional 'anomaly' years, such as those during the COVID-19 period, may be substituted with adjacent years from 'normal' periods. Any such replacements must be clearly disclosed and documented.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The renewal of a wastewater collection system improves energy efficiency by decreasing the average energy consumption by 20% compared to its own baseline performance, demonstrated annually. That decrease in energy consumption can be accounted for at the level of the project (i.e. the collection system renewal) or across the downstream wastewater agglomeration (i.e. including the downstream collection system, treatment plant or discharge of wastewater); OR 2. The renewal of a wastewater treatment plant improves energy efficiency by decreasing the average energy consumption of the system by at least 20% compared to its own baseline performance, demonstrated annually; AND 3. For the purposes of criteria (1) and (2), the net energy consumption of the system can be calculated as either: a. kWh per population equivalent per annum of the wastewater collected or effluent treated; OR b. kWh per m³ per annum of wastewater collected or effluent treated, Taking into account measures decreasing energy consumption relating to source control (reduction of stormwater or pollutant load inputs) and, as appropriate, energy generation within the system (such as hydraulic, solar, thermal and wind energy); AND 4. For the purposes of criteria (1) and (2), the operator demonstrates that there are no material changes relating to external conditions, including modifications to discharge authorisation(s) or changes in load to the agglomeration that would lead to a reduction in energy consumption, independent of efficiency measures taken.	Review date pre-set (see Annex 6), with some criteria update pre-set.
Tier 2 (Amber T2)	1. The renewal of a wastewater collection system improves energy efficiency by decreasing the average energy consumption by 10% compared to its own baseline performance, demonstrated annually. That decrease in energy consumption can be accounted for at the level of the project (i.e. the collection system renewal) or across the downstream wastewater agglomeration (i.e. including the downstream collection system, treatment plant or discharge of wastewater); OR 2. The renewal of a wastewater treatment plant improves energy efficiency by decreasing the average energy consumption of the system by at least 10% compared to its own baseline performance, demonstrated annually; AND	

	3. For the purposes of criteria (1) and (2), the net energy consumption of the system can be calculated as either: a. kWh per population equivalent per annum of the wastewater collected or effluent treated; or b. kWh per m³ per annum of wastewater collected or effluent treated. Taking into account measures decreasing energy consumption relating to source control (reduction of stormwater or pollutant load inputs) and, as appropriate, energy generation within the system (such as hydraulic, solar, thermal and wind energy); AND 4. For the purposes of criteria (1) and (2), the operator demonstrates that there are no material changes relating to external conditions, including modifications to discharge authorisation(s) or changes in load to the agglomeration that would lead to a reduction of energy consumption, independent of efficiency measures taken; AND 5. The sunset date for this Activity under the Tier 2 (Amber T2) criteria is 31 December 2035 after which the facilities must meet the Green Criteria. Criteria and sunset dates are not fixed and will be reviewed and possibly revised periodically based on emerging science and technology.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

37[003] Flood or drought risk prevention and protection, including nature-based solutions

Activity Notes

- Activity refers to structural (including civil engineering structures) and nature-based measures aimed at the protection of people, ecosystems, cultural heritage and infrastructure against floods and droughts.
- The primary goal of this Activity is to support protection and prevention efforts against flood and drought risks.
- Includes:
 - The design, construction, extension, rehabilitation, upgrade and operation of structural measures, including planning, construction, extension; and
 - Planning, construction, extension and operation of large-scale nature-based flood or drought management and coastal, transitional or inland aquatic ecosystem restoration measures contributing to preventing and protecting against flooding or droughts, and enhancing natural water retention, biodiversity and water quality.
- Structural measures undertaken include:
 - Dykes, river embankments;
 - Sea defence dykes, storm-surge barriers, seawalls, groynes and breakwaters;
 - On-line and off-line buffer basins for flood detention and control in natural and artificial drainage networks;
 - Measures to control floods by increasing the retention capacity of catchment areas, such as implementing distributed buffer basins or sewer overflow structures;
 - Hydraulic structures to regulate water flow such as pumping stations, sluices, gates;
 - Sediment control structures;
 - Large-scale nature-based flood or drought management measures applied in peri-urban, rural and coastal areas that are coordinated at river basin, regional or local, such as municipal, scale.
- Nature-based solutions may include:
 - River or lake related measures, including: riparian or floodplain vegetation development or floodplain restoration, including re-connection of a river or lake with its floodplain or off-channel/lateral connectivity improvement to restore the retention capacity of the floodplain and its ecosystem's function;
 - Re-meandering river courses by creating a new meandering course or reconnecting cut-off meanders or reconnecting a lake or group of lakes to a river;
 - Restoration of the longitudinal and lateral connectivity of a river (including oxbow lakes) by removing obsolete barriers, including dams and weirs or small barriers across or along the river;
 - Substitution of artificial riverbank or lake shore protection with nature-based solutions for bank or bed stabilisation as measures for river or lake restoration;
 - Measures aimed at improving the diversification of river or lake depth and width to increase habitat variety;
 - Wetland restoration to enhance floodwater retention and groundwater recharge;
 - Riparian buffer zones to restore vegetation along waterways to reduce erosion and slow floodwaters;

- Mangrove and coastal ecosystem restoration to protect coastal areas from storm surge and sea level rise;
- Sustainable urban drainage such as bioswales;
- Urban wetlands and retention ponds;
- Soil restoration.
- Excludes:
 - Non-structural measures, such as those listed below:
 - Flood awareness raising campaigns;
 - Flood modelling and forecasting, flood hazard and risk mapping;
 - Spatial planning in flood-prone areas aimed at reducing flood risks, such as by applying restrictions to land uses and enforcing protection criteria through building codes;
 - Flood early warning systems.
 - Non-structural measures which should be classified, as relevant, under the enabling sectors of Information and Communication or Professional, Scientific and Technical Activities.
 - Infrastructure for water transport such as waterways, harbours and marinas, emergency response in case of a flood event, consultancy on physical climate risk management and adaptation, and software enabling structural and non-structural measures for flood and drought risk prevention and protection.
 - Construction, modification or removal of online water retaining structures that result in impoundment primarily for the purposes of hydropower use or irrigation.
- Substantial reductions in material physical climate risks can be demonstrated through quantitative or qualitative evidence.
- Non-exhaustive list of relevant standards:
 - IUCN Global Standard for Nature-based Solutions (2020);
 - ISO 31000: Risk Management – Principles and Guidelines;
 - ISO 14001:2015 Environmental Management Systems;
 - ISO 37101: Sustainable development in communities – Management system for sustainable development;
 - ISO 14006:2020 Environmental Management Systems — Guidelines for Incorporating Ecodesign.

EO1: Climate Change Mitigation TSC

TSC are presently not available for the Activity Tiers defined.

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity complies with the following criteria: a. Where data is available, the physical climate risks that are material to the Activity have been identified by performing a robust Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance provided in Annex 3; AND b. The Activity has implemented physical and non-physical ('adaptation solutions') that substantially reduce the most material physical climate risks identified through the	Enduring

	project-specific CRVA, in accordance with the project's defined thresholds of acceptable residual risk; AND 2. Specific measurable key performance indicators (KPIs) must be developed to track the reduction of material climate risks; AND 3. Acceptable residual risk thresholds should be defined for the Activity; these thresholds shall be established using a structured risk management process consistent with recognised international frameworks, such as ISO 31000; AND 4. It must be shown that the Activity is necessary for flood and drought risk prevention and protection.	
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity complies with the following criteria: a. A baseline assessment of pre-existing ecological conditions is completed; AND b. An assessment of flood and/or drought risk for the location is completed; AND c. The Activity has implemented physical nature-based solutions that reduce flood or drought risks, and in turn reduce adverse consequences, where applicable for human health, the environment, cultural heritage and economic activity, whilst demonstrating specific ecosystem co-benefits. These commitments are to be measured against the ecological baseline assessment, as required in criterion (1.a) and the flood/drought risk assessment described in criterion (1.b); AND 2. The Activity must demonstrate that it will achieve one or more of the following criteria: a. Restoration or significant enhancement of natural habitat; OR b. Improve water quality; OR c. Improve soil quality; OR d. Improve ecological function through the reintroduction of native vegetation and species; OR e. Enable ecological connectivity; AND 3. The Activity must demonstrate that it will achieve one or more of the following criteria: a. Maintain existing natural habitat and ecological stability; OR b. Preserve water quality and avoid water stress; OR	Review date pre-set (see Annex 6).

	c. Preserve soil quality and avoid degradation; OR d. Maintain ecological connectivity; AND 4. The commitments for criteria (2) and (3) are to be measured against the baseline assessment, as required in criterion (1.a); AND 5. The Activity contains clear and binding targets on nature restoration or conservation over a clearly defined timeframe and describes measures to achieve those targets. Local stakeholders are involved from the outset in the planning and design phase. The Activity is based on the principles outlined by the IUCN Global Standard for Nature-Based Solutions. These targets are to be set against the baseline assessment, as required in criterion (1.a); AND 6. The Activity takes into account: a. National Biodiversity Strategies and Action Plans for the setting of nature conservation and restoration targets and for the description of the measures to achieve these targets; AND b. National Disaster Risk Management Plans and where relevant Transboundary Disaster Risk Management Plans; AND 7. A monitoring programme is in place to evaluate the effectiveness of a nature-based solution scheme in improving the status of the affected water body, achieving the conservation and restoration targets and in adapting to changing climate conditions. The monitoring program is to be based against the ecological baseline assessment, as required in criterion (1.a), the flood/drought risk assessment described in criterion (1.b), and the specific targets required by criterion (2.c).	
Tier 2 (Amber T2)	1. The Activity complies with the following criteria: a. A baseline assessment of pre-existing ecological conditions is completed; AND b. An assessment of flood and/or drought risk for the location is completed; AND c. The Activity has implemented physical nature-based solutions that reduce flood or drought risks, and in turn reduce adverse consequences, where applicable for human health, the environment, cultural heritage and economic activity, whilst demonstrating specific ecosystem co-benefits. These commitments are to be measured against the ecological baseline assessment, as required in criterion (1.a) and the flood/drought risk assessment described in criterion (1.b); AND 2. The Activity must demonstrate that it will achieve one or more of the following criteria:	

	a. Maintain existing natural habitat and ecological stability; OR b. Preserve water quality and avoid water stress; OR c. Preserve soil quality and avoid degradation; OR d. Maintain ecological connectivity; AND 3. These commitments are to be measured against the baseline assessment, as required in criterion (1.a); AND 4. The Activity takes into account National Biodiversity Strategies and Action Plans, National Disaster Risk Management Plans and where relevant Transboundary Disaster Risk Management Plans; AND 5. The Activity must set a commitment and achieve within five years, one or more of the following: a. Restoration or enhancement of natural habitat; OR b. Improved water quality; OR c. Enable ecological connectivity; AND 6. These commitments are to be measured against the baseline assessment, as required in criterion (1.b).	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

381[001] Collection and transport of non-hazardous and hazardous waste

Activity Notes

- Includes:
 - Separate collection and transport of non-hazardous and hazardous waste aimed at preparing for reuse or recycling, and the transport of hazardous waste prior to treatment, material recovery or disposal, including the construction, operation and upgrade of facilities involved in the collection and transport of such waste, such as civic amenity centres and waste transfer stations, as a means for material recovery and additionally for hazardous waste as a means for appropriate treatment.
 - Collection and transport of waste streams such as hazardous waste fractions produced by households, waste oils, batteries, non-depolluted waste from electrical and electronic equipment (WEEE), non-depolluted end-of-life vehicles, certain healthcare waste, such as infectious and cytotoxic waste and other waste streams that meet the classifications outlined under the Basel Convention (Annex III).
- Waste segregation means that the waste is not mixed with other waste or materials with different properties.
- In the context of this Activity, different properties refer to differences in the physical, chemical, or biological characteristics of materials that affect how they are handled, treated, or recycled.
- Non-exhaustive list of standards and guidance:
 - ISO 24161:2022 Waste collection and transportation vocabulary.
 - ISO 24160:2022 Refuse Collection Vehicles — Waste Odour and Leachate Prevention and Control.
 - ISO 24162:2022 Test Method for Energy Consumption of Refuse Collection Vehicles.
 - ISO 14001:2015 Environmental management systems.
 - ISO 45001:2018 Occupational health and safety management.
 - ISO 9001:2015 Quality management system standards.
 - Basel Convention International treaty on hazardous waste movement and disposal.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. All separately collected and transported non-hazardous waste that is segregated at source is intended for preparation for reuse or recycling operations. This excludes waste segregated for WTE; AND 2. The transportation vehicle conforms to national emission regulations with a sunset date of 2030, after this the transportation vehicle must meet EO1 Tier 1 (Green) criteria as defined in Activity 4923[001] Freight transport services by road.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	To meet the TSC, criterion (1) is mandatory; either criterion (2) OR (3) must be satisfied: 1. All separately collected and transported non-hazardous waste that is segregated at source is intended for preparation for reuse or recycling operations. This excludes waste segregated for WTE; AND	

	2. The transportation vehicle conforms to national emission regulations; OR 3. Alternative initiatives to reduce emissions associated with collection and transportation of waste are demonstrated. For example, the use of route optimisation software.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Hazardous waste is source segregated and collected separately from non-hazardous waste to prevent cross-contamination. Appropriate measures are taken to ensure that during separate collection and transport, hazardous waste is not mixed or diluted either with other categories of hazardous waste or with other waste, substances or materials. Examples of appropriate measures include clear labelling, suitable packaging that is compatible with the type of waste. Separate dedicated containers for each hazardous waste type, physical separation in transport such as separate compartments, dedicated vehicles, physical barriers and employee training; AND 2. Proper collection and handling to prevent leakage of hazardous waste during collection, transport, storage and delivery to the treatment facility, which is permitted to treat hazardous waste, according to national legislation. Examples of proper collection and handling include leakproof and compatible containers for the type of waste, secondary containment systems, regular inspections, proper loading and securing, emergency preparedness such as equipping vehicles with spill response kits and employee training; AND 3. Where a given waste classified as hazardous also has a transport status of dangerous goods, the transport complies with the relevant national requirements for transport of dangerous goods; AND 4. During collection and transport, hazardous waste is packaged and labelled in accordance with the international and national standards in force; AND 5. The operator collecting hazardous waste complies with record-keeping obligations including as regards quantity, nature, origin, destination, frequency of collection, mode of transport and treatment method; AND 6. For the collection and transport of waste from electrical and electronic equipment (WEEE), the integrity of WEEE must be	Enduring

	preserved and leakage of hazardous substances prevented, such as ozone-depleting substances, fluorinated greenhouse gases or mercury contained in fluorescent lamps; AND 7. The transportation vehicle conforms to national emission regulations.	
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO4: Resource Resilience and the Transition to a Circular Economy TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. For hazardous and non-hazardous waste: a. Waste is segregated: i. At source, or ii. At an intermediate sorting facility, or iii. At waste collection or transport facilities; For options (ii) and (iii), Activities must adhere to applicable national regulations on waste segregation, with a sunset date of 31 December 2030 established for both options; AND b. Source segregated waste consisting of waste from electrical and electronic equipment (WEEE) or any type of hazardous waste is collected separately (i.e. in single fractions) and not commingled with other waste streams. The transport of source-segregated hazardous waste must be to facilities that engage in material recovery of hazardous substances; AND c. Waste is to be transported to a location with the intention of preparation for material recovery (reuse or recycling) or energy recovery; AND d. The transportation vehicle conforms to national emission regulations.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	1. Waste is segregated: a. At an intermediate sorting facility; OR b. At waste collection or transport facilities; AND c. Source segregated waste consisting of waste from electrical and electronic equipment (WEEE) or any type of hazardous waste is collected separately (i.e., in single fractions) and not commingled with other waste streams; AND 2. Waste is to be transported to a location with the intention of preparation for material recovery (reuse or recycling) or energy recovery; AND 3. The transportation vehicle conforms to national emission regulations.	

Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

3821[001] Anaerobic digestion of bio-waste

Activity Notes

- Includes:
 - Construction and operation of dedicated facilities for the treatment of separately collected bio-waste, including sewage waste, through anaerobic digestion with the resulting production and utilisation of biogas and digestate and/or chemicals.
- Further processing in the context of this TSC may include:
 - Composting;
 - Nutrient recovery and fertiliser production;
 - Thermal drying to create biosolids.
- Non-exhaustive list of relevant standards and guidelines:
 - IPCC Guidelines.
 - ISO 14064-1: Greenhouse Gases - Part 1: Specification with guidance at the organisation level for the quantification and reporting of greenhouse gas emissions and removals,
 - Regional Best Available Techniques (BAT).
 - Non-exhaustive guidance, as applicable, for the detection of methane:
 - ISO 25140:2010 Stationary source emissions - Automatic method for the determination of the methane concentration using Flame Ionisation Detection (FID).
 - ISO 25139:2011 Stationary source emissions - Manual method for the determination of the methane concentration using gas chromatography.
 - ISO 6974-3:2018 Natural gas - Determination of composition and associated uncertainty by gas chromatography.
 - Any other standards which are aligned with IPCC Guidelines, ISO 14064-1, or regional national standards or regulatory frameworks, as applicable.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The bio-waste is segregated at source and collected separately; AND 2. In the dedicated bio-waste treatment plants, the share of food and feed crops used as input feedstock, measured by weight, as an annual average, is less than or equal to 10% of the input feedstock. Food and feed crops should be defined in line with the relevant national bio-waste definitions; AND 3. Woody waste must be segregated before or after processing and sent to an aligned treatment plant (such as composting or biomass-based energy plants); AND 4. The produced biogas is used directly for the generation of electricity or heat or upgraded to bio-methane for injection into the natural gas grid or used as vehicle fuel or as feedstock in the chemical industry; AND 5. The produced digestate from: a. Biowaste (excluding sewage sludge) from single digestion facilities is used as fertiliser or soil improver	Review date pre-set (see Annex 6), with some criteria update pre-set.

	either directly or after composting or any other treatment as permitted by the applicable regulations; OR b. Anaerobic digestion of sewage sludge will be further processed and not disposed directly in landfills; ash resulting from incineration can be landfilled; OR c. Co-digestion facilities must be processed further to ensure resource recovery and cannot be disposed directly; AND 6. A monitoring and contingency plan is in place in order to minimise methane leakage at the facility, consistent with recognised standards or regulatory frameworks.	
Tier 2 (Amber T2)	1. The bio-waste is segregated: a. At source; OR, b. At an intermediate sorting facility; OR c. At an anaerobic digestion facility; AND 2. A monitoring and contingency plan is in place in order to minimise methane leakage at the facility, consistent with recognised standards or regulatory frameworks; AND 3. The produced biogas is flared directly without capture of energy, whilst avoiding the release of incomplete combustion products, in line with national standards and regulations or other recognised standards; AND 4. The produced digestate from: a. Biowaste (excluding. sewage sludge) from single digestion facilities is used as fertiliser or soil improver, either directly or after composting or any other treatment as permitted by the applicable regulations; OR b. Sewage sludge will be further processed and not disposed directly in landfills; ash resulting from incineration can be landfilled; OR c. Co-digestion facilities must be processed further to ensure resource recovery and cannot be disposed directly; AND 5. Rejects from the pre-sorting facility are directed to disposal routes that meet, or are progressing toward, ASEAN Taxonomy eligibility criteria or other recognised best practice standards, where available; AND 6. The sunset date for this Activity under the Tier 2 (Amber T2) criteria is 31 December 2030 after which the facilities must meet the Green Criteria. Criteria and sunset dates are not fixed and will be reviewed and possibly revised periodically based on emerging science and technology.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

3821[002] Composting of bio-waste

Activity Notes

- Includes:
 - Construction and operation of dedicated facilities that employ technology for the treatment of separately collected bio-waste through composting (aerobic digestion) with the resulting production and utilisation of compost.
- Definitions:
 - Feedstock management: The process of controlling characteristics of incoming materials to support effective composting.
 - ASEAN Taxonomy eligibility may relate to other Activities defined in this sector, including, but not necessarily limited to:
 - 381[001] Collection and transport of non-hazardous and hazardous waste.
 - 383[001] Materials recovery from non-hazardous waste.
- List of non-exhaustive relevant standards and guidelines:
 - ISO 19822:2018 Soil improvers and growing media - Extraction of nutrients.
 - ISO 17088:2021 Plastics - Organic recycling - Specifications for compostable plastics.
 - ISO 14034:2016 Environmental management - Environmental technology verification (ETV).
- Non-exhaustive guidance, as applicable, for the detection of methane:
 - ISO 25140:2010 Stationary source emissions - Automatic method for the determination of the methane concentration using Flame Ionisation Detection (FID).
 - ISO 25139:2011 Stationary source emissions - Manual method for the determination of the methane concentration using gas chromatography.
 - ISO 6974-3:2018 Natural gas - Determination of composition and associated uncertainty by gas chromatography.
 - Any other standards which are aligned with IPCC Guidelines, ISO 14064-1, or regional or national standards or regulatory frameworks, as applicable.

EO1: Climate Change Mitigation TSC

TSC are presently not available for the Activity Tiers defined.

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The bio-waste that is composted is source segregated and collected separately; AND 2. The produced compost is used as fertiliser or soil improver as permitted by the applicable national regulations and/or in line with ISO standards relevant to environmental technology verification, biodegradable materials, and compostable soil improvers; AND	Review date pre-set (see Annex 6).

	3. The facility applies best available techniques to ensure aerobic conditions during composting to avoid and reduce methane leakage. Examples of measures include: a. Aeration and oxygen management; OR b. Moisture content control; OR c. Temperature monitoring and management; OR d. Feedstock management; OR e. Pile design and turn frequency; AND 4. Measures to prevent and mitigate odour and water pollution from leachate are in place. Examples of measures include: a. Enclosed systems or covered piles; OR b. Biofilters; OR c. Feedstock management; OR d. Leachate collection systems; OR e. Runoff diversion channels; AND 5. Where applicable, composting facilities must comply with nationally imposed standards/guidelines.	
Tier 2 (Amber T2)	1. The bio-waste is segregated: a. At source; OR b. At an intermediate sorting facility; OR c. At a composting facility; AND 2. Rejects from the segregation are directed to disposal routes that meet, or can demonstrate that they are progressing toward, ASEAN Taxonomy eligibility criteria or other recognised best practice standards, where available; AND 3. The produced compost is used as fertiliser or soil improver as permitted by the applicable national regulations and/or in line with ISO standards relevant to environmental technology verification, biodegradable materials, and compostable soil improvers; AND 4. The facility applies best available techniques to ensure aerobic conditions during composting to avoid and reduce methane leakage. Examples of measures include: a. Aeration and oxygen management; OR b. Moisture content control; OR c. Temperature monitoring and management; OR d. Feedstock management; OR e. Pile design and turn frequency; AND 5. Measures to prevent and mitigate odour and water pollution from leachate are in place. Examples of measures include: a. Enclosed systems or covered piles; OR b. Biofilters; OR c. Feedstock management; OR d. Leachate collection systems; OR e. Runoff diversion channels; AND 6. Where applicable composting facilities must comply with nationally imposed standards/guidelines.	

Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

3821[003] Waste-to-Energy

Activity Notes

- Includes:
 - The use of residual waste streams to generate energy through pre-sorted residual waste (non-recyclable fraction of waste) incineration.
- Excludes:
 - R&D investments related to developing and testing new and emerging technologies such as pyrolysis and gasification that can produce alternative and sustainable fuels or chemicals. These R&D-related Activities are covered by Activity 721[001] Close to market research, development and innovation.
 - Co-processing: refer to Activity 2394[001] Manufacture of cement for TSC related to co-processing.
 - Bio-waste: agricultural residues, large-scale commercial food waste, or waste from industrial food processing are not acceptable inputs. Processing of bio-waste from these sources should not be classified under this Activity but under other Activities, including:
 - 3821[001] Anaerobic digestion of bio-waste;
 - 3821[002] Composting of bio-waste;
 - 351[014] Electricity generation from bioenergy, including co-firing with fossil fuels.
 - Recognising that source segregation is not yet widely implemented across ASEAN, flexibility may be applied for mixed waste streams from domestic or small-scale commercial sources that contain unavoidable organic fractions which cannot be practically or economically separated. This policy should be revised at the next review period, as defined in Annex 6.
- Definitions:
 - Residual waste is the non-recyclable fraction of waste.
 - Pre-sorting refers to a process where the input waste has undergone sorting of recyclables at an intermediate facility such as a Material Recovery Facility (MRF) or undergone segregation prior to any waste treatment or disposal.
 - Net energy efficiency represents the percentage of the energy content in the waste that is converted into usable energy.
 - Domestic or small-scale commercial: Waste from households and micro- or small-sized enterprises (as defined under ASEAN or national SME classifications) that produce mixed municipal-type waste similar to household waste.
 - Cannot be practically or economically separated: Applies where separating organic waste from mixed waste would require excessive cost, infrastructure, or effort relative to the environmental benefit.

EO1: Climate Change Mitigation TSC

While this Activity can be an economically and technically feasible method to reduce GHG emissions (EO1), within the ASEAN Taxonomy its contribution to the environment is defined by its support for Resource Resilience and the Transition to a Circular Economy (EO4). Waste-to-Energy (WTE) primarily manages waste by converting it into a useful commodity (energy). For this reason, the TSC for this Activity are set under EO4 rather than EO1.

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity uses residual or pre-sorted waste (so that high-quality recyclables can be recovered); AND 2. Plant net energy efficiency is not less than 25%; AND 3. Bottom ash recovery to the extent permitted by national law. At least 75% of metal contained within the ash must be recovered. This activity could take place in an off-site location; AND 4. Based on the location of the plant, technology used and plant discharges, including emissions to air and emissions to waterways, shall comply with the relevant national regulations and emission standards.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	1. The Activity uses residual or pre-sorted waste (so that high-quality recyclables can be recovered); AND 2. Plant net energy efficiency between 10% and 25%; AND 3. Bottom ash recovery to the extent permitted by national law. At least 50% of metal contained within the ash must be recovered. This activity could take place in an off-site location; AND 4. Based on the location of the plant, technology used and plant discharges, including emissions to air and emissions to waterways, shall comply with the relevant national regulations and emission standards.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

3821[004] Landfill gas capture and utilisation

Activity Notes

- Includes:
 - Installation and operation of infrastructure for landfill gas capture and utilisation in permanently closed landfills, engineered waste disposal sites or landfill cells using new or supplementary dedicated technical facilities and equipment installed during or post landfill or landfill cell closure.
- Definitions:
 - Meteorological monitoring means monitoring of weather parameters including precipitations (rain), temperature, wind direction and speed, humidity and evaporation.
- Non-exhaustive list of relevant Standards and Models:
 - ISO 25140:2010 Stationary Source Emissions.
 - ISO 25139:2011 Stationary Source Emissions — Manual method for the determination of the methane concentration using gas chromatography.
 - ACM0001 (latest version).
 - LandGEM (Landfill Gas Emissions Model).
 - IPCC 2006 Guidelines for National Greenhouse Gas Inventories (Volume 5: Waste).

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The landfill or landfill cell where the gas capture system is implemented is permanently closed and is not taking in further biodegradable waste; AND 2. Methane emissions from the landfill and leakages from the landfill gas collection and utilisation facilities are subject to control and monitoring procedures. At a minimum monitoring and control procedures should include: a. Meteorological monitoring; b. GHG emissions monitoring (including CH₄ and conducted at least every six months); c. GHG emissions monitoring must be carried out in line with recognised standards. Where on-site monitoring is not feasible, approved modelling methods may be utilised; AND 3. The produced biogas is used directly for the generation of electricity or heat, or upgraded to bio-methane for injection into the natural gas grid, or used as vehicle fuel, or as feedstock in chemical industry; AND 4. Where applicable facilities must comply with nationally imposed standards/guidelines.	Review date pre-set (see Annex 6), with some criteria update pre-set.
Tier 2 (Amber T2)	1. The landfill or landfill cell where the gas capture system is implemented is permanently closed and is not taking in further waste; AND 2. Methane emissions from the landfill and leakages from the landfill gas collection and utilisation facilities are subject to	

	control and monitoring procedures. At a minimum, monitoring and control procedures shall include: - Meteorological monitoring; - GHG emissions monitoring (including CH₄, conducted at least every six months); - GHG emissions monitoring must be carried out in line with recognised standards. Where on-site monitoring is not feasible, approved modelling methods may be utilised; AND - The produced biogas is flared directly without capture of energy, whilst minimising the release of incomplete combustion products, such as carbon monoxide (CO) and particulate matter (PM), into the atmosphere; AND - Where applicable facilities must comply with nationally imposed standards/guidelines; AND - The sunset date for this Activity under the Tier 2 (Amber T2) criteria is 31 December 2030 after which the facilities must meet the Green Criteria. Criteria and sunset dates are not fixed and will be reviewed and possibly revised periodically based on emerging science and technology.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

3822[001] Treatment of hazardous waste

Activity Notes

- Activity encompasses both criteria for material recovery operations of waste classified as hazardous waste as well as the treatment of hazardous waste.
- Activity covers both in-situ and ex-situ material recovery operations of waste classified as hazardous waste in accordance with Annex III of the Basel Convention.
- Includes:
 - Recovery operations of waste classified as hazardous waste: Construction, upgrade, and operation of dedicated facilities for the treatment of hazardous waste as a means for material recovery operations and of controlled disposal aimed at preventing pollution.
 - Treatment of hazardous waste: construction, repurposing, upgrade, and operation of dedicated facilities for the treatment of hazardous waste, including the incineration of non-recyclable hazardous waste, biological treatment of hazardous waste and physicochemical treatment.
 - The treatment of residual waste materials generated from the depollution of waste electrical and electronic equipment (WEEE).
- Excludes:
 - The reuse of substances that do not qualify as waste, such as by-products or residues from production activities.
 - Materials recovery from WEEE (as it is consistent with that listed in Annex VIII: A1181 of the Basel Convention). Any dismantling of end-of-life products including WEEE should be managed under Activity 383[002] Depollution and dismantling of end-of-life products.
 - Recovery of materials from batteries, end-of-life vehicles (ELV), inorganic materials from incineration processes, such as ashes, slags or dust.
 - Disposal operations of hazardous waste such as landfilling or permanent storage.
 - Incineration of recyclable hazardous waste and incineration of non-hazardous waste.
 - Treatment and recovery of nuclear waste.
 - Treatment and disposal of toxic or contaminated live or dead animals and other contaminated waste.
- Examples of approaches for 'maximising recovery' could include:
 - The application of best available techniques suitable for the waste type, with clear documentation to show why chosen technologies represent best practice for recovery.
 - Maintain a mass balance system, tracking input, recovered material and residual waste for each stream, providing a periodic performance report.
 - Establish and report on recovery targets for specific waste streams in line with recognised sector benchmarks such as set in the Basel Convention.
 - Participate in periodic independent verification to assess recovery performance to ensure consistent with maximising recovery potential.
- Non-exhaustive list of standards and guidelines:
 - ISO 24297:2022 Guidelines for treatment and reuse of leachate from municipal solid waste (MSW) incineration plants.
 - ISO 24161:2022 Waste collection and transportation management — Vocabulary.
 - ISO 14001:2015 Environmental Management Systems.
 - ISO 9001:2015 Quality Management Systems.
 - ISO 45001:2018 Occupational Health & Safety.
 - Basel Convention.
 - Best Available Techniques (BAT) Conclusions for Waste Treatment.

- Best Available Techniques (BAT) Conclusions for Waste Incineration.
- EN 14899:2005(5) Characterisation of waste - Sampling of waste materials.
- EN 12457-2:2002(51) Characterisation of waste – Leaching.
- WHO Handbook on Safe Management of Wastes from Health-care Activities.

EO1: Climate Change Mitigation TSC

TSC are presently not available for the Activity Tiers defined.

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. For all waste treatment processes, the Activity complies with the following criteria: a. According to the type of activity, the Activity complies with the requirements set out in national regulations for either waste treatment or waste incineration. Facilities that have been granted exemptions from pollution limits are not considered as compliant with the TSC; AND b. During the pre-acceptance procedures, at least the following information is gathered: i. Expected date of arrival at the waste treatment plant; ii. Contact details of the waste producer, the sector which the waste originates from and the nature of the process producing the waste, including the variability of the process; iii. The estimated quantity expected to be delivered to the operator per delivery and per year; iv. Description of the waste, including composition, hazardous properties of the waste, waste code and the suitable treatment route; AND c. During the acceptance procedures, the following elements are in place: i. A reception facility equipped with a laboratory to analyse samples on site and documented analytical standard operating procedures, with the option to sub-contract analyses to accredited external contract laboratories; ii. Documented sampling procedure consistent with relevant standards; iii. Documented analysis of the relevant physicochemical parameters for the treatment; iv. A dedicated quarantine waste storage area, as well as written procedures to manage non-accepted waste; AND	Enduring

	d. The personnel dealing with the pre-acceptance and acceptance procedures are able, due to their profession or experience, to deal with all necessary questions relevant for the treatment of the wastes in the waste treatment facility. The procedures are intended to cover pre-accepting and accepting wastes at the waste treatment plant only if a suitable treatment route is available and the disposal or recovery route for the output of the treatment is determined; AND e. For 'blending or mixing activities' the operator is not using dilution to lower the concentration of one or more hazardous substances present in the waste, with the aim for the resulting waste mix to be declassified and become 'non-hazardous waste' and thus be subsequently treated in facilities non-dedicated to the treatment of hazardous waste. Dilution is not used as a 'substitute' for the adequate treatment of the waste; AND f. Where blending or mixing occurs, documented records to describe the purpose of blending and technical justification that this is required for the treatment process are required. This documentation must also include provisions for periodic independent third-party sampling to verify compliance; AND 2. Prior to final disposal, hazardous waste is treated to the level specified by national law and in alignment with international best practice; AND 3. For final disposal, hazardous waste is treated in accordance with national law and in alignment with international best practice. When secured landfill is identified as the disposal method, ensure that leachate parameters comply with the thresholds set out in national law and in alignment with international best practice.	
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO4: Resource Resilience and the Transition to a Circular Economy TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activities consist of maximising the recovery of secondary raw materials (including chemical substances) from source-segregated hazardous waste; AND 2. Maximising recovery of secondary raw materials must be demonstrated; AND	Enduring

	3. A documented plan must be in place to describe approaches to be taken to maximise the recovery of secondary raw materials and track implementation measures; AND 4. The recovered materials are substituting primary raw materials, or chemicals in production processes; AND 5. Evidence of clear documentation from the end-users of the recovered materials confirming their use as a substitute for primary raw materials or chemicals is required; AND 6. The recovered materials comply with the applicable industry specifications, harmonised standards, as well as relevant applicable national legislation.	
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

383[001] Materials recovery from non-hazardous waste

Activity Notes

- Includes
 - Construction, upgrade and operation of facilities for the sorting and processing of separately collected non-hazardous waste streams into usable secondary raw materials involving mechanical reprocessing or mechanical transformation process.
 - All facilities and equipment such as conveyor belts, compactors, pelletisers, air classifiers, magnetic belts, and other infrastructure required for material recovery are eligible.
- Excludes:
 - Materials recovery from Electrical and Electronic Equipment (EEE). Any dismantling of end-of-life products including EEE should be managed under Activity 383[002] Depollution and dismantling of end-of-life products.
 - Use of recovered materials for backfilling purposes, i.e., filling voids, pits, or excavations without producing usable secondary raw materials.
- Definitions:
 - Recovery efficiency: Is expressed as the percentage of material recovered (for reuse, recycling, or recovery) from the total input waste
 - Output Quality Management System: A structured set of procedures, controls, monitoring activities, and documentation designed to ensure that the materials produced by a materials recovery facility consistently meet applicable quality requirements, standards, and end-of-waste criteria.
 - Potential environmental pollution: The possibility of introducing into or onto, waters, land or air any matter, whether solid, liquid or gaseous:
 - That causes or is likely to cause the physical, chemical or biological condition of the waters, land or air to be adversely affected, or
 - That causes or is likely to cause harm to the health or safety of human beings or to any other aspect of the environment.

EO1: Climate Change Mitigation TSC

TSC are presently not available for the Activity Tiers defined.

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity results in a recovery efficiency of at least 50% by weight of all non-hazardous waste received by the facility into secondary raw materials (for example PET bales, paper bales and fertiliser) which are suitable for the substitution of primary raw materials; AND 2. The facility recovering non-hazardous waste has implemented best industry practice to improve overall environmental performance of the plant including:	Review date pre-set (see Annex 6).

	a. A waste characterisation procedure and a waste acceptance procedure regarding the quality of incoming waste; AND b. A tracking system and inventory to track the location and quantity of waste in the plant; AND c. An output quality management system to ensure that the output of the waste treatment is in line with applicable quality requirements or standards; AND d. The relevant waste segregation measures or procedures to ensure that waste, after separation, is kept separated depending on its properties in order to enable easier and environmentally safer storage and treatment; AND e. Implemented measures to prevent and control potential environmental pollution are made publicly available. Examples of pollution prevention and control measures may include: i. Dust control; ii. Odour management; iii. Noise control; iv. Water pollution prevention; v. Litter control; vi. Fire prevention. To make measures publicly available, facilities can: i. Publish environmental management plans on company websites; ii. Include information in publicly available annual reports; iii. Display key information on site noticeboards that are accessible to the public; AND f. The facility has installed the sorting and material recovery technology and processes to meet relevant technical specifications or quality standards. The Activity uses state-of-the-art technologies suited to the waste fractions processed such as optical separation by near infrared spectroscopy or X-ray systems, density separation, magnetic separation, size separation and other semi-mechanised and manual methods; AND 3. Where applicable, materials recovery facilities must comply with nationally imposed standards/guidelines.	
Tier 2 (Amber T2)	1. The Activity results in a recovery efficiency of at least 40% by weight of all non-hazardous waste received by the facility into secondary raw materials (for example PET bales, paper bales, and fertiliser) which are suitable for the substitution of primary raw materials; AND 2. Implemented measures to prevent and control potential environmental pollution are implemented and made publicly	

	available. Examples of pollution prevention and control measures may include: a. Dust control; b. Odour management; c. Noise control; d. Water pollution prevention; e. Litter control; f. Fire prevention. To make measures publicly available, facilities can: a. Publish environmental management plans on company websites; b. Include information in publicly available annual reports; c. Display key information on site noticeboards that are accessible to the public; AND 3. Where applicable, materials recovery facilities must comply with nationally imposed standards/guidelines.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

383[002] Depollution and dismantling of end-of-life products

Activity Notes

- Includes:
 - Construction, operation and upgrade of facilities dismantling and depolluting complex end-of-life products, movable assets and their components for materials recovery or preparation for reuse of components.
 - The dismantling of end-of-life products and movable assets and their components of any type, such as automobiles, ships and electrical and electronic equipment (EEE) for material recovery.
- Excludes:
 - Transportation of EEE, this is covered under 381[001] Collection and transport of non-hazardous and hazardous waste.
 - Treatment of batteries stemming from separate collection or removed during dismantling and depollution activities.
 - Demolition and wrecking of buildings and other structures which belong to 431[001] Demolition and site preparation.
- Definitions:
 - EEE encompasses a wide range of devices that require electric currents or electromagnetic fields to operate. Below are some common examples:
 - Household appliances;
 - IT and telecommunications equipment;
 - Consumer electronics (e.g., televisions, cameras);
 - Lighting equipment;
 - Medical devices.
- Non-exhaustive list of relevant standards and guidelines:
 - ISO 9001:2015 Quality Management Systems.
 - ISO 14001:2015 Environmental Management Systems.
 - ISO 45001:2018 Occupational health and safety management systems – requirements with guidance for use.

EO1: Climate Change Mitigation TSC

TSC are presently not available for the Activity Tiers defined.

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity dismantles and depollutes separately collected waste, complex end-of-life products, such as automobiles, waste electrical and electronic equipment (WEEE) or ships, in order to: a. Harvest parts and components that are suited for reuse; AND	Review date pre-set (see Annex 6).

	b. Separate non-hazardous and hazardous waste fractions suited for material recovery including recovery of critical raw materials; AND c. Remove hazardous substances, mixtures and components, so that these are contained in an identifiable stream or are an identifiable part of a stream within the treatment process and send them to facilities permitted for proper treatment including disposal of hazardous waste. To support identification these streams should be: i. Separated into clearly labelled suitable containers ii. Stored in dedicated areas, that have secondary containment and clear signage; AND d. Enclose documentation of the materials that are sent for further treatment or reuse; AND 2. The Activity dismantling and depolluting complex end-of-life products, such as automobiles, ships, or WEEE, including waste originating from collection points, complies with at least the following standards: a. ISO 9001:2015 Quality Management Systems; b. ISO 14001:2015 Environmental Management Systems; c. ISO 45001:2018 Occupational health and safety management systems – Requirements with guidance for use, or an equivalent national standard; AND 3. Where applicable, materials recovery facilities must comply with nationally imposed standards/guidelines.	
Tier 2 (Amber T2)	1. The Activity dismantles and depollutes separately collected waste, complex end-of-life products, such as automobiles, ships, or WEEE, in order to: a. Harvest parts and components that are suited for reuse; AND b. Separate non-hazardous and hazardous waste fractions suited for material recovery including recovery of critical raw materials; AND c. Remove hazardous substances, mixtures and components, so that these are contained in an identifiable stream or that are an identifiable part of a stream within the treatment process and sends them to facilities permitted for proper treatment including disposal of hazardous waste. To support identification these streams should be: i. Separated into clearly labelled suitable containers ii. Stored in dedicated areas, that have secondary containment and clear signage; AND d. Enclose documentation of the materials that are sent for further treatment or reuse; AND 2. Where applicable, materials recovery facilities must comply with nationally imposed standards/guidelines.	

Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

39[001] Remediation of contaminated sites and areas

Activity Notes

- Includes:
 - Decontamination or remediation of soils and groundwater in the polluted area, either in situ or ex situ, in particular using physical, chemical or biological methods;
 - Decontamination or remediation of contaminated industrial plants or sites;
 - Decontamination or remediation of surface water and its shores following accidental pollution, such as through collection of pollutants or through physical, chemical or biological methods;
 - Cleaning up oil spills and other types of pollutants on or in:
 - surface water including rivers, lakes, coastal waters or transitional waters;
 - groundwater;
 - marine water;
 - sediments (for all surface water types);
 - aquatic ecosystems;
 - buildings;
 - soil;
 - terrestrial ecosystems;
 - Material abatement of hazardous substances, mixtures or products, such as asbestos or lead-based paint;
 - Other specialised pollution-control activities;
 - Clean-up after disasters from natural hazards, such as flooding, or earthquakes;
 - Remediation of disused mining sites or legacies not associated with extraction revenues;
 - Containment operations, hydraulic barriers, active and passive barriers intended to limit or prevent migration of pollutants.
 - All activities that are required to prepare, plan, monitor and follow up the decontamination or remediation activity itself, such as:
 - Preparatory investigations, including data collection and surveying activities (in particular geological or hydrological), technical feasibility and environmental impact studies required to define the remediation project;
 - Monitoring and control of the remediation measures, including: i. sampling of soil, water, sediment, biota or other materials; ii. laboratory analysis of samples to identify the nature and concentration of pollutants; iii. installation, operation and maintenance of monitoring facilities and equipment such as observation wells in and outside the perimeter of the remediation site;
 - Demolition of contaminated buildings or other structures, dismantling large-scale machinery and equipment (i.e., decommissioning) and removal of surface sealing and concreting;
 - Earth moving or dredging, including excavation, landfilling, levelling, construction or reinforcement of perimeter walls or fences, primary access and internal roads and any other activities necessary to operate the decontamination;
 - Implementation of other environmental protection and pollution prevention and control measures to comply with the conditions imposed in the environmental permit for the remediation project, including measures for safeguarding safety of operations on-site and health of workers (such as for fire control, flood;

- Protection, hazardous waste management), protection of workers, site access control, management of invasive species before or during decontamination or remediation, reinforcement operations carried out prior to or during decontamination.
- Excludes:
 - Pest control in agriculture;
 - Purification of water for water supply purposes;
 - Decontamination or remediation of nuclear plants and sites;
 - Treatment and disposal of hazardous or non-hazardous waste unrelated to the site contamination problem;
 - Morphological remediation (restoration of a water body's natural physical form and flow characteristics);
 - Remediation of legally non-conforming landfills and abandoned or illegal waste dumps unrelated to the site under remediation;
 - Emergency services;
 - Outdoor sweeping and watering of streets.
- Non-exhaustive list of relevant standards and guidelines:
 - ASTM E1368.
 - ASTM E2081-00: Standard Guide for Risk-Based Corrective Action (RBCA).
 - ASTM E2205-02: Standard Guide for RBCA for Protection of Ecological Resources.
 - ASTM E1527-21: Standard Practice for Phase I Environmental Site Assessments.
 - ASTM E1903-19: Standard Practice for Phase II Environmental Site Assessments.
 - ASTM E1528-14: Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process.
 - ASTM E2435-05: Standard Guide for Application of Engineering Controls to Environmental Remediation Sites.
 - ASTM E2091-00: Standard Guide for the Use of Activity and Use Limitations (AULs), Including Institutional and Engineering Controls.
 - ASTM E2060-06: Standard Guide for Ensuring the Quality of Environmental Site Characterisation and Remediation.
 - ASTM E2557-07: Standard Guide for Assessing and Remediating Vapor Intrusion into Buildings.
 - ASTM E1689-95: Standard Guide for Developing Conceptual Site Models for Contaminated Sites.
 - Best Available Techniques (BAT) Reference Document for Waste Treatment.
 - Best Available Techniques (BAT) Reference Document for Common Wastewater and Waste Gas Treatment/Management Systems in the Chemical Sector.
 - ISO 18400: Soil Quality Sampling.
 - ISO 18504: Soil quality – Sustainable remediation.
 - ISO 15175: Soil Quality.
 - ISO 11074: Soil Quality – Vocabulary.
 - ISO 21365: Conceptual Models for Potentially Contaminated Sites.
 - ISO 16000: series Indoor air, VOCs, mould and asbestos.
 - ISO 31000: Risk Management – Principles and Guidelines.

EO1: Climate Change Mitigation TSC

TSC are presently not available for the Activity Tiers defined.

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Remediation Activities are not carried out by the operator that caused the pollution or a person acting on behalf of that operator, with environmental liability provisions based on the 'polluter-pays' principle according to national law; AND 2. Contaminant removal or control meets national regulatory standards; OR a. Where national regulatory standards for remediation are not available a site-specific risk assessment shall be conducted, considering contaminant properties and spread, to eliminate significant health and environmental risks to ensure that the contaminated area is safe for current or future use; AND 3. The remediation Activity is conducted in line with recognised standards or best available techniques and includes all of the following elements; AND a. The original source that led to the contamination has been stopped or addressed so as not to be a potential source of further contamination before any assessment or remediation Activity is undertaken; AND b. Preparatory investigations including site-specific surveys are carried out in line with recognised standards or best available techniques to establish the following elements used to define the environmental targets for the remediation and evaluate the remedial options: i. The location, characteristics and extent of the contaminated site; AND ii. The underlying geological and hydrological conditions; AND iii. The likely quantity, composition and sources of contamination; AND iv. Soil and water pollution originating from the contamination as well as the risks to human health and the environment; AND c. The remedial options are analysed in line with recognised standards or best available techniques and the most suitable remedial measures are defined in a dedicated remediation and monitoring plan; AND d. Any hazardous or non-hazardous waste or contaminated soils extracted or otherwise produced by the remediation Activity are subject to appropriate collection, transport, treatment, recovery or disposal by an authorised operator, in accordance with legal requirements and care	Enduring

	is taken to prevent any mixing of excavated contaminated soils and non-contaminated soils. Hazardous and non-hazardous waste management should be demonstrated to be compliant with the TSCs outlined in 3822[001] Treatment of hazardous waste and 381[001] Collection and transport of non-hazardous and hazardous waste; AND e. Remediation methods do not include reducing pollutant concentrations through dilution or watering down, unless a full justification, for reasons other than cost considerations, is provided in the remediation plan; AND f. Control, monitoring or maintenance activities are carried out in the after-care phase of at least 10 years, unless a different duration sufficient to guarantee long-term risk control is defined in the national law or in the remediation and monitoring plan (see criterion (3.c)); AND 4. The specific remediation and monitoring plan, detailing the remediation actions, is approved by the competent authority in accordance with national legal requirements; OR 5. Where there is no designated competent authority in place, the plan shall be reviewed and endorsed by a suitably qualified, independent third party; AND 6. Surveillance of the control and monitoring plan takes place at least on an annual basis to ensure the plan's efficiency and relevance.	
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

39[002] Remediation of legally non-conforming landfills and abandoned or illegal waste dumps

Activity Notes

- Includes:
 - Remediation of legally non-conforming landfills and of abandoned or illegal waste dumps that have been closed and are not taking in further waste other than possibly inert or biostabilised waste to be used as landfill cover material (as far as allowed in the environmental permit for the remediation project).
 - Remediation strategies and sub-activities typically implemented as part of projects aimed at removing, controlling, containing or diminishing polluting emissions from non-conforming landfills and abandoned or illegal dumpsites:
 - Remediation through environmental isolation of non-conforming or illegal landfills or dumpsites at the present site, including:
 - Physical isolation, concentration, structural stabilisation and protection of the non-conforming or illegal landfill or dumpsite, including application of hydraulic barriers, sealing, drainage and cover layers;
 - Installation, operation and maintenance of drainage and separate collection and treatment systems for leachates and run-off water prior to discharge;
 - Installation, operation and maintenance of landfill gas collection, abatement and control systems, including wells, piping and flaring systems;
 - Application of topsoil and vegetation cover for renaturation purposes;
 - Remediation through excavation and removal of non-conforming or illegal landfills or dumpsites with subsequent treatment, recovery or disposal of excavated waste, including:
 - Selective excavation of the waste deposited on the site, loading and transport to existing permitted treatment, recovery or disposal facilities with separate management of non-hazardous and hazardous waste;
 - Sorting and recovery of materials and fuels from excavated non-hazardous waste, including the installation, operation and maintenance of dedicated facilities and equipment for the duration of the remediation project;
 - Remediation through decontamination of soils, surface and groundwater at the place of pollution, including the following:
 - Selective excavation, loading, transport, temporary storage, backfilling of soil, with separate management of non-contaminated and contaminated soils;
 - Treatment of contaminated soil or water, either in situ or ex situ, using in particular physical, chemical or biological methods, including the installation, operation and maintenance of dedicated facilities for the duration of the remediation project;
 - Application of hydraulic barriers, active and passive barriers intended to limit/prevent migration of pollutants.
 - All of the following sub-activities that are required to prepare, plan, monitor and follow-up on the above remediation measures:
 - Preparatory investigations, including data collection and surveying activities (in particular geological or hydrological), technical feasibility and environmental impact studies required to define the remediation project;
 - Site preparation, including earth moving and levelling works, construction or reinforcement of perimeter walls or fences, primary access and internal roads, demolition of buildings or other structures on the landfill site;
 - Monitoring and control of the remediation measures, including:

- Sampling of soil, water, sediment, biota or other materials;
- Laboratory analysis of samples to identify the nature and concentration of pollutants;
- Installation, operation and maintenance of monitoring facilities and equipment such as observation wells in and outside the perimeter of the landfill site;
- Implementation of other environmental protection and pollution prevention and control measures to comply with the conditions imposed in the environmental permit for the remediation project, including measures for safeguarding safety of operations on-site and health of workers, such as for fire control, flood protection, hazardous waste management.
- Excludes:
 - The permanent closure, rehabilitation and aftercare of existing or new landfills that comply with relevant regional legislation or otherwise aligned with recognised international industry standards;
 - Landfill gas transformation for utilisation as energy carrier or industry feedstock;
 - Redevelopment of the remediated site for other economic use such as recreational, residential or commercial areas, installation of photovoltaic (PV) panels;
 - Compensatory measures for pollution caused by the landfill or dumpsite such as the development and operation of alternative water supply systems for affected populations living in the surrounding area.
- Non-exhaustive list of relevant standards and guidelines:
 - ISO 24212:2024 Remediation Techniques Applied at Contaminated Sites.
 - ISO 21365: Conceptual Models for Potentially Contaminated Sites.
 - ISO 18400: Soil Quality Sampling.
 - ISO 18504: Soil Quality – Sustainable remediation.
 - ISO 15175: Soil Quality.
 - ISO 11074: Soil Quality – Vocabulary.
 - ISO 16000 series: Indoor air, VOCs, mould and asbestos.
 - ASTM E1368: Standard Practice for Visual Inspection of Asbestos Abatement Projects.
 - ASTM E2081-00: Standard Guide for Risk-Based Corrective Action (RBCA).
 - ASTM E2205-02: Standard Guide for RBCA for Protection of Ecological Resources.
 - ASTM E1527-21: Standard Practice for Phase I Environmental Site Assessments.
 - ASTM E1903-19: Standard Practice for Phase II Environmental Site Assessments.
 - ASTM E1528-14: Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process.
 - ASTM E2435-05: Standard Guide for Application of Engineering Controls to Environmental Remediation Sites.
 - ASTM E2091-00: Standard Guide for the Use of Activity and Use Limitations (AULs), Including Institutional and Engineering Controls.
 - ASTM E2060-06: Standard Guide for Ensuring the Quality of Environmental Site Characterisation and Remediation.
 - ASTM E2557-07: Standard Guide for Assessing and Remediating Vapor Intrusion into Buildings.
 - ASTM E1689-95: Standard Guide for Developing Conceptual Site Models for Contaminated Sites.
 - Best Available Techniques (BAT) Reference Document for Waste Treatment.
 - Best Available Techniques (BAT) Reference Document for Common Wastewater and Waste Gas Treatment/Management Systems in the Chemical Sector.

EO1: Climate Change Mitigation TSC

TSC are presently not available for the Activity Tiers defined.

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	To meet the TSC, criteria (1), (4) AND (7) apply in all cases; either (2) OR (3) apply; AND either (5) OR (6) apply: 1. Remediation Activities are not carried out by the operator that caused the pollution or a person acting on behalf of that operator in order to comply with the requirements of the 'polluter-pays' principle; AND 2. Contaminant removal or control meets national regulatory standards; OR 3. Where national regulatory standards for remediation are not available a site-specific risk assessment is conducted, considering contaminant properties and spread, to eliminate significant health and environmental risks to ensure that the contaminated area is safe for current or future use; AND 4. The remediation Activity is conducted in line with recognised standards or best available techniques and includes all of the following elements: a. The non-conforming or illegal landfill or dumpsite to be remediated has been closed and is not taking in further waste other than possibly inert or biostabilised waste to be used as landfill cover material (as far as allowed in the environmental permit for the remediation project); AND b. Preparatory investigations including site-specific surveys are carried out in line with recognised standards or best available techniques to establish the following elements used to define the environmental targets for the remediation and evaluate the remedial options: i. The location, characteristics and extent of the landfill and the polluted area; AND ii. The underlying geological and hydrological conditions; AND iii. The likely quantity, composition and sources of landfilled waste; AND iv. Soil and water pollution originating from it as well as the risks to human health and the environment; AND c. The results of such remedial investigations are inputs for a feasibility study that defines the objectives, targets and scope for the remediation and evaluates alternative remedial options; AND	Enduring

	d. The remedial options are analysed in line with recognised standards or best available techniques, and/or accepted international standards, and described in a feasibility study produced for the landfill remediation project that convincingly demonstrates how the selected remedial option is the overall best solution to meet the defined remediation objectives and targets; AND e. All materials and fuels recovered from landfilled waste meet relevant quality standards or user specifications for the intended recovery operations and do not represent a risk for the environment or human health; AND f. Any hazardous or non-hazardous waste extracted or otherwise produced by the remediation Activity are subject to appropriate collection, transport, treatment, recovery or disposal by an authorised operator, in accordance with legal requirements. Hazardous and non-hazardous waste management should be demonstrated to be compliant with the TSCs outlined in 3822[001] Treatment of hazardous waste and 381[001] Collection and transport of non-hazardous and hazardous waste; AND g. Remediation methods do not include reducing pollutant concentrations through dilution or watering down, unless a full justification, for reasons other than cost considerations, is provided in the remediation plan; AND h. Control, monitoring or maintenance activities are carried out in the after-care phase of at least 10 years, unless a different duration, sufficient to guarantee long-term risk control, is defined in the national law or in the remediation and monitoring plan (see criterion (3.c)); AND 5. The remediation project, including monitoring and control plan are approved by the competent authority in accordance with national legal requirements; OR 6. Where there is no designated competent authority in place, the plan shall be reviewed and endorsed by a suitably qualified, independent third party; AND 7. Surveillance of the control and monitoring plan takes place at least on an annual basis to ensure the plan's efficiency and relevance.	
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

3. APPENDICES – ENABLING SECTORS

G. INFORMATION AND COMMUNICATION

G.1. Bases for setting TSC

Environmental Objective 1: Climate Change Mitigation

Tier	Description / Definition
Tier 1 (Green)	1. TSC are aimed at Activities that enable defined GHG emissions reductions, which reference credible, 1.5°C-aligned science-based pathways, as aligned with the Paris Agreement; AND 2. It has been assessed for the following sub-sectors: a. Programming and broadcasting Activities, where these Activities can enable GHG emissions reductions by facilitating the dissemination of information and awareness related to Climate Change Mitigation; OR b. Computer programming and software, where these Activities can enable GHG emissions reductions by developing and deploying innovative technologies that improve energy efficiency, reduce waste, and promote sustainable practices; OR c. Data-driven solutions including IT/OT solutions, where these solutions can enable GHG emissions reductions across various sectors by optimising energy use, improving resource efficiency, and facilitating the transition to renewable energy sources; OR d. Data processing, hosting and related Activities, including web portals, where facilities meet best-practice efficiency thresholds (PUE), maintain water efficiency within recognised WUE limits, use refrigerants with low climate impact or comply with strict leakage controls, and achieve advanced certification under credible national or international GBC; AND 3. It has been assessed that the Activity demonstrates the following level of greenness: a. Transformative innovations; OR b. Broad scope; OR c. Strong integration; OR d. Technological efficiency; OR e. Advanced data analytics.
Tier 2 (Amber T2)	1. It has been assessed for the following sub-sector: a. Data processing, hosting and related Activities, including web portals, where facilities operate in line with transitional efficiency benchmarks (PUE) differentiated by data centre size, apply transitional WUE limits, use refrigerants with low climate impact or robust leakage controls, and achieve advanced certification under credible national or international GBC schemes, subject to independent verification and periodic re-certification.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

Environmental Objective 2: Climate Change Adaptation

Tier	Description / Definition
Tier 1 (Green)	1. TSC are aimed at Activities which meet the following criteria: a. Activity where measures have been implemented to ensure its own resilience to climate change and thereby contribute to overall local, national or regional resilience; OR b. Activities enable other Activities to increase resilience to climate change; AND 2. It has been assessed for the following sub-sectors: a. Programming, where these Activities can enable Climate Change Adaptation by facilitating the dissemination of information and awareness related to Climate Change Adaptation; OR b. Broadcasting, where the Activity can enable the climate resilience of broadcasting infrastructure; AND 3. It has been assessed that the Activity demonstrates the following level of greenness: a. Comprehensive; OR b. Significant impact; OR c. High impact advocacy.
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

Environmental Objective 3: Protection of Healthy Ecosystems and Biodiversity

Tier	Description / Definition
Tier 1 (Green)	1. TSC are aimed at Activities that enable other Activities to enhance their environmental sustainability and minimise their negative impacts on biodiversity, thereby contributing to the protection of healthy ecosystems; AND 2. It has been assessed that the Activity demonstrates the following level of greenness: a. Significant enabling of biodiversity conservation; OR b. Supporting conservation research and innovation.
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

Environmental Objective 4: Resource Resilience and the Transition to a Circular Economy

Tier	Description / Definition
Tier 1 (Green)	1. TSC are aimed at Activities that enable other Activities to transition towards a circular economy by promoting resource efficiency, minimising waste generation, and maximising resource recovery and reuse, thereby contributing to resource resilience; AND 2. It has been assessed that the Activities demonstrates strong circular economy integration.
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

Any Activity which is dedicated to the enablement of an Activity listed in Appendix A of the ASEAN Taxonomy Main Report (Activities Classified Red) is also automatically classified as Red.

G.2. Current, Future TSC and Review Programmes

The TSC in this sector are enduring as defined in Section 1.4 except for Activity 631[001] Data processing, hosting and related activities; web portals, which is review date pre-set, in accordance with Annex 6.

G.3. Definitions of terms used in these TSC

To avoid ambiguity, certain terms used in this TSC are defined here.

Substantial Contribution refers to:

- For EO1: the enablement of emissions reduction through associated focus sector Activities that directly contribute to the EO. This can be demonstrated through quantitative or qualitative evidence.
- For EO2: the enablement of climate change adaptation and resilience through associated focus sector Activities that directly contribute to the EO. This can be demonstrated through quantitative or qualitative evidence.
- For EO3: the enablement of ecosystem protection and biodiversity conservation through associated focus sector Activities that directly contribute to the EO. This can be demonstrated through quantitative or qualitative evidence.
- For EO4: the enablement of resource resilience and the transition to a circular economy through associated focus sector Activities that directly contribute to the EO. This can be demonstrated through quantitative or qualitative evidence.

The following terms used in this Appendix are defined as follows:

Term	Meaning as they are used in the context of this sector
Best available science	Most current, peer-reviewed scientific knowledge and international best practices used as benchmarks for assessing the contribution to the EO.
Better performance	Improved effectiveness, efficiency, or impact of solutions, technologies, products, processes, or business models that enhance the EO. It involves achieving superior outcomes, such as greater ecological benefits or increased resilience, compared to existing standards.
Convention on Biological Diversity (CBD) Guidelines	Internationally recognised standards and recommendations for biodiversity conservation and ecosystem management, as outlined by the Convention on Biological Diversity. They provide a framework for ensuring activities align with best practices to protect and sustain healthy ecosystems and biodiversity.
Critical for broader commercialisation	Significant cost advantages provided by technologies that enable wider adoption and market uptake of activities classified as Green. These advantages accelerate the transition to a greener economy by making emission-reducing solutions more economically viable and scalable.
Improved solutions	Enhanced or newly developed technologies, products, processes, or business models, including nature-based solutions, that increase the effectiveness or efficiency of Activities which contribute to the EO. These solutions build on existing Green activities to deliver superior outcomes, such as better ecological impact or cost-effectiveness.
International Union for Conservation of Nature (IUCN) Red List	Globally recognised framework and criteria for assessing the conservation status of species to guide biodiversity protection efforts. It provides a standardised approach to identifying at-risk species, supporting the objectives of the EO through informed ecosystem management and conservation practices.
Significant advantages	Substantial benefits, such as lower costs or enhanced feasibility, provided by low- or lower-emission alternatives compared to existing technologies or solutions. These benefits support the objectives of the EO by facilitating broader adoption and scalability of decarbonisation efforts in high-emitting sectors.
Technical consultations	Specialised advisory services, such as energy consultations, simulations, project management, and dedicated training sessions, aimed at enhancing the energy performance of industries. These services support the objectives of the EO by providing expertise to improve efficiency and reduce energy consumption in industrial processes.
Widespread implementation	Broad adoption and accessibility of technologies or practices that enhance climate adaptation and resilience across communities and infrastructure. It is facilitated by significant cost advantages, enabling scalable deployment to support the objectives of the EO in strengthening long-term resilience to climate change impacts.

G.4. TSC for Information and Communication

60[001] Programming and broadcasting activities

Activity Notes

- Programming includes:
 - Creating content or acquiring the rights to distribute content and subsequently broadcasting that content, such as radio, television, internet and data programming.
 - Examples of content creation may include, but are not necessarily limited to:
 - a. Early warning and alert systems;
 - b. Educational and informative programming;
 - c. Community engagement and capacity building content.
- Broadcasting includes:
 - Broadcasting performed using different technologies, e.g., over-the-air, via satellite, via a cable network or via internet.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Programming: a. The Activity supports the development, deployment, operation, and use of information to enable GHG emissions reduction. This includes information aimed at improving energy efficiency and reducing the carbon footprint of focus sector Activities.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Programming: a. The Activity supports the development, deployment, operation, and use of information to enable climate adaptation and resilience; OR 2. Broadcasting: a. The Activity supports the development, deployment, operation, and effective use of broadcasting infrastructure that substantially reduces the most important physical climate risks that are material to that Activity; AND b. The Activity enables communities to receive timely and accurate climate-related information; thereby improving their ability to respond to climate risks; AND c. The Activity incorporates infrastructure climate resilience in new and existing broadcasting infrastructure projects; AND	Enduring

	d. The Activity applies methodologies and data that are consistent with the requirements of a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3.	
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Programming: a. The Activity supports the development, deployment, operation, and use of information to enable the protection of healthy ecosystems and biodiversity.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO4: Resource Resilience and the Transition to a Circular Economy TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Programming a. The Activity supports the development, deployment, operation, and use of information to contribute to resource resilience and the transition to a circular economy.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Not relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Not relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Not relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Not relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Not relevant	Annex 2, Section 4.4
EO3	Impact on Air	Not relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Not relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Not relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Not relevant	Annex 2, Section 5

620[001] Computer programming and software

Activity Notes

- Includes:
 - Providing expertise in the field of information technologies: writing, modifying, testing and supporting software; planning and designing computer systems that integrate computer hardware, software and communication technologies;
 - On-site management and operation of clients' computer systems or data processing facilities; and
 - Other professional and technical computer-related Activities.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Computer programming and software for GHG emission reductions are considered to make a substantial contribution to Climate Change Mitigation through the lifecycle emissions reductions they enable in emissions-related processes; AND 2. The Activity enables a focus sector Activity to be consistent with standards and guidelines on Climate Change Mitigation, such as the calculation of GHG emissions using the ISO 14064 series, as well as relevant national and international climate policies and regulations.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Computer programming and software are considered to make a substantial contribution to climate change adaptation and resilience; AND 2. The Activity enables a focus sector Activity to apply methodologies and data that are consistent with the requirements of a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Computer programming and software are considered to make a substantial contribution to biodiversity conservation; AND	Enduring

	2. The Activity enables a focus sector Activity to apply methodologies and data that are consistent with standards and guidelines on biodiversity conservation and ecosystem management, including ISO 14001 on environmental management systems, the Convention on Biological Diversity (CBD) guidelines, and the IUCN Red List criteria.	
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO4: Resource Resilience and the Transition to a Circular Economy TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Computer programming and software are considered to make a substantial contribution to resource efficiency and circularity; AND 2. The Activity enables a focus sector Activity to apply methodologies and data that are consistent with the requirements of lifecycle assessments, material flow analyses, and resource efficiency strategies, as well as the best available science for circular economy transitions and related methodologies in line with the most recent scientific peer-reviewed publications and international best practices.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Not relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Not relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Not relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Not relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Not relevant	Annex 2, Section 4.4
EO3	Impact on Air	Not relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Not relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Not relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Not relevant	Annex 2, Section 5

620[002] Data-driven solutions including IT/OT solutions

Activity Notes

- Includes:
 - Manufacture, development, installation, deployment, maintenance, repair, or provision of professional services, including technical consulting for design, monitoring, or control of software and information technology (IT) or operational technology (OT) systems, including artificial intelligence (AI)-based solutions, such as for automated machine learning. These systems may be designed for:
 - a. Remotely collecting, processing, transferring, and storing data from equipment, products, or infrastructure during their use or operation;
 - b. Analysing data and generating insights about the operational performance, condition, and efficiency of the equipment, product, or infrastructure;
 - c. Providing remote maintenance, control, and recommendations about necessary measures to avoid operational failure, optimise performance, and prolong the useful life of equipment, products, or infrastructure, thereby reducing resource use and waste;
 - d. Implementing automated control functions to adjust operational parameters dynamically, enhance system efficiency, and improve safety and reliability based on real-time data and predictive insights.
- IT solutions may include, but are not necessarily limited to, methodologies and data which enable environmental monitoring, analysis, and control, consistent with standards and guidelines such as:
 - ISO 14001:
 - Environmental Management Systems (EMS) software to track, monitor, and report on environmental performance;
 - Data analytics to identify areas for improvement in resource efficiency and waste reduction.
 - CBD guidelines:
 - Geographic Information Systems (GIS) to map and analyse biodiversity data
 - IUCN Red List criteria
 - Web-based tools for data submission, review, and publication of Red List assessments.
- OT solutions may include, but are not necessarily limited to, methodologies and data which enable environmental monitoring, analysis, and control, consistent with standards and guidelines such as:
 - ISO 14001:
 - Sensor networks to monitor emissions, energy consumption, and waste generation in real-time.
 - CBD guidelines:
 - Remote sensing technologies (e.g., drones, satellite imagery) to monitor habitat changes and biodiversity.
 - IUCN Red List criteria:
 - Field data collection tools (e.g., mobile apps, GPS devices) to improve the accuracy and efficiency of species monitoring.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Data-driven solutions including IT/OT solutions for GHG emission reductions are considered to make a substantial contribution to Climate Change Mitigation through the lifecycle emissions reductions they enable in emissions-related processes; AND 2. The Activity enables a focus sector Activity to be consistent with standards and guidelines on Climate Change Mitigation, such as the calculation of GHG emissions using the ISO 14064 series, as well as relevant national and international climate policies and regulations.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Data-driven solutions including IT/OT solutions for climate adaptation are considered to make a substantial contribution to climate change adaptation and resilience; AND 2. The Activity enables a focus sector Activity to apply methodologies and data that are consistent with the requirements of a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Data-driven solutions including IT/OT solutions for ecosystem protection and biodiversity conservation are considered to make a substantial contribution to biodiversity conservation; AND 2. The Activity enables a focus sector Activity to apply methodologies and data that are consistent with standards and guidelines on biodiversity conservation and ecosystem management, including for example ISO 14001 on environmental management systems, the Convention on Biological Diversity (CBD) guidelines, and the IUCN Red List criteria.	Enduring

Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO4: Resource Resilience and the Transition to a Circular Economy TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Data-driven solutions including IT/OT solutions for resource resilience and the circular economy are considered to make a substantial contribution to resource efficiency and circularity; AND 2. The Activity enables a focus sector Activity to apply methodologies and data that are consistent with the requirements of lifecycle assessments, material flow analyses, and resource efficiency strategies, the best available science for circular economy transitions and related methodologies in line with the most recent scientific peer-reviewed publications and international best practices.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Not relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Not relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Not relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Not relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Not relevant	Annex 2, Section 4.4
EO3	Impact on Air	Not relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Not relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Not relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Not relevant	Annex 2, Section 5

631[001] Data processing, hosting and related activities; web portals

Activity Notes

- Includes
 - Storage, manipulation, management, movement, control, display, switching, interchange, transmission or processing of data through data centres, including edge computing.
- Definitions:
 - Annualised operational Power Usage Effectiveness (PUE) is a measure of the energy efficiency of a data centre over a year. It is calculated by dividing the total energy consumed by the data centre by the energy consumed by the IT equipment. A lower PUE indicates better energy efficiency.
 - Water Usage Effectiveness (WUE) is a measure of a data centre's water efficiency, expressed as the volume of water consumed per unit of IT energy load (e.g., m³/MWh/year).
 - Global Warming Potential (GWP) is a measure of how much heat a greenhouse gas traps in the atmosphere compared to carbon dioxide (CO₂), over a specific time period (usually 100 years). CO₂ has a GWP of 1. Gases with higher GWPs contribute more to global warming. A GWP limit indicates that the refrigerants used in data centre cooling should have a GWP that is no more than 675 times that of CO₂. This is to minimise the cooling system's contribution to global warming.
 - Newly designed data centre: This term may apply to a data centre built entirely from scratch or an existing data centre that undergoes retrofitting, materially altering its primary operating parameters (e.g., PUE).

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	The Activity complies with the following criteria ((1), (2) OR (3)) AND criteria (4), (5), (6) AND (7). 1. For large sized data centres with >20 MW power capacity: a. For newly designed facilities, the design PUE to refer to the corresponding IT load: i. 1.28 at 100% IT load; ii. 1.39 at 25% IT load; OR b. For existing facilities, the annualised operational PUE should be less than 1.3; OR 2. For medium sized data centres with 1 - 20 MW power capacity: a. For newly designed facilities, the design PUE to refer to the corresponding IT load: i. 1.35 at 100% IT load; ii. 1.50 at 25% IT load; OR b. For existing facilities, the annualised operational PUE should be less than 1.4; OR 3. For small sized data centres with <1 MW power capacity: a. For newly designed facilities, the design PUE to refer to the corresponding IT load: i. 1.45 at 100% IT load;	Review date pre-set (see Annex 6).

	ii. 1.6 at 25% IT load; OR b. For existing facilities, the annualised operational PUE should be less than 1.5; AND 4. With respect to refrigerants used in the data centre cooling system: a. GWP must not exceed 675; OR b. Cooling system must incorporate leak prevention measures, achieving an annual refrigerant leakage rate of less than 2% of total charge, verified through ISO 5149-compliant design, installation, and maintenance practices; AND 5. If the project includes the construction of a newly designed facility or retrofit of existing buildings, the facility must achieve an advanced level of certification from a credible national or international Green Building Certification (GBC) scheme as defined in Section B.3 of this Annex; AND 6. The implementation of those practices is verified by an independent third-party and audited at least every three years. Re-certification has to be obtained every three years; AND 7. The WUE of the data centres should be no more than 2.0 m³/MWh/year.	
Tier 2 (Amber T2)	Until 31 December 2040, the Activity complies with the following criteria ((1), (2) OR (3)) AND criteria (4), (5), (6), AND (7). 1. For large sized data centres with >20 MW power capacity: a. For newly designed facilities, the design PUE to refer to the corresponding IT load: i. 1.35 at 100% IT load; ii. 1.46 at 25% IT load; OR b. For existing facilities, the annualised operational PUE should be less than 1.4; OR 2. For medium sized data centres with 1 - 20 MW power capacity: a. For newly designed facilities, the design PUE to refer to the corresponding IT load: i. 1.45 at 100% IT load; ii. 1.55 at 25% IT load; OR b. For existing facilities, the annualised operational PUE should be less than 1.5; OR 3. For small sized data centres with <1 MW power capacity: a. For newly designed facilities, the design PUE to refer to the corresponding IT load: i. 1.55 at 100% IT load; ii. 1.65 at 25% IT load; OR b. For existing facilities, the annualised operational PUE should be less than 1.6; AND	

	4. With respect to refrigerants used in the data centre cooling system: a. GWP must not exceed 675; OR b. Cooling system must incorporate leak prevention measures, achieving an annual refrigerant leakage rate of less than 2% of total charge, verified through ISO 5149-compliant design, installation, and maintenance practices; AND 5. If the project includes the construction of a newly designed facility or retrofit of existing buildings, the facility must achieve certification from a credible national or international Green Building Certification (GBC) scheme as defined in Section B.3 of this Annex; AND 6. The implementation of those practices is verified by an independent third-party and audited at least every three years. Re-certification has to be obtained every three years; AND 7. The WUE of the data centres should be no more than 2.3 m³/MWh/year.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

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H. PROFESSIONAL, SCIENTIFIC AND TECHNICAL ACTIVITIES

H.1. Bases for setting TSC

Environmental Objective 1: Climate Change Mitigation

Tier	Description / Definition
Tier 1 (Green)	1. TSC are aimed at Activities that enable: - Defined GHG emissions reductions, which refer to credible, 1.5°C-aligned science-based pathways, as aligned with the Paris Agreement; OR - The decarbonisation of high-emitting sectors through credible and time-bound transition plans that are aligned or aligning with science-based pathways in accordance with the ASEAN Transition Finance Guidance (ATFG).
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

Environmental Objective 2: Climate Change Adaptation

Tier	Description / Definition
Tier 1 (Green)	1. TSC are aimed at Activities where measures have been implemented to ensure own resilience to climate change and thereby contribute to overall local, national or regional resilience; OR 2. Activity enables other Activities to increase resilience to climate change; AND 3. It has been assessed that the Activity demonstrates the following level of greenness: - Comprehensive; OR - Significant impact; OR - High impact advocacy
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

Environmental Objective 3: Protection of Healthy Ecosystems and Biodiversity

Tier	Description / Definition
Tier 1 (Green)	1. TSC are aimed at Activities that enable other Activities to enhance their environmental sustainability and minimise their negative impacts on biodiversity, thereby contributing to the protection of healthy ecosystems; AND 2. It has been assessed that Activity demonstrates the following level of greenness: - Significant enabling of biodiversity conservation; - Supporting conservation research and innovation.
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

Environmental Objective 4: Resource Resilience and the Transition to a Circular Economy

Tier	Description / Definition
Tier 1 (Green)	1. TSC are aimed at Activities that enable other Activities to transition towards a circular economy by promoting resource efficiency, minimising waste generation, and maximising resource recovery and reuse, thereby contributing to resource resilience; AND 2. It has been assessed that the Activity demonstrates strong circular economy integration.
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

Any Activity which is dedicated to the enablement of an Activity listed in Appendix A of the ASEAN Taxonomy Main Report (Activities Classified Red) is also automatically classified as Red.

H.2. Current, Future TSC and Review Programmes

The TSC in this sector are enduring as defined in Section 1.4.

H.3. Definitions of terms used in these TSC

To avoid ambiguity, certain terms used in this TSC are defined here.

Substantial Contribution refers to:

- For EO1: the enablement of emissions reductions through associated focus sector Activities that directly contribute to the EO. This can be demonstrated through quantitative or qualitative evidence.
- For EO2: the enablement of climate change adaptation and resilience through associated focus sector Activities that directly contribute to the EO. This can be demonstrated through quantitative or qualitative evidence.
- For EO3: the enablement of ecosystem protection and biodiversity conservation through associated focus sector Activities that directly contribute to the EO. This can be demonstrated through quantitative or qualitative evidence.
- For EO4: the enablement of resource resilience and transition to a circular economy through associated focus sector Activities that directly contribute to the EO. This can be demonstrated through quantitative or qualitative evidence.

The following terms used in this Appendix have the meanings shown below.

Term	Meaning as they are used in the context of this sector
Better performance	Improved effectiveness, efficiency, or impact of solutions, technologies, products, processes, or business models that enhance the EO. It involves achieving superior outcomes, such as greater ecological benefits or increased resilience, compared to existing standards.
Convention on Biological Diversity (CBD) Guidelines	Internationally recognised standards and recommendations for biodiversity conservation and ecosystem management, as outlined by the Convention on Biological Diversity. They provide a framework for ensuring activities align with best practices to protect and sustain healthy ecosystems and biodiversity.

Critical for broader commercialisation	Significant cost advantages provided by technologies that enable wider adoption and market uptake of activities classified as Green. These advantages accelerate the transition to a greener economy by making emissions-reducing solutions more economically viable and scalable.
Ellen MacArthur Foundation's principles for a circular economy	Principles for a circular economy which emphasise designing products and systems to eliminate waste and pollution, maximise the reuse and recycling of materials, and restore natural ecosystems, fostering a sustainable economy that minimises resource depletion and environmental harm.
Improved solutions	Enhanced or newly developed technologies, products, processes, or business models, including nature-based solutions, that increase the effectiveness or efficiency of Activities which contribute to the EO. These solutions build on existing Green activities to deliver superior outcomes, such as better ecological impact or cost-effectiveness.
International Union for Conservation of Nature (IUCN) Red List	Globally recognised framework and criteria for assessing the conservation status of species to guide biodiversity protection efforts. It provides a standardised approach to identifying at-risk species, supporting the objectives of the EO through informed ecosystem management and conservation practices.
Less immediate or dramatic gains	Modest or gradual improvements in resource efficiency or circularity offered by certain technologies or practices compared to established alternatives. These approaches, while less transformative in the short term, support the objectives of the EO by enabling broader adoption through significant cost advantages.
Lower immediate emission reduction capabilities	Technologies that achieve less significant greenhouse gas emission reductions in the short term compared to established alternatives. These technologies support the objectives of the EO by offering significant cost advantages that enable broader commercialisation and adoption, accelerating the transition to a greener economy.
Lower-emission alternatives	Technologies or practices that achieve reduced greenhouse gas emissions compared to conventional options, though they may offer less immediate or significant reductions than other established solutions. These alternatives support the objectives of the EO by providing significant cost advantages that facilitate broader commercialisation and adoption, contributing to a greener economy.
Nature-based solutions	Solutions harnessing and enhancing natural ecosystems, nature-based solutions tackle societal challenges like climate change, biodiversity loss, and water management by protecting, restoring, or sustainably managing environments to deliver benefits for both people and nature.
Potentially offering less immediate or dramatic improvements.	Technologies or practices that provide more gradual or modest enhancements in climate resilience compared to established alternatives. These approaches support the objectives of the EO by enabling broader adoption through significant cost advantages, contributing to long-term community and infrastructure resilience to climate change impacts.
Significant advantages	Substantial benefits, such as lower costs or enhanced feasibility, provided by low- or lower-emission alternatives compared to existing

	technologies or solutions. These benefits support the objectives of the EO by facilitating broader adoption and scalability of decarbonisation efforts in high-emitting sectors.
Significant cost advantages	See above.
Technical consultations	Specialised advisory services, such as energy consultations, simulations, project management, and dedicated trainings, aimed at enhancing the energy performance of industries. These services support the objectives of the EO by providing expertise to improve efficiency and reduce energy consumption in industrial processes.
Widespread implementation	Broad adoption and accessibility of technologies or practices that enhance climate adaptation and resilience across communities and infrastructure. It is facilitated by significant cost advantages, enabling scalable deployment to support the objectives of the EO in strengthening long-term resilience to climate change impacts.

H.4. TSC for Professional, Scientific and Technical Activities

702[001] Management consultancy for environmental-related services

Activity Notes

- Includes:
 - The provision or contracting of consultancy Activities enabling businesses or organisations to obtain environment-related services including service provision across the ESG value chain;
 - Consultancy, risk and impact assessment, reporting, assurance services, and the development of rating tools.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The provision or contracting of consultancy Activities enabling businesses or organisations to obtain environmental-related services including service providers across the ESG value chain, including consultancy, risk and impact assessment, reporting, assurance services, and the development of rating tools. Services included in this enabling Activity may include, but are not necessarily limited to: a. Carbon footprint analysis and reduction strategies; b. Energy efficiency audits and optimisation; c. Renewable energy integration and planning; d. Sustainable transportation solutions; e. Green building design and certification; f. Climate change mitigation policy advisory; g. Emission reduction project development; h. Corporate climate strategy development; i. Carbon offset and trading advisory; j. Sustainable supply chain management; AND 2. The enabling Activity supports the development, deployment, operation, and effective use of information, technology, or capacity to enable GHG emissions reduction; AND 3. The enabling Activity enables a focus sector Activity to be consistent with: a. Best practice and available guidance on Climate Change Mitigation, in line with the most recent scientific peer-reviewed publications, international best practices, and available databases; AND b. Standards and guidelines on Climate Change Mitigation, such as the calculation of GHG emissions using the ISO 14064 series, as well as relevant national and international climate policies and regulations.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	

Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The provision or contracting of consultancy Activities enabling businesses or organisations to obtain environmental-related services including service providers across the ESG value chain, including consultancy, risk and impact assessment, reporting, assurance services, and the development of rating tools. Services included in this enabling Activity may include, but are not necessarily limited to: a. Climate risk and vulnerability assessments; b. Resilience planning and implementation; c. Water resource management and adaptation; d. Infrastructure and built environment resilience advisory; e. Ecosystem-based adaptation strategy development; f. Climate adaptation policy and governance advisory; g. Climate adaptation strategy consulting; h. Business continuity and disaster recovery planning consulting; i. Climate adaptation financing and investment strategy advisory; j. Climate-smart agriculture and food security; AND 2. The enabling Activity supports the development, deployment, operation, and effective use of information, technology, or capacity to enable climate adaptation and resilience; AND 3. The enabling Activity enables a focus sector Activity to be consistent with the requirements of a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The provision or contracting of consultancy Activities enabling businesses or organisations to obtain environmental-related services including service providers across the ESG value chain, including consultancy, risk and impact assessment, reporting, assurance services, and the development of rating tools. Services included in this enabling Activity may include, but are not necessarily limited to:	Enduring

	a. Environmental and social impact assessments (ESIA); b. Biodiversity and ecosystem services assessments; c. Habitat restoration and conservation planning; d. Wildlife and endangered species management; e. Invasive species control and management; f. Sustainable land use and landscape planning; g. Ecological monitoring and reporting; h. Natural resource management and conservation; i. Environmental impact mitigation strategies; j. Marine and coastal ecosystem management; AND 2. The enabling Activity supports the development, deployment, operation, and effective use of information, technology, or capacity to enable the protection of healthy ecosystems and biodiversity; AND 3. The enabling Activity enables a focus sector Activity to be consistent with: a. Best practice and available guidance for biodiversity conservation and ecosystem management, in line with the most recent scientific peer-reviewed publications, international best practices, and available databases; AND b. Standards and guidelines on biodiversity conservation and ecosystem management such as ISO14001 on environmental management systems, the Convention on Biological Diversity (CBD) guidelines, and the International Union for Conservation of Nature (IUCN) Red List criteria.	
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO4: Resource Resilience and the Transition to a Circular Economy TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The provision or contracting of consultancy Activities enabling businesses or organisations to obtain environmental-related services including service providers across the ESG value chain, including consultancy, risk and impact assessment, reporting, assurance services, and the development of rating tools. Services included in this enabling Activity may include, but are not necessarily limited to: a. Material flow analysis (MFA) and mapping; b. Waste stream characterisation and valorisation assessments; c. Circular product design and development planning; d. Lifecycle assessment (LCA) services; e. Industrial symbiosis and by-product exchange facilitation;	Enduring

	f. Sustainable material sourcing and supply chain optimisation; g. Resource efficiency auditing and performance monitoring; h. Circular economy infrastructure development and planning; i. Circular economy implementation and mitigation strategies; j. Extended producer responsibility (EPR) and product stewardship planning; AND 2. The enabling Activity supports the development, deployment, operation, and effective use of information, technology, or capacity contribution to resource resilience and the transition to a circular economy; AND 3. The enabling Activity enables a focus sector Activity to be consistent with: a. Best practice and available guidance on lifecycle assessment, material flow analysis, resource efficiency, and circular economy transitions; AND b. The most recent scientific peer-reviewed publications, international best practices, and available databases; AND c. Standards and guidelines on resource management, circular economy, and waste management, such as ISO 14040, ISO 14044, ISO 14001, and the Ellen MacArthur Foundation's principles for a circular economy.	
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Not relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Not relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Not relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Not relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Not relevant	Annex 2, Section 4.4
EO3	Impact on Air	Not relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Not relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Not relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Not relevant	Annex 2, Section 5

711[001] Engineering activities and related technical consultancy for environmental-related services

Activity Notes

- Includes:
 - Engineering activities and related technical consultancy dedicated to environmental-related services.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Engineering Activities and related technical consultancy dedicated to environmental-related services. Services included in this enabling Activity may include, but are not necessarily limited to following services in as much: a. Engineering design and development; b. Technical consulting and advisory; c. Project management and execution; d. Construction and infrastructure services; e. Environmental and sustainability consulting; f. Energy and utilities consulting; g. Automation and industrial engineering; h. Testing, inspection and certification; i. Maintenance and asset management; j. IT and digital engineering solutions; AND Activity meets criteria (2) AND (3) AND ((4.a) OR (4.b)) 2. The enabling Activity supports the development, deployment, operation, and effective use of information, technology, or capacity to enable GHG emissions reduction; AND 3. The enabling Activity enables a focus sector Activity to be consistent with standards and guidelines on Climate Change Mitigation, such as the calculation of GHG emissions using the ISO 14064 series, as well as relevant national and international climate policies and regulations; AND 4. The enabling Activity enables a focus sector Activity to adopt technologies that: a. Exhibit improved GHG emissions reduction compared to current established alternatives; OR b. Provide significant cost advantages that are critical for making focus sector Activity more economically viable for broader commercialisation and widespread adoption.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Engineering Activities and related technical consultancy dedicated to environmental-related services. Services included in this enabling Activity may include, but are not necessarily limited to: a. Flood defence system design and engineering; b. Water resource engineering for drought and flood management; c. Coastal erosion protection and stabilisation engineering; d. Climate-adaptive building design and retrofitting; e. Stormwater management and drainage system engineering; f. Climate-resilient transportation infrastructure engineering; g. Ecosystem restoration and engineering for climate adaptation; h. Climate data analysis and modelling for engineering applications; i. Climate-resilient material selection and testing; AND - Activity meets criteria (2) AND (3) AND ((4.a) OR (4.b)) 2. The enabling Activity supports the development, deployment, operation, and effective use of information, technology, or capacity to enable climate adaptation and resilience; AND 3. The enabling Activity enables a focus sector Activity to be consistent with the requirements of a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3; AND 4. The enabling Activity enables a focus sector Activity to adopt technologies that: a. Exhibit improved climate adaptation and resilience compared to current established alternatives; OR b. Provide significant cost advantages that are critical for making focus sector Activity more economically viable for broader commercialisation and widespread adoption.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Engineering activities and related technical consultancy dedicated to environmental-related services. Services included in this enabling Activity may include, but are not necessarily limited to following services in as much: a. Engineering design and development; b. Technical consulting and advisory; c. Project management and execution; d. Construction and infrastructure services; e. Environmental and sustainability consulting; f. Energy and utilities consulting; g. Automation and industrial engineering; h. Testing, inspection and certification; i. Maintenance and asset management; j. IT and digital engineering solutions; AND Activity meets criteria (2) AND (3) AND ((4.a) OR (4.b)) 2. The enabling Activity supports the development, deployment, operation, and effective use of information, technology, or capacity to enable the protection of healthy ecosystems and biodiversity; AND 3. The enabling Activity enables a focus sector Activity to be consistent with a. Best practice and available guidance for biodiversity conservation and ecosystem management, in line with the most recent scientific peer-reviewed publications, international best practices, and available databases; AND b. Standards and guidelines on biodiversity conservation and ecosystem management such as ISO14001 on environmental management systems, the Convention on Biological Diversity (CBD) guidelines, and the International Union for Conservation of Nature (IUCN) Red List of Threatened Species; AND 4. The enabling Activity enables a focus sector Activity to adopt technologies that a. Exhibit improved ecosystem health or biodiversity compared to current established alternatives; OR b. Provide significant cost advantages that are critical for making focus sector Activity more economically viable for broader commercialisation and widespread adoption.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO4: Resource Resilience and the Transition to a Circular Economy TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Engineering Activities and related technical consultancy dedicated to environmental-related services. Services included in this enabling Activity may include, but are not necessarily limited to following services in as much: a. Engineering design and development; b. Technical consulting and advisory; c. Project management and execution; d. Construction and infrastructure services; e. Environmental and sustainability consulting; f. Energy and utilities consulting; g. Automation and industrial engineering; h. Testing, inspection and certification; i. Maintenance and asset management; j. IT and digital engineering solution; AND - Activity meets criteria (2) AND (3) AND ((4.a) OR (4.b)) 2. The enabling Activity supports the development, deployment, operation, and effective use of information, technology, or capacity contribution to resource resilience and the transition to a circular economy; AND 3. The enabling Activity enables a focus sector Activity to be consistent with: a. Best practice and available guidance on lifecycle assessment, material flow analysis, resource efficiency, and circular economy transitions; AND b. The most recent scientific peer-reviewed publications, international best practices, and available databases; AND c. Standards and guidelines on resource management, circular economy, and waste management, such as ISO 14040, ISO 14044, ISO 14001, and the Ellen MacArthur Foundation's principles for a circular economy; AND 4. The enabling Activity enables a focus sector Activity to adopt technologies that: a. Exhibit improvement in resource efficiency or circularity compared to current established alternatives; OR b. Provide significant cost advantages that are critical for making focus sector Activity more economically viable for broader commercialisation and widespread adoption.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Not relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Not relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Not relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Not relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Not relevant	Annex 2, Section 4.4
EO3	Impact on Air	Not relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Not relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Not relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Not relevant	Annex 2, Section 5

711[002] Professional services related to energy performance of industries

Activity Notes

- Includes:
 - Professional services related to energy performance of industries.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The Activity consists of one of the following: a. Technical consultations, such as: i. Energy consultations; ii. Energy simulations; iii. Project management; iv. Production of energy performance contracts; OR v. Dedicated training) linked to the improvement of energy performance of industries; OR b. Accredited energy audits and building performance assessments; OR c. Energy management services; OR d. Energy performance contracts; OR e. Energy services provided by energy service companies (ESCOs).	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Not relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Not relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Not relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Not relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Not relevant	Annex 2, Section 4.4
EO3	Impact on Air	Not relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Not relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Not relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Not relevant	Annex 2, Section 5

721[001] Close to market research, development and innovation

Activity Notes

- Includes:
 - Research, applied research, and experimental development (R&D) of solutions, processes, technologies, business models, and other products dedicated to Climate Change Mitigation; Climate Change Adaptation; Protection of Healthy Ecosystems and Biodiversity; Resource Resilience and the Transition to a Circular Economy in the target economic Activities have at least been demonstrated in a relevant environment, corresponding to at least a fully functional prototype or representative model.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	Activity meets (1) AND (2) AND ((3.a) OR (3.b)) 1. The enabling Activity researches, innovates, or develops solutions, technologies, products, processes, or business models, including nature-based solutions to enable GHG emissions reduction; AND 2. The enabling Activity enables a focus sector Activity to be consistent with standards and guidelines on Climate Change Mitigation, such as the calculation of GHG emissions using the ISO 14064 series, as well as relevant national and international climate policies and regulations; AND 3. The enabling Activity enables a focus sector Activity to adopt technologies which may potentially meet the following criteria: a. Exhibit improved lifecycle GHG emissions reduction compared to current established alternatives; OR b. Provide significant cost advantages that are critical for making focus sector Activity more economically viable for broader commercialisation and widespread adoption.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	Activity meets criteria (1) AND (2) AND ((3.a) OR (3.b)) 1. The enabling Activity researches, innovates, or develops and introduces new or improved solutions, technologies, products, processes, or business models, including nature-based solutions, to enable climate adaptation and resilience; AND 2. The enabling Activity enables a focus sector Activity to be consistent with the requirements of a Climate Risk and	Enduring

	Vulnerability Assessment (CRVA) as described in Annex 3; AND 3. The enabling Activity enables a focus sector Activity to adopt technologies which may meet the following criteria: a. Exhibit improved climate adaptation and resilience compared to current established alternatives; OR b. Provide significant cost advantages that are critical for making focus sector Activity more economically viable for broader commercialisation and widespread adoption.	
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	Activity meets criteria (1) AND (2) AND (3) AND ((4.a OR 4.b)) 1. The enabling Activity researches, innovates, or develops and introduces new or improved solutions, technologies, products, processes, or business models, including nature-based solutions, to enable the protection of healthy ecosystems and biodiversity; AND 2. The enabling Activity enables enhancement of biodiversity conservation and ecosystem restoration by introducing new or improved solutions, technologies, products, processes, or business models, including nature-based solutions; AND 3. The enabling Activity enables a focus sector Activity to be consistent with: a. Best practice and available guidance for biodiversity conservation and ecosystem management, in line with the most recent scientific peer-reviewed publications, international best practices, and available databases; AND b. Standards and guidelines on biodiversity conservation and ecosystem management such as ISO 14001 on environmental management systems, the Convention on Biological Diversity (CBD) guidelines, and the International Union for Conservation of Nature (IUCN) Red List of Threatened Species; AND 4. The enabling Activity enables a focus sector Activity to adopt technologies which may potentially meet the following criteria: a. Exhibit improved ecosystem health or biodiversity compared to current established alternatives; OR b. Provide significant cost advantages that are critical for making focus sector Activity more economically viable for broader commercialisation and widespread adoption.	Enduring

Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO4: Resource Resilience and the Transition to a Circular Economy TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	Activity meets criteria (1) AND (2) AND ((3.a) OR (3.b)) 1. The enabling Activity researches, innovates, or develops solutions, technologies, products, processes, or business models for resource resilience and the transition to a circular economy; AND 2. The enabling Activity enables a focus sector Activity to be consistent with: a. Best practice and available guidance on lifecycle assessment, material flow analysis, resource efficiency, and circular economy transitions; AND b. The most recent scientific peer-reviewed publications, international best practices, and available databases; AND c. Standards and guidelines on resource management, circular economy, and waste management, such as ISO 14040, ISO 14044, ISO 14001, and the Ellen MacArthur Foundation's principles for a circular economy; AND 3. The enabling Activity enables a focus sector Activity to adopt technologies which may potentially meet the following criteria: a. Exhibit improved resource efficiency or circularity compared to current established alternatives; OR b. Provide significant cost advantages that are critical for making focus sector Activity more economically viable for broader commercialisation and widespread adoption.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance (see notes below)	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

DNSH is considered relevant only in these circumstances:

1. Large-scale: Extensive operations with significant material use or broad ecosystem impact.
2. Uncontrolled: Conducted in open or uncontained environments, risking environmental release.
3. High-risk: Activities with substantial potential for harm, like testing toxic substances.
4. Field-based activities: Physical experiments or operations directly interacting with the environment, beyond theoretical or computational work.

721[002] Research, development and innovation for direct air capture of CO₂

Activity Notes

- Includes:
 - Research, applied research and experimental development of solutions, processes, technologies, business models and other products dedicated to the direct air capture of CO₂ in the atmosphere.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. The enabling Activity researches, develops or provides innovation for technologies, products or other solutions that are dedicated to the direct air capture of CO ₂ in the atmosphere; AND 2. The implementation of the technologies, products or other solutions being researched for the direct air capture of CO ₂ in the atmosphere has the potential to result in overall net GHG emissions reductions once commercialised.	Enduring
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

TSC are presently not available for the Activity Tiers defined.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

TSC are presently not available for the Activity Tiers defined.

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance (see notes below)	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

DNSH is considered relevant only in these circumstances:

1. Large-scale: Extensive operations with significant material use or broad ecosystem impact.
2. Uncontrolled: Conducted in open or uncontained environments, risking environmental release.
3. High-risk: Activities with substantial potential for harm, such as testing toxic substances.
4. Field-based activities: Physical experiments or operations directly interacting with the environment, beyond theoretical or computational work.

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I. CARBON CAPTURE, UTILISATION AND STORAGE

I.1. Bases for setting TSC

The Activities in this Appendix are not explicitly included in ISIC Rev 4 and are therefore not included in any other Appendix. However, the Activities in this Annex are a potential prerequisite for the Green or Amber classification under EO1 of Activities listed under Appendices A and E of this Annex.

These Activities may be recognised as essential supporting functions that enable the implementation of other Activities, including those commonly referenced in hard-to-abate sectors. In particular, they provide the necessary infrastructure and processes for carbon management, without which certain Activities under Appendices A and E could not credibly achieve alignment with EO1. For this reason, the Activities in this Annex may be classified as Green in their own right assuming they meet TSC and other ASEAN Taxonomy requirements. The TSC were developed in line with relevant international guidelines, such as those developed by the IPCC as well as guidelines established under ISO, for the transport and underground storage of CO₂.

The TSC for EOs 2-4 were considered by the ATB but have not been included as no clear case can currently be identified in this focus sector that shows a direct positive benefit to these EOs. However, these EOs are considered under the DNSH assessment described in Annex 2.

I.2. Current, Future TSC and Review Programmes

The TSC in this sector are review date pre-set as defined in Section 1.4. and may be adjusted in accordance with the processes laid down in Annex 6.

I.3. TSC for Carbon Capture, Utilisation and Storage

000[010] Transport of CO₂

Activity Notes

- Includes
 - Equipment for the transport of CO₂ for the purposes of sequestration.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. CO₂ transported from capture point to injection point does not lead to leakages above 0.5% of CO₂ by mass on an annual basis; AND 2. CO₂ is delivered directly or indirectly to a permanent storage site that meets the criteria for underground geological CO₂ storage as described in Activity 000[020] Underground permanent geological storage of CO₂; AND 3. Appropriate leak detection systems are applied, and a monitoring plan is in place, with the report verified by an independent third party in accordance with international standards.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	No TSC available.	
Tier 3 (Amber T3)	No TSC available.	
Applicable Standards	• Exploration and operation of storage sites ISO 27914:2017 Carbon dioxide capture, transportation, and geological storage - Geological storage. • Refer to international guidelines, such as cited to in IPCC guidance⁶⁰.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

No TSC available.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

No TSC available.

⁶⁰ <https://www.ipcc.ch/report/carbon-dioxide-capture-and-storage/>

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant (Offshore)	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

000[020] Underground permanent geological storage of CO₂

Activity Notes

- Includes
 - Equipment for the storage of CO₂.

EO1: Climate Change Mitigation TSC

Tiers	TSC	Review Programme
Tier 1 (Green)	1. Characterisation and assessment of the potential storage complex and surrounding area, or exploration is carried out in order to establish whether the geological formation is suitable for use as a CO₂ storage site; AND 2. For operation of underground geological CO₂ storage sites, including closure and post-closure obligations: appropriate leakage detection systems are implemented to prevent release during operation; AND 3. A monitoring plan of the injection facilities, the storage complex, and, where appropriate, the surrounding environment is in place, with the regular reports checked by the competent national authority; AND 4. Exploration and operation of storage sites complies with applicable standard.	Review date pre-set (see Annex 6).
Tier 2 (Amber T2)	No TSC available.	
Tier 3 (Amber T3)	No TSC available.	
Applicable Standards	• Exploration and operation of storage sites ISO 27914: 2017 Carbon dioxide capture, transportation, and geological storage — Geological storage. • Refer to international guidelines, such as cited to in IPCC guidance⁶¹.	

EO2: Climate Change Adaptation TSC

TSC are presently not available for the Activity Tiers defined.

EO3: Protection of Healthy Ecosystems and Biodiversity TSC

No TSC available.

EO4: Resource Resilience and the Transition to a Circular Economy TSC

No TSC available.

⁶¹ <https://www.ipcc.ch/report/carbon-dioxide-capture-and-storage/>

Do No Significant Harm

Significant Harm	Category for Assessment	Relevance	If Relevant, Reference for Assessment
EO1	Climate Change Mitigation	Relevant	Annex 2, Section 2
EO2	Climate Change Adaptation	Relevant	Annex 2, Section 3
EO3	Protection of Healthy Ecosystems and Biodiversity	Relevant	Annex 2, Section 4
EO3	Impact on Water Resources	Relevant	Annex 2, Section 4.3
EO3	Impacts Related to Noise	Relevant (Offshore)	Annex 2, Section 4.4
EO3	Impact on Air	Relevant	Annex 2, Section 4.5
EO3	Impact on Soil	Relevant	Annex 2, Section 4.6
EO3	Impact on Biodiversity	Relevant	Annex 2, Section 4.7
EO4	Resource Resilience and the Transition to Circular Economy	Relevant	Annex 2, Section 5

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ANNEX 2. to the ASEAN Taxonomy for Sustainable Finance

Significant Harm criteria for the ASEAN Taxonomy for Sustainable Finance

6 November 2025

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PREAMBLE

Annex 2 of the ASEAN Taxonomy for Sustainable Finance (ASEAN Taxonomy) encompasses the Do No Significant Harm (DNSH) criteria to be considered under each Environmental Objective (EO), as and when Activities undergo an assessment. This Annex can be updated as and when new considerations for the DNSH assessment criteria are needed as determined by the ATB. Version 1 of the ASEAN Taxonomy did not include this Annex, as it was intended to provide the conceptual framework of the ASEAN Taxonomy.

Version 2 of the ASEAN Taxonomy, first published on 27 March 2023 and made effective on 19 February 2024, introduced Annex 2, to include:

- Generic Principles and criteria for DNSH assessments under EOs 1-4;
- 'Generic Principles' changed to 'Guiding Principles' for consistency and showing the interlink between EO and DNSH assessments;
- Clarification to the DNSH Guiding Principles criteria for EO1, EO3, and EO4;
- Simplification of EO3 DNSH assessment protocol, emphasising the reference to conducting EIAs / ESIA's and reducing the detailed criteria to be considered under each Section of EO3.

Version 3 of the ASEAN Taxonomy, published on 27 March 2024, has been updated to include revisions in the DNSH assessment protocol:

- Clarification to the guidance on LCA Checklist;
 - Clarification to the details listed under the LCA Checklist;
 - Worked example on requirements for an LCA Checklist.

Future revisions of the ASEAN Taxonomy may include amendments, as and where required, upon endorsement by the ATB.

Version 4 of the ASEAN Taxonomy has been updated to include DNSH provisions related specifically to the Agriculture, Forestry and Fishing sector (see Sections 2.3.2, 3.3.1, 4.8.1 and 5.4.1).

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1 INTRODUCTION

1.1 Purpose of Annex

This Annex relates to Activities undergoing assessment for classification under the Plus Standard (PS) of the ASEAN Taxonomy. Specifically, the Annex provides criteria to determine if these Activities may cause significant harm to EOs. The criteria outlined in this Annex are partly mandated by the text of the ASEAN Taxonomy requiring that an assessment must be undertaken to ascertain whether the Activities are causing significant harm to the environment while fulfilling one or more of the EOs. In alignment with the intentions of the ASEAN Taxonomy,¹ this Annex attempts to provide consistent understanding of what it means for Activities to be considered as causing significant harm (or not) to the ASEAN Taxonomy EOs and ensures that progress in achieving any EO is not made at the expense of another. Notwithstanding the guiding questions that have been provided to address the DNSH aspect in the Foundation Framework (FF), this document can also be a useful reference for FF assessments of DNSH.

1.2 Definition of Significant Harm in the ASEAN Taxonomy

A definition of 'significant harm' in the context of the ASEAN Taxonomy is important as users must work from the same definition and avoid subjective interpretations. With progress in the implementation of the criteria developed in this Annex, it is expected that there will be periodic reviews and updates to keep the document relevant to the prevailing contexts.

An Activity is considered as having done significant harm when, with respect to:

1. Climate Change Mitigation (EO1):

- (i) Activity leads to significant greenhouse gas (GHG) emissions.

2. Climate Change Adaptation (EO2):

- (i) Activity leads to greater adverse impacts of the current and expected future climate on the Activity itself, or on people, nature, or other assets; or
- (ii) Activity fails to adequately assess, consider and manage key climate risks affecting the Activity.

3. Protection of Healthy Ecosystems and Biodiversity (EO3):

- (i) Activity is significantly detrimental to the good condition and resilience of ecosystems;
- (ii) Activity encroaches upon ecosystems; or
- (iii) Activity is detrimental to the conservation status of habitats and species.

4. Resource Resilience and the Transition to Circular Economy (EO4):

- (i) Activity leads to significant inefficiencies in the use of materials or the direct or indirect use of natural resources compared to what is technically and economically feasible in that industry; or
- (ii) Activity significantly increases the generation, incineration, or disposal of waste, or if waste disposal may cause significant and/or long-term environmental harm.

¹ Section 2.1 of ASEAN Taxonomy Version 1 recognises the clear need for a common language across AMS to communicate and coordinate on labelling for Activities and financial instruments.

1.3 Lock-in

For an Activity seeking classification under any EO, it must be shown that the Activity is not resulting in 'Lock-in'. Lock-in refers to an Activity, which may itself be supporting an EO, but does not support a sustainable solution over the medium/long term or may limit or inhibit resource availability (capital, technology, etc.) for longer-term sustainable alternatives.

An example of a lock-in activity is the use of renewable energy to power operations in a coal mine. Although the use of renewable energy reduces the mine's operational emissions and may appear to support EO1, it indirectly sustains and prolongs the extraction of coal, a high-emission fuel. This creates a dependency that delays the phase-out of unsustainable activities and diverts resources from more sustainable energy transitions.

1.4 Application of Significant Harm Criteria

The Annex is intended as a generic guide to significant harm for use with the PS for assessment of any defined Activity at any Tier.

Any Activity to be classified under the ASEAN Taxonomy must do no significant harm to an EO other than that for which the EO was intended to result in a benefit.

Also, notwithstanding any guidance given in this Annex, any significant harm, which is being caused or which may potentially be caused by an Activity, whether or not described in this Annex, may negatively affect the classification of the Activity.

The baseline scenario for the economic activities should be in compliance with relevant national requirements in the AMS in which the Activity takes place or other international standards – such as the International Finance Corporation (IFC) Performance Standards, World Bank Group's Environmental, Health, and Safety (EHS) Guidelines or the Asian Development Bank's Safeguard Policy Statements.

Note also, that although significant harm relates to EOs other than that to which the Activity is intended to contribute, Activities may also not cause effects which directly or indirectly detract from the intended EO. Such an effect must result in the Activity being assessed as not meeting the criteria for the intended EO, and therefore being classified as Red. This could include an effect which is the same as significant harm, as it has been defined in this Annex.

An example could be a reforestation project intended to contribute to EO3 (Protection of Healthy Ecosystems and Biodiversity) by restoring degraded land through tree planting. However, if the chosen species are highly water-demanding and significantly reduce river flows or groundwater levels, this adverse impact would directly undermine EO3. In such a case, the activity would be classified as Red, as it detracts from the very EO it was designed to benefit.

1.5 Sector specific DNSH criteria

In some cases, sector-specific DNSH criteria are established in addition to the generic DNSH requirements.

However, for Agriculture, Forestry and Fishing, Activities are required to meet only the sector-specific DNSH criteria. This reflects the unique practice-based assessment applied in this sector,

where practices from multiple EOs are evaluated simultaneously. As a result, DNSH considerations are already largely embedded within the classification process.

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2 EO1: CLIMATE CHANGE MITIGATION

2.1 Generic Criteria and Guiding Principles

An Activity seeking classification under the ASEAN Taxonomy must demonstrate that it will not unduly result in emissions which contribute to Climate Change. An Activity is considered as doing significant harm to EO1 if it leads to significant GHG emissions or causes other people or assets to increase their GHG emissions.²

Table 1: Guiding Principles for DNSH in EO1

Guiding Principles
For an Activity to demonstrate that it will do no significant harm with respect to factors related to Climate Change Mitigation, the following must be considered: ³ 1. An identification of the Scope 1 and Scope 2 emissions related to the Activity and, if relevant to the Sector under assessment, an identification of the Scope 3 emissions related to the Activity. 2. An identification of the potential risk to other people or assets to directly increase their GHG emissions; and 3. Plans for the management and minimisation of emissions related to the Activity.

2.2 Assessment of Significant Harm

An assessment of the potential significant harm caused to the environment by an Activity must be conducted if the Activity causes emissions which contribute to climate change.

Where an Activity is applicable and deemed relevant based on the above assessment, the following actions should be in place, for which evidence is required as part of an assessment to determine if the Activity is causing significant harm to EO1:

- Plans for the management and minimisation of Scope 1 and Scope 2 emissions related to the Activity, as well as Scope 3 if relevant to the sector under assessment⁴;
- Evidence that the remediation plans have been implemented and are ongoing.

2.3 Specific Criteria for Consideration

2.3.1 Energy Provision, Transmission and Distribution and Storage

These criteria apply in addition to the generic DNSH criteria described in other parts of this Annex.

Activities involving aspects of energy provision (including power generation, co-generation, heating, and cooling) shall have lifecycle GHG emissions as follows:

- Activities which predominantly involve electric power generation, transmission and distribution: less than 510 gCO₂e/kWh;

² General Principle under EO1: Climate Change Mitigation.

³ The following points are referenced from all sectors included in the Appendix List of Activities in the EU Taxonomy, as they pertain to direct impact on the climate. The EU Taxonomy does not provide a direct reference to DNSH in terms of EO1, however, provides references to Annexes for specific Activities/Sectors that need to consider DNSH requirements in terms of Climate Change Mitigation.

⁴ Greenhouse Gas Protocol 2001 (GHG Protocol, 2001).

- Activities which predominantly involve distribution of gas fuels and steam and air conditioning supply: less than 65 gCO₂e/MJ.

The provision of electricity or heat / cooling 'predominates' for an Activity if more than 50% of the energy supplied by that Activity over its lifetime is electricity or heat / cooling respectively.

For the purposes of estimating GHG intensity, the 'non-predominant' energy supplied shall be converted to the predominant energy unit. For this conversion, 1 MJ of heat energy is equal to 0.277778 kWh of electricity:

- If used for heating, calculated at the point of discharge from the heat producing facility; or
- If used for cooling, calculated at the point of discharge to the equipment for producing a cooling medium.

Electricity transmission and distribution (T&D) or storage Activities must demonstrate an average GHG intensity of less than 510 gCO₂e/kWh averaged over a five-year rolling period for all energy supplied from that network.

Gas supply networks, or networks which are used to distribute heating or cooling media, must demonstrate an average GHG intensity of less than 65 gCO₂e/MJ averaged over a five-year rolling period, for all energy supplied from that network.

In all cases, lifecycle emissions are calculated using the methodology described in ISO 14067:2018 or ISO 14064-1:2018.

2.3.2 Agriculture, Forestry and Fishing sector specific DNSH criteria

For reasons explained in Section 1.5, Activities in this sector are only required to comply with the sector specific DNSH criteria.

The following criteria are applied to Activities in the Agriculture, Forestry and Fishing sector:

1. Avoid slash-and-burn or burning of agricultural residues unless for phytosanitary reasons approved by competent authority.
2. The production Activity does not take place on land converted from natural forests, grasslands, peatlands, wetlands, and riparian areas after the cut-off date of 31 December 2020 OR avoid deforestation which are consistent with AMS net sink targets as determined by applicable national laws and regulations.
3. Apply mitigation and emission reduction techniques for feeding and housing of livestock and for manure storage and processing, as recommended in the United Nations Economic Commission for Europe (UNECE) Framework Code for Good Agricultural Practice for Reducing Ammonia, and Guidelines developed by Food and Agriculture Organization of the United Nations (FAO)'s Livestock Environmental Assessment and Performance. Avoid over-tilling, overgrazing and excessive application of inputs (e.g. fertiliser, feed, antibiotics).

2.3.3 Carbon Lock-in

Carbon lock-in is a form of lock-in related specifically to the difficulty of transitioning to cleaner and more sustainable energy sources due to the existing infrastructure and economic systems being built around the use of carbon-based fuels.

Examples of carbon lock-in may include, but are not necessarily limited to:

- Sustainable Activities (e.g., renewable power), solely dedicated to supporting the extraction, storage, transport, or manufacture of fossil fuels which are not aligned under the ASEAN Taxonomy;
- Climate Change Adaptation Activities which are intended to serve another high carbon emitting Activity (e.g., the upgrade of a road intended to transport coal to a power plant).

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3 EO2: CLIMATE CHANGE ADAPTATION

3.1 Generic Criteria and Guiding Principles

An Activity is considered as doing significant harm to EO2 if it fails to adequately assess, consider and manage its own climate change related physical risks, or leads to greater adverse impacts of the current and expected future climate on the Activity itself, or on people, nature, or other assets; directly infringing on the ability of these to build resilience against climate change⁵. Resilience in this context is defined as the ability of the Activity, or other Activities, to provide utility over time - in the short, medium and long term - at the current or improved performance level in the face of actual or potential climate-related disruption or gradual change.

Table 2: Guiding Principles for DNSH in EO2

Guiding Principles
Criterion 1: Reducing material physical climate risks The Activity must reduce all material physical climate risks to the Activity to the extent possible and on a best effort basis.
1.1 The Activity integrates physical and non-physical measures aimed at reducing – to the extent possible and on a best effort basis – all material risks that have been identified through a climate risk and vulnerability assessment. - For existing Activities, the implementation of those physical and non-physical measures may be phased and executed over a period of up to 5 years. - For new Activities, implementation of these measures must be met at the time of design and construction.
1.2 The above-mentioned Climate Risk and Vulnerability Assessment (CRVA) has the following characteristics: - Considers both current weather variability and future climate change, including uncertainty; - Is based on robust analysis of available climate data and projections across a range of future scenarios; and - Is consistent with the expected lifespan of the Activity.
Criterion 2: Supporting system adaptation The Activity and its adaptation measures do not adversely affect the adaptation efforts of other people, nature, and/or assets.
2.1 The Activity and its adaptation measures do not increase the risks of an adverse climate impact on other people, nature, and assets, or hamper adaptation elsewhere.
2.2 The Activity is consistent with sectoral, regional, and/or national adaptation efforts.

3.2 Climate Risk and Vulnerability Assessment

Any Activity seeking to demonstrate its compliance with DNSH related to EO2, must conduct a CRVA in accordance with the guidance shown in Annex 3.

⁵ Referenced from the EU Taxonomy and consolidated with the general principle of EO2 under the ASEAN Taxonomy.

3.3 Specific Criteria for Consideration

3.3.1 Agriculture, Forestry and Fishing sector specific DNSH criteria

For reasons explained in Section 1.5, Activities in this sector are only required to comply with the sector specific DNSH criteria.

The following criteria are applied to Activities in the Agriculture, Forestry and Fishing sector.

1. Clear boundaries and critical interdependencies between the agricultural production unit and the ecosystem within which it operates are identified.
2. An assessment has been undertaken to identify the key physical climate hazards to which the production unit and the vulnerable operations, such as the impact of heavy rainfall on manure storage, will be exposed and vulnerable over its operating life.
3. Adaptation measures mitigate physical climate risks to a level that the production unit is able to manage changing climatic conditions over its operational life.
4. Adaptation measures do not adversely affect the adaptation efforts of other people, nature and assets.

4 EO3: PROTECTION OF HEALTHY ECOSYSTEMS AND BIODIVERSITY

4.1 Generic Criteria and Guiding Principles

An Activity is considered as doing significant harm to EO3 if it meets any of the conditions in Table 3.

Table 3: Guiding Principles for DNSH in EO3.

Guiding Principles
An Activity is considered as doing significant harm to EO3 if it meets any of the conditions below: 1. The Activity is detrimental to the good status, or where relevant the good ecological potential, of water bodies, including surface waters and groundwaters, or to the good environmental status of marine waters; OR 2. The Activity leads to a significant increase in the emissions of pollutants into air, water, or land, as compared to the situation before the Activity started; OR 3. The Activity is detrimental to a significant extent to the good condition and resilience of ecosystems or where that Activity is detrimental to the conservation status of habitats and species, including those of community interest.

This Section is broken down into two distinct parts:

- Section 4.2:
 - Provides guidance as to whether an Environmental Impact Assessment (EIA) or an Environmental and Social Impact Assessment (ESIA)⁶ is required for an aspect of potential significant harm; and
 - If required, the requirements for assessing harm and/or measures to remediate harm through an EIA or ESIA.
- Sections 4.3 to 4.7:
 - Define specific criteria and provide guidance and standards, for aspects of potential significant harm, through sub-categories under an overarching umbrella of ecosystem and biodiversity protection (as listed in Table 4).

Table 4: Aspects of Potential Significant Harm

Aspect of Potential Significant Harm	Criteria defined in
Impact on Water Resources	Section 4.3
Impacts related to Noise	Section 4.4
Impact on Air	Section 4.5
Impact on Soil	Section 4.6
Impact on Biodiversity	Section 4.7

⁶ Note that Significant Harm, as defined by the ASEAN Taxonomy, does not cover Social Aspects; these are a separate Essential Criterion. Nevertheless, in some cases, an ESIA study is required, as its output will be a necessary input to Social Aspects.

4.2 Guidance on Environmental Impact Assessments

4.2.1 Requirement for an EIA or ESIA

The general requirement for Activities that may have the potential for environmental impacts is to conduct an EIA or an ESIA,⁷ to address an aspect of significant harm which may be **relevant** and **material** to the Activity.

An EIA or ESIA is the process of identifying, predicting and evaluating environmental and social impacts of an Activity, in order to reduce or mitigate adverse impacts.

- A potential aspect of significant harm is considered not **relevant** if the Activity would not have any interaction with that aspect at all. For example, subsea noise would not be relevant to a purely onshore Activity. Annex 1 shows those aspects of significant harm which are not relevant.
- In the context of the ASEAN Taxonomy, '**materiality**'⁸ relates to the extent to which the negative impact of an Activity could be considered significant to a specific aspect. Materiality is deemed to be on a case-by-case basis with due consideration to **Appendices A, B and C** of this Annex.

The circumstances under which an EIA or ESIA is not required to address a potential aspect of significant harm are outlined below:

- It can be shown that an aspect of significant harm is not material to that Activity. It should be noted that all aspects of potential significant harm, other than those which are not relevant (refer to Annex 1), should normally be considered material.
- An EIA or ESIA already exists which covers an aspect of potential significant harm for that Activity, and: any appropriate mitigation actions required by the existing EIA or ESIA were taken and the situation as it relates to the Activity as described in that EIA or ESIA has not significantly changed and no new significant increase in the Activity's environmental impact is expected.
- The Activity falls under an exemption category in national or local environmental regulations, which do not require an EIA or ESIA.

The materiality and relevance of an Activity should be determined on a case-by-case basis. The final determination of the materiality and relevance of any aspect of potential significant harm shall lie with the assessor. An assessor may require an EIA or ESIA to be presented related to any aspect of potential significant harm which they deem to be material.

4.2.2 Guidance for ESIA or EIAs

Except in those cases listed in Table 3, for an Activity to demonstrate that it will do no significant harm to the ecosystem and biodiversity, the following is required:

- EIA or ESIA for the Activity which assesses the potential impact of relevant forms of significant harm; and

⁷ Note that DNSH does not cover Social Aspects; these are a separate Essential Criterion (EC) within the ASEAN Taxonomy.

Nevertheless, in some cases, an ESIA study is required, as its output will be a necessary input to the Social Aspects EC.

⁸ Note that 'materiality' in this context does not have the same meaning that is commonly used in financial reporting.

- Implementation of mitigation actions resulting from the EIA or ESIA.

EIAs should draw from the **UN Environment Programme's Guidelines for Conducting Integrated Environmental Assessments**,⁹ or from national requirements, where such exist. It is expected that while carrying out an EIA, the necessary adaptations to the scale of the economic operator as well as the scale and impact of Activities on the environment, are considered.

Any EIA or ESIA used in support of an assessment of an Activity must be completed and provided prior to the start of on-site construction of facilities to be used for the Activity.

4.2.3 Harm being caused by ongoing Activities

For an ongoing Activity, where no EIA or ESIA was conducted before commencement, an EIA or ESIA should be conducted with respect to any relevant and material aspect of potential significant harm.

In all cases, regardless of whether a prior EIA or ESIA was conducted, details of any significant harm being caused by an ongoing Activity must be presented as part of an assessment. Harm being caused by an ongoing Activity will be considered in the classification of an Activity.

4.3 Impact on Water Resources

Prior to the commencement of any Activity which may have a material impact on water and marine resources, the following actions must be taken:

- Ensure an EIA or an ESIA has been completed in accordance with the national requirements applicable in the AMS in which the Activity takes place or other international standards – such as the IFC Performance Standards, the World Bank Group's EHS Guidelines or the Asian Development Bank's Safeguard Policy Statements;
- Identify and manage environmental detrimental risks associated with the Activity related to water quality and/or water consumption at the appropriate level;
- Ensure all relevant management plans such as Water Quality Protection and Conservation Management Plans are developed in consultation with relevant stakeholders, and implemented for the potentially affected water bodies, which include tangible commitments to minimise environmental impacts through the appropriate management of water utilised during the Activities lifecycle; and
- Monitor the compliance and effectiveness of the mitigation measures to which the Project has committed.

4.4 Impacts related to Noise

It must be shown that neither the construction nor operation of the Activity will cause significant harm to the environment through noise emissions. Noise emitted by the Activity must comply with maximum permissible noise levels for the area in which the Activity will take place in accordance with current and future laws and regulations applicable in the AMS where the Activity will take place, as well as any applicable international agreements or conventions such as the World Bank Group's EHS Guidelines or the World Health Organization (WHO) Guidelines.

⁹ [UN Environment Programme Guidelines for Conducting Integrated Environmental Assessments](#).

Prior to the commencement of an Activity which may have a material impact on noise, the following actions must be taken:

- Ensure an EIA or an ESIA has been completed in accordance with the national requirements applicable in the AMS in which the Activity takes place or other international standards – such as the IFC Performance Standards, the World Bank Group’s EHS Guidelines or the Asian Development Bank’s Safeguard Policy Statements.
- Identify and manage environmental detrimental risks associated with the Activity related to noise at the appropriate level.
- Ensure all relevant management plans such as Noise Management Plans are developed in consultation with relevant stakeholders and implemented for the potentially affected area; and
- Monitor the compliance and effectiveness of the mitigation measures to which the Project has committed.

4.5 Impact on Air

It must be shown that neither the construction nor operation of the Activity will cause significant harm to the environment through air emissions. Air emissions caused by the Activity must comply with maximum permissible air quality levels for the area in which the Activity will take place in accordance with the current and future laws and regulations applicable in the AMS where the Activity will take place, as well as any applicable international agreements or conventions such as the World Bank Group’s EHS Guidelines or the WHO Guidelines.

Prior to the commencement of any Activity which may have a material impact on air quality, the following actions must be taken:

- Ensure an EIA or an ESIA has been completed in accordance with the national requirements applicable in the AMS in which the Activity takes place or other international standards – such as the IFC Performance Standards, the World Bank Group’s EHS Guidelines or the Asian Development Bank’s Safeguard Policy Statements.
- Not hamper the achievement of air quality targets specified by national or local policies, laws and regulations or any international agreements or conventions applicable in the AMS in which the Activity will take place.
- Identify and manage environmental detrimental risks associated with the Activity related to air quality at the appropriate level.
- Ensure all relevant management plans such as Air Quality Management Plans are developed in consultation with relevant stakeholders and implemented for the potentially affected area; and
- Monitor the compliance and effectiveness of the mitigation measures to which the Project has committed.

4.6 Impact on Soil

It must be shown that neither the construction nor operation of the Activity will cause significant harm to the environment by impacting soil quality. Minerals and chemicals such as metals, pesticides, polychlorinated biphenyl, and total petroleum hydrocarbons contained in the soil must

be within the permissible limits for the area in which the Activity will take place in accordance with current and future laws and regulations applicable in the AMS where the Activity will take place, as well as any applicable international agreements or conventions such as the World Bank Group's EHS Guidelines or the WHO Guidelines.

Prior to the commencement of any Activity which may have a material impact on air quality, the following actions must be taken:

- Ensure an EIA or an ESIA has been completed in accordance with the national requirements applicable in the AMS in which the Activity takes place or other international standards – such as the IFC Performance Standards, the World Bank Group's EHS Guidelines or the Asian Development Bank's Safeguard Policy Statements.
- Identify and manage environmental detrimental risks associated with the Activity related to soil quality at the appropriate level.
- Ensure all relevant management plans such as Soil Erosion and Sediment Control Plans are developed in consultation with relevant stakeholders and implemented for the potentially affected area; and
- Monitor the compliance and effectiveness of the mitigation measures to which the Project has committed.

4.7 Impact on Biodiversity

Prior to the commencement of any Activity which may have a material impact on biodiversity, the following actions must be taken:

- Ensure an EIA or an ESIA has been completed in accordance with the national requirements applicable in the AMS in which the Activity takes place or other international standards – such as the IFC Performance Standards, the World Bank Group's EHS Guidelines or the Asian Development Bank's Safeguard Policy Statements.
- Identify and manage environmental detrimental risks associated with the Activity related to biodiversity at the appropriate level.
- Ensure all relevant management plans such as Biodiversity Management Plans are developed in consultation with relevant stakeholders and implemented for the potentially affected area; and
- Monitor the compliance and effectiveness of the mitigation measures to which the Project has committed.

4.8 Specific Criteria for Consideration

4.8.1 Agriculture, Forestry and Fishing sector specific DNSH criteria

For reasons explained in Section 1.5, Activities in this sector are only required to comply with the sector specific DNSH criteria.

The following criteria are applied to Activities in the Agriculture, Forestry and Fishing sector.

Impacts on water resources:

1. Avoid the direct discharge of wastewater, sediments, nutrients and agrochemicals into natural water bodies. When wastewater is discharged into natural water bodies or being reutilised, ensure that the discharge quality meets the national regulations.
2. Where the Activity involves water abstraction, a permit for water abstraction has been granted. Where the permit specifies conditions to avoid significant impact on water bodies, these are followed.
3. Rainwater harvesting system complies with national regulations.

Impacts on soil

1. Demonstrate practices to reduce or prevent physical degradation, e.g., erosion and soil compaction.
2. Demonstrate practices to reduce or prevent, e.g. salinisation, acidification, alkalinisation and pollution.
3. Demonstrate practices to reduce or prevent biological degradation, e.g. loss of organic matter, imbalance of biological activity and mineralisation processes.

Specific EO3 DNSH for AFF: Impacts on biodiversity

1. Control the invasiveness of non-native species. If alien or invasive species have been accidentally introduced, then a remedial plan must be developed and include an evaluation of the size of the problem, mitigation measures and a monitoring programme to determine if the plan is being successful.
2. When Genetically Modified Inputs or Traits are used, ensure the compliance with national requirements of the production and consumption countries.
3. The use of agrochemicals (fertilisers, pesticides, herbicides, etc.) and Active Pharmaceutical Ingredients complies with national requirements of the production and consumption countries, avoiding excessive use which could harm the populations of natural beneficial organisms.
4. Prevent destruction of critical natural and cultural habitats in the area of operation (e.g. coral reefs, wetlands, natural vegetation degradation and/or fragmentation), or species populations, as recommended in the Exploring Natural Capital Opportunities, Risks and Exposure (ENCORE), Integrated Biodiversity Assessment Tool (IBAT), United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage sites or other relevant guidelines.

5 EO4: RESOURCE RESILIENCE AND THE TRANSITION TO A CIRCULAR ECONOMY

5.1 Generic Criteria and Principles

Resource resilience refers to the ability of an Activity to adapt and recover from disruptions or changes in resource availability. It involves the development and implementation of strategies and practices that enable the sustainable management and use of resources, including reducing waste and promoting conservation, efficiency, and innovation. A circular economy is an economic model that aims to reduce waste, conserve resources, and promote sustainability by minimising the use of virgin materials and maximising the use of existing resources. An Activity is considered as doing significant harm to EO4 if it meets any of the conditions in Table 5.

Table 5: Guiding Principles for DNSH in EO4

Guiding Principles
An Activity is considered as doing significant harm to EO4 if it meets any of the conditions below: 1. The Activity leads to significant inefficiencies in the use of materials and the direct or indirect use of natural resources such as non-renewable energy sources, raw materials, water and land in one or more stages of the lifecycle of products, including in terms of durability, reparability, upgradability, reusability or recyclability of products; OR 2. The Activity leads to a significant increase in the generation, incineration or disposal of waste, with the exception of incineration of nonrecyclable hazardous waste, or where the long-term disposal of waste may cause significant and long-term harm to the environment.

For an Activity to demonstrate that it will do no significant harm with respect to resource resilience and a circular economy, the following must be conducted to determine its resource use effectiveness: An LCA on the products, materials, process, or other measurable activities involved in the Activity.

LCAs should be a key consideration for the Construction and Real Estate sector. For new construction (buildings or portions of buildings), a cradle-to-grave lifecycle assessment of the projects structure and enclosure should be conducted.

5.2 Assessment of Risk

Prior to commencement of the Activity, risks associated with resource resilience/circularity must be identified. This is to ensure the Activity encourages less use of primary resources, reuse, and recycling of materials, but that the recycling is done in a way that avoids harm.

It must be demonstrated that the Activity will do no significant harm with respect to the following:

1. Impacts resulting from the natural diminution of resources on people, nature, or other assets; and
2. Actions by the Company implementing the Activity to ensure the maximum possible circularity of the resources/products and services.

5.3 Guidance on Lifecycle Assessments

Prior to the commencement of any Activity, an LCA must be completed for all significant aspects relevant to EO4 which have not already been covered by an EIA or ESIA.

The LCA should be conducted using the ISO 14040 and 14044 Series as a guideline.¹⁰ The principles and framework of the LCAs are described in ISO 14040; while the requirements themselves are set out in ISO 14044. The key components which should be included within an LCA are outlined in the guidelines, while the specific content within each of the sections can be tailored based on the context of the Activity under assessment. The ISO 14040 and 14044 Series are meant to serve as guidance on the details of the content.

Table 6 can be used as a template for an LCA Checklist related to investigating EO4. This may be used by entities to declare completion of lifecycle aspects of the Activity where relevant.

Table 6: Lifecycle Assessment Checklist

Step	Item	Description	Explanation	Status
1A	Activity Definition	Activity	What is the proposed Activity?	
1B		Period of Activity (Start / End)	When will the Activity start and what it is expected life?	
2A	Inputs and outputs throughout	Initial infrastructure / equipment	High level view of main equipment items.	
2B	Activity lifecycle	Raw materials used	What type of raw materials will be used for the activity? (Mainly applies to manufacturing Activities).	
2C		Replacements and Spares	What spares are likely to be consumed during Activity life?	
2D		Energy use	What forms of energy does the Activity consume?	
2E		Emissions	What emissions does the Activity make?	
2F		Waste Streams	What forms of waste will the	

¹⁰ ISO 14040 and ISO 14044 'Environmental Management – Lifecycle Assessment'

			Activity generate in its lifetime?	
3A	Potential impacts from the Activity on EO4 (circular economy and resource resilience)	Initial infrastructure / equipment	For each of these categories, what are or could be the impact on EO4?	
3B		Raw materials used		
3C		Replacements and Spares		
3D		Energy use		
3E		Emissions		
3F		Waste Streams		
4A	Proposed actions and improvements to mitigate impact	Initial infrastructure / equipment	What actions are or will be implemented to avoid harm to EO4?	
4B		Raw materials used		
4C		Replacements and Spares		
4D		Energy use		
4E		Emissions		
4F		Waste Streams		

The LCA Checklist should demonstrate considerations of:

1. **Upstream sourcing** of materials and/or products for the intended Activity.
2. **Usage** of the materials and/or products, or for processes and other measurable activities, for the intended Activity, including information on potential by-products, alternative processes, etc.
3. **Downstream** use or value of the materials and/or products, processes, and other measurable activities, for the intended Activity.
4. **End of life requirements** and expectations from the materials and/or products, processes, or other measurable Activities.

The LCA need not include any aspects already covered in other EOs and which are not relevant to EO4.

A worked example of Table 6 is shown in Appendix E.

5.4 Specific Criteria for Consideration

5.4.1 Agriculture, Forestry and Fishing sector specific DNSH criteria

For reasons explained in Section 1.5, Activities in this sector are only required to comply with the sector specific DNSH criteria.

The following criteria are applied to Activities in the Agriculture, Forestry and Fishing sector:

- Minimise primary raw material use per unit of output by prioritising the use of on-farm or locally generated residues and by-products over importing the inputs.

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APPENDIX A: ACTIVITIES WHERE AN ESIA OR EIA MUST BE CONDUCTED IN ALL CASES

An EIA or ESIA must be conducted in all cases for the following Activities¹¹:

Note that inclusion in this list does not necessarily indicate that the Activity described would be eligible for classification under the ASEAN Taxonomy.

- Thermal power plants and other combustion installations with a heat output of 300 MW or more;
- Hydropower plant with an electrical output of 50 MW or more;
- Wind power plant with an electrical output of 50 MW or more;
- Integrated works for the initial smelting of cast iron and steel;
- Installations for the production of non-ferrous crude metals from ore, concentrates or secondary raw materials by metallurgical, chemical or electrolytic processes;
- Installations for the extraction of asbestos and for the processing and transformation of asbestos and products containing asbestos: for asbestos-cement products, with an annual production of more than 20,000 tonnes of finished products, for friction material, with an annual production of more than 50 tonnes of finished products, and for other uses of asbestos, utilisation of more than 200 tonnes per year;
- Integrated chemical installations; i.e., those installations for the manufacture of substances on an industrial scale, using chemical conversion processes in which several units are contrasted and are functionally linked to one another, and which are:
 - for the production of basic organic chemicals;
 - for the production of basic inorganic chemicals;
 - for the production of phosphorous-, nitrogen- or potassium-based fertilisers (simple or compound fertilisers);
 - for the production of basic plant health products and of biocides;
 - for the production of basic pharmaceutical products using a chemical or biological process;
 - for the production of explosives.
- Construction of lines for long-distance railway traffic.
- Construction of airports with a basic runway length of 2,100m or more.
- Inland waterways and ports for inland-waterway traffic which permit the passage of vessels of over 1,350 tonnes.
- Trading ports, piers for loading and unloading connected to land and outside ports (excluding ferry piers) which can take vessels of over 1,350 tonnes.
- Waste disposal facilities using incineration or chemical treatment:
 - for hazardous waste;
 - for non-hazardous waste with a capacity exceeding 100 tonnes per day.
- Groundwater abstraction or artificial groundwater recharge schemes where the annual volume of water abstracted or recharged is equivalent to or exceeds 10 million cubic metres.
- Works for the transfer of water resources:

¹¹ This list is not exhaustive and may be expanded as and when Activities are added to the ASEAN Taxonomy. Users should ensure that they are referring to the most up-to-date list. Note, however, that inclusion of infrastructure types within this list does not necessarily imply that the related Activity will be an eligible Activity under the ASEAN Taxonomy.

- between river basins where that transfer aims at preventing possible shortages of water and where the amount of water transferred exceeds 100 million cubic metres/year; and
- between river basins where the multi-annual average flow of the basin of abstraction exceeds 2,000 million cubic metres/year and where the amount of water transferred exceeds 5% of that flow.
- In both cases, transfers of piped drinking water are excluded.
- Wastewater treatment plants with a capacity which will serve population of greater than 150,000.
- Infilling of natural wetlands for real estate activities and/or the construction of water and/or wastewater treatment facilities.
- Extraction of natural gas for commercial purposes where the amount extracted exceeds 500,000 cubic metres/day in the case of gas.
- Dams and other installations designed for the holding back or permanent storage of water, where a new or additional amount of water held back or stored exceeds 10 million cubic metres.
- Pipelines with a diameter of more than 800 mm and a length of more than 40 km:
 - for the transport of gas, oil, chemicals;
 - for the transport of carbon dioxide (CO₂) streams for the purposes of geological storage, including associated booster plants.
- Installations for the intensive rearing of poultry or pigs with more than:
 - 85,000 places for broilers, 60,000 places for hens;
 - 3,000 places for production pigs (over 30 kg); or
 - 900 places for sows.
- Industrial plants for the production of:
 - pulp from timber or similar fibrous materials;
 - paper and board with a production capacity exceeding 200 tonnes per day.
- Quarries and open-cast mining where the surface of the site exceeds 25 hectares, or peat extraction, where the surface of the site exceeds 150 hectares.
- Construction of overhead electrical power lines with a voltage of 220 kV or more and a length of more than 15 km.
- Installations for storage of petroleum, petrochemical, or chemical products with a capacity of 200,000 tonnes or more.
- Storage sites for the geological storage of CO₂.
- Installations for the capture of CO₂ streams for the purposes of geological storage where the total yearly capture of CO₂ is 1.5 megatonnes or more.
- Project related to the supply or use of biofuels, bioliquids and biomass fuels from agricultural or forest biomass.

Any change to or extension of Activities listed above where such a change or extension in itself meets the thresholds, if any, set out above.

APPENDIX B: ACTIVITIES WHICH MAY BE ASSESSED AS HAVING A MATERIAL IMPACT

The following Activities, where not specifically listed in Appendix A, shall be subject to an assessment for materiality in as much as they may have an impact on EO3.

For the avoidance of doubt, inclusion in this list does not necessarily indicate that the Activity described would be eligible for classification under the ASEAN Taxonomy.

1 AGRICULTURE, SILVICULTURE AND AQUACULTURE

- (a) Projects for the restructuring of rural land holdings;
- (b) Projects for the use of uncultivated land or semi-natural areas for intensive agricultural purposes;
- (c) Water management projects for agriculture, including irrigation and land drainage projects;
- (d) Initial afforestation and deforestation for the purposes of conversion to another type of land use;
- (e) Intensive livestock installations (Activities not included in Appendix A);
- (f) Intensive fish farming;
- (g) Reclamation of land from the sea.

2 EXTRACTIVE INDUSTRY

- (a) Quarries, open-cast mining and peat extraction (Activities not included in Appendix A);
- (b) Underground mining;
- (c) Extraction of minerals by marine or fluvial dredging;
- (d) Deep drillings, in particular geothermal drilling but not including drilling for investigating the stability of the soil;
- (e) Surface industrial installations for the extraction of natural gas and ores.

3 ENERGY INDUSTRY

- (a) Industrial installations for the production of electricity, steam and hot water (Activities not included in Appendix A);
- (b) Industrial installations for carrying gas, steam and hot water; transmission of electrical energy by overhead cables (Activities not included in Appendix A);
- (c) Surface or underground storage of combustible gases;
- (d) Surface or underground storage of combustible liquids;
- (e) Installations for the processing and storage of radioactive waste (unless included in Appendix B);
- (f) Installations for hydroelectric energy production (Activities not included in Appendix A);
- (g) Installations for the harnessing of wind power for energy production (wind farms);
- (h) Installations for the capture of CO₂ streams for the purposes of geological storage (projects not included in Appendix A).

4 PRODUCTION AND PROCESSING OF METALS

- (a) Installations for the production of pig iron or steel (primary or secondary fusion) including continuous casting;
- (b) Installations for the processing of ferrous metals:
- (c) hot-rolling mills;
- (d) Ferrous metal foundries;

- (e) Installations for the smelting, including the alloyage, of non-ferrous metals, excluding precious metals, including recovered products (refining, foundry casting, etc.);
 - (f) Installations for surface treatment of metals and plastic materials using an electrolytic or chemical process;
 - (g) Manufacture and assembly of motor vehicles and manufacture of motor-vehicle engines;
 - (h) Shipyards;
 - (i) Installations for the construction and repair of aircraft;
 - (j) Manufacture of railway equipment;
 - (k) Swaging by explosives;
 - (l) Installations for the roasting and sintering of metallic ores.
- 5 MINERAL INDUSTRY
- (a) Coke ovens (dry coal distillation);
 - (b) Installations for the manufacture of cement;
 - (c) Installations for the production of asbestos and the manufacture of asbestos products (Activities not included in Appendix A);
 - (d) Installations for the manufacture of glass including glass fibre;
 - (e) Installations for smelting mineral substances including the production of mineral fibres;
 - (f) Manufacture of ceramic products by burning, in particular roofing tiles, bricks, refractory bricks, tiles, stoneware or porcelain.
- 6 CHEMICAL INDUSTRY (Activities not included in Appendix A)
- (a) Treatment of intermediate products and production of chemicals;
 - (b) Production of pesticides and pharmaceutical products, paint and varnishes, elastomers and peroxides;
 - (c) Storage facilities for petroleum, petrochemical and chemical products.
- 7 FOOD INDUSTRY
- (a) Manufacture of vegetable and animal oils and fats;
 - (b) Packing and canning of animal and vegetable products;
 - (c) Manufacture of dairy products;
 - (d) Brewing and malting;
 - (e) Confectionery and syrup manufacture;
 - (f) Installations for the slaughter of animals;
 - (g) Industrial starch manufacturing installations;
 - (h) Fish-meal and fish-oil factories;
 - (i) Sugar factories.
- 8 TEXTILE, LEATHER, WOOD AND PAPER INDUSTRIES
- (a) Industrial plants for the production of paper and board (Activities not included in Appendix A);
 - (b) Plants for the pre-treatment (operations such as washing, bleaching, mercerisation) or dyeing of fibres or textiles;
 - (c) Plants for the tanning of hides and skins;
 - (d) Cellulose-processing and production installations.
- 9 RUBBER INDUSTRY
- (a) Manufacture and treatment of elastomer-based products.
- 10 INFRASTRUCTURE PROJECTS

- (a) Industrial estate development projects;
- (b) Urban development projects, including the construction of shopping centres and car parks;
- (c) Construction of railways and intermodal transshipment facilities, and of intermodal terminals (Activities not included in Appendix A);
- (d) Construction of airfields (Activities not included in Appendix A);
- (e) Construction of roads, harbours and port installations, including fishing harbours (Activities not included in Appendix A);
- (f) Inland-waterway construction not included in Appendix A, canalisation and flood-relief works;
- (g) Dams and other installations designed to hold water or store it on a long-term basis (Activities not included in Appendix A);
- (h) Tramways, elevated and underground railways, suspended lines or similar lines of a particular type, used exclusively or mainly for passenger transport;
- (i) Oil and gas pipeline installations and pipelines for the transport of CO₂ streams for the purposes of geological storage (Activities not included in Appendix A);
- (j) Installations of long-distance aqueducts;
- (k) Coastal work to combat erosion and maritime works capable of altering the coast through the construction, for example, of dykes, moles, jetties and other sea defence works, excluding the maintenance and reconstruction of such works;
- (l) Groundwater abstraction and artificial groundwater recharge schemes (Activities not included in Appendix A).

11 OTHER PROJECTS

- (a) Permanent racing and test tracks for motorised vehicles;
- (b) Installations for the disposal of waste (Activities not included in Appendix A);
- (c) Waste-water treatment plants (Activities not included in Appendix A);
- (d) Sludge-deposition sites;
- (e) Storage of scrap iron, including scrap vehicles;
- (f) Test benches for engines, turbines or reactors;
- (g) Installations for the manufacture of artificial mineral fibres;
- (h) Installations for the recovery or destruction of explosive substances;
- (i) Knackers' yards.

12 TOURISM AND LEISURE

- (a) Ski runs, ski lifts and cable cars and associated developments;
- (b) Marinas;
- (c) Holiday villages and hotel complexes outside urban areas and associated developments;
- (d) Permanent campsites and caravan sites;
- (e) Theme parks.

13 Any change or extension of Activities listed in Appendix A or this Appendix, already authorised, executed or in the process of being executed, which may have significant adverse effects on the environment (change or extension not included in Appendix A).

14 Projects in Appendix A undertaken exclusively or mainly for the development and testing of new methods or products and not used for more than two years.

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APPENDIX C: CONSIDERATIONS WHEN DETERMINING THE MATERIALITY OF AN ASPECT OF POTENTIAL SIGNIFICANT HARM

1 CHARACTERISTICS OF PROJECTS

The characteristics of projects must be considered having regard, in particular, to:

- (a) the size of the project;
- (b) the cumulation with other projects;
- (c) the use of natural resources;
- (d) the production of waste;
- (e) pollution and nuisances;
- (f) the risk of accidents, having regard in particular to substances or technologies used.

2 LOCATION OF PROJECTS

The environmental sensitivity¹² of geographical areas likely to be affected by projects must be considered, having regard, in particular, to:

- (a) the existing land use;
- (b) the relative abundance, quality and regenerative capacity of natural resources in the area;
- (c) the absorption capacity of the natural environment, paying particular attention to the following areas:
 - i. wetlands;
 - ii. coastal zones;
 - iii. mountain and forest areas;
 - iv. nature reserves and parks;
 - v. areas classified or protected under ASEAN Member States' legislation;
 - vi. densely populated areas;
 - vii. landscapes of historical, cultural or archaeological significance.

3 CHARACTERISTICS OF THE POTENTIAL IMPACT

The potential significant effects of projects must be considered in relation to considerations set out in points 1 and 2, and having regard in particular to:

- (a) the extent of the impact (geographical area and size of the affected population);
- (b) the transfrontier nature of the impact;
- (c) the magnitude and complexity of the impact;
- (d) the probability of the impact;
- (e) the duration, frequency and reversibility of the impact.

¹² Refer also to Appendix D.

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APPENDIX D: PROTECTED LAND OR LANDS WITH HIGH BIODIVERSITY PROTECTION VALUES

Generic examples of protected lands or lands with high biodiversity conservation value:

- Nature reserves;
- Nature monuments;
- Ramsar sites;
- Resource management areas;
- World Heritage sites;
- Lands with conservation deeds;
- Marine protected areas with mangroves or forest components;
- Areas protected by Indigenous Peoples and local communities, including Community Conservation Areas;
- Areas covered by community-based resource management agreements;
- Forests recognised as being regionally significant at the bioregion or larger scale in formally recognised reports or peer-reviewed journals, due to the unusual landscape scale biodiversity values provided by size and condition of the forest relative to regional forest land cover and land use trends;
- Ridge-to-Reef ecosystems, including but not limited to those containing mangrove, freshwater swamp, and freshwater stream components.

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APPENDIX E: LCA CHECKLIST WORKED EXAMPLE

The worked example in Table 7 gives an indication of the level of information required to provide evidence of avoidance or mitigation of significant harm to EO4. Where evidence is provided in another document (e.g., an EIA or ESIA), this document may be referenced in this table.

Table 7: Lifecycle Assessment Checklist – Worked Example

Step	Item	Description	Explanation	Status [<i>Example of information expected</i>]
1A	Activity Definition	Activity	What is the proposed activity?	A 20 MW solar farm located in [LOCATION].
1B		Period of Activity (Start / End)	When will the Activity start and what it is expected life?	Operation will commence on 1 January 2025. Projected operating lifetime of equipment is until 2055.
2A	Inputs and outputs throughout Activity lifecycle	Initial infrastructure / equipment	High level view of main equipment items	(1) Solar panels; (2) Inverters; (3) Panel mounts, including concrete foundations; (4) Internal cabling; (5) Interconnector cable to substation; (6) Air-insulated switchgear equipment; (6) Ceramic insulators; (7) Monitoring and control equipment
2B		Raw materials used	What type of raw materials will be used for the activity? (Mainly applies to manufacturing Activities)	Not applicable – Activity does not consume raw materials.
2C		Replacements and Spares	What spares are likely to be consumed during Activity life?	Schedule of spares and operations and maintenance plans to be required from equipment suppliers.
2D		Energy use	What forms of energy does the Activity consume?	Equipment is intended for the generation of electricity but draws relatively small amounts of power from the grid for its own operation.
2E		Emissions	What emissions does the Activity make?	Activity results in no emissions.
2F		Waste Streams	What forms of waste will the	Activity will result in small volumes of waste resulting

			Activity generate in its lifetime?	from maintenance, repairs and replacements during equipment life.
3A	Potential impacts from the Activity on EO4 (circular economy and resource resilience)	Initial infrastructure / equipment	For each of these categories, what are or could be the impact on EO4?	Activity will result in significant use of up-front equipment (e.g. solar panels, cabling).
3B		Raw materials used		Not applicable
3C		Replacements and Spares		Replacements and spares will be used during operation, as defined in operations and maintenance plans.
3D		Energy use		Low impact
3E		Emissions		No impact
3F		Waste Streams		Other waste during operation is likely to be minimal.
4A	Proposed actions and improvements to mitigate impact	Initial infrastructure / equipment	What actions are or will be implemented to avoid harm to EO4?	Engineering Procurement and Construction (EPC) / Operations and Maintenance (O&M) contracts will specify end of life management plans to optimise recyclability and recycling of equipment during and at completion of operation.
4B		Raw materials used		Not applicable.
4C		Replacements and Spares		See 'Initial infrastructure / equipment'
4D		Energy use		Not applicable.
4E		Emissions		Not applicable.
4F		Waste Streams		See 'Initial infrastructure / equipment'.

Guidance on performing a Climate Risk and Vulnerability Assessment (CRVA)

6 November 2025

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PREAMBLE

Annex 3 of the ASEAN Taxonomy for Sustainable Finance (ASEAN Taxonomy) encompasses the Climate Resilience and Vulnerability Assessment (CRVA) to be considered under EO2 Climate Change Adaptation, as and when Activities undergo an assessment. This Annex can be updated as and when new considerations for the CRVA is needed as determined by the ATB. Version 1 of the ASEAN Taxonomy did not include this Annex, as it was intended to provide the conceptual framework of the ASEAN Taxonomy.

Version 2 of the ASEAN Taxonomy, first published on 27 March 2023 and made effective on 19 February 2024, introduced Annex 3, to include:

- Application of the CRVA when considered under both EO and DNSH assessment criteria; and
- CRVA Checklist Template to guide users on how to report on the criteria for assessment.

Version 3 of the ASEAN Taxonomy, published on 27 March 2024, has been updated to include revisions in the CRVA Checklist:

- Clarification to the CRVA Checklist Template
 - Clarifications to the details listed under the CRVA Checklist Template;
 - Worked example on requirements for a CRVA.

Future revisions of the ASEAN Taxonomy may include amendments, as and where required, upon endorsement by the ATB.

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1 INTRODUCTION

1.1 Document Purpose

This Annex relates to Activities for which a Climate Risk and Vulnerability Assessment (CRVA) must be conducted under the ASEAN Taxonomy for Sustainable Finance (“ASEAN Taxonomy”).

A CRVA will be required for the following Activities undergoing Assessment for Classification based on their contribution to an Environmental Objective (EO):

- Activities undergoing assessment for Classification under the Technical Screening Criteria (TSC) defined for EO2 (Climate Change Adaptation); and
- Activity undergoing assessment for Classification under another EO, but where it is necessary to show that the Activity meets Do No Significant Harm (DNSH) criteria for EO2 DNSH

Note, however, that there is a distinction between Activities which are:

1. seeking classification under EO2; or
2. seeking classification under another EO but are seeking to avoid DNSH related to EO2.

In the case of item (1), it must also be shown that the Activity is essential to providing resilience in the face of climate-change to other activities, communities or industry. In the case of item (2), it must be shown that the Activity itself will remain resilient into the future.

The guidance is based on guidance prepared by the German Environment Agency¹ for performing a taxonomy compliant CRVA,² based on the principles and framework of ISO 14091.

1.2 Application of a CRVA

For an Activity to demonstrate that it meets the TSC for EO2, or that it will do no significant harm with respect to factors related to climate change adaptation, the following must be considered:

1. The physical climate risks that are material to the Activity must be identified from those listed in Chapter 2, by performing a robust CRVA. This includes the following steps:
 - a. Screening of the Activity to identify which physical climate risks from the list in Chapter 2 of this Annex may affect the performance of the Activity during its expected lifetime;
 - b. Where the Activity is screened to likely be at risk from one or more of the physical climate risks in Chapter 2 of this Annex, conduct a CRVA to assess the significance of the physical climate risks on the Activity; and
 - c. An assessment and prioritisation of adaptation solutions that can reduce the identified physical climate risk.

¹ German Environment Agency. How to perform a robust CRVA for EU Taxonomy reporting? Recommendations for Companies. November 2022.

² The EU Taxonomy refers to a CRVA as a method for identifying material impacts to the Activity, in line with both chronic and acute climate-related disasters.

2. The CRVA is proportionate to the scale of the Activity and its expected lifespan, such that:
 - a. For Activities with a lifespan of less than 10 years, the assessment is performed, at least by using climate projections at the smallest appropriate scale, which may include extrapolated past trends data; and
 - b. For all other Activities, the assessment is performed using the highest available resolution, state-of-the art climate projections across the existing range of future scenarios³ consistent with the expected lifetime of the Activity, including at least, 10-to-30-year climate projections scenarios for major investments.

The climate projections and assessment of impacts are based on best practice and available guidance, issued by international bodies, national or regional authorities, standardisation bodies and other sources of equivalent trustworthiness and consider the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports,⁴ scientific peer-reviewed publications, and open source⁵ or paying models.

For existing and new Activities using existing physical assets, physical and non-physical solutions ('adaptation solutions') must be identified, assessed, prioritised. An adaptation plan for the implementation of those solutions is to be drawn up accordingly. This implementation plan must cover a timeframe of up to five years and reduce the most important identified physical climate risks that are material to that Activity.

For new and existing Activities using newly built physical assets, the Activity must integrate adaptation solutions that reduce the most important identified physical climate risks that are material to that Activity at the time of design and construction and implement them before the start of operations.

³ Future scenarios include Intergovernmental Panel on Climate Change (IPCC) representative concentration pathways RCP2.6, RCP4.5, RCP6.0, and RCP8.5.

⁴ Assessments Reports on Climate Change: Impacts, Adaptation and Vulnerability, published periodically by the Intergovernmental Panel on Climate Change (IPCC), the United Nations body for assessing the science related to climate change produces, <https://www.ipcc.ch/reports/>.

⁵ Including, but not necessarily limited to the Copernicus Services managed by the European Commission.

1.3 Terminology and Concepts for a CRVA

The concepts under a CRVA are shown in Table 1.

Table 1: Concepts under a CRVA⁶

Terminology	Context
Climate-related hazard	The potential occurrence of natural or human-induced physical events and changes which stem from changes to the climate caused by anthropogenic GHG emissions. Potential climate-related hazards are listed under Table 2 of Chapter 2 in this Annex.
Vulnerability	Encompasses or susceptibility to harm and lack of capacity to cope and adapt.
Risk	Under this context, the potential impacts as a result of exposure to hazards and level of vulnerability to specific climate-related hazards.
Physical climate risk	A physical climate risk can occur to any Activity (or system), where the Activity is exposed to and sensitive to a climate-related hazard. For example, “potential flooding damage to buildings or infrastructure.”

1.4 Guidance on Conducting a CRVA

In general, there are four main steps that should be included as part of a CRVA:⁷

- **Step 1:** Identify the lifespan of the Activity under assessment, and identify the specific components (i.e., factors, processes, materials, etc., of the Activity) that would require an investigation under a risk assessment.
- **Step 2:** Screening of climate-related hazards from Table 2, Chapter 2 in this Annex and identify those with most potential risks to the Activity and/or objects under assessment.
- **Step 3:** Conduct the risk assessment. For current potential risks, it is recommended to use past climate trends and climate projections based on these trends. For future potential risks, it is recommended to use a range of climate projections based on future scenarios.
 - For an Activity with a lifespan of less than 10 years may use extrapolated past trends data assessment;
 - For an Activity with a lifespan of more than 10 years, an assessment of both current and future risks based on modelled data is required.
- **Step 4:** Identify adequate and effective adaptation solutions to reduce the risks that are material to the Activity, including:
 - Identifying a range of possible solutions/measures; and
 - Assessing the different solutions for their costs, benefits, effectiveness for reducing or eliminating the risk, the adaptation efforts or the level of resilience.

Adaptation solutions must:

- Not adversely affect physical climate risks of other people, of nature, of cultural heritage, of assets and of other Activities;

⁶ The definitions are adapted and derived from the relevant climate adaptation sections of the IPCC AR6 and ISO 14090f.

⁷ Ibid.

- Not result in any form of maladaptation, including solutions which will not achieve the intended objective or may result in unintended side effects;
- Be consistent with local, sectoral, regional or respective ASEAN Member State adaptation strategies and plans; and must consider the use of nature-based solutions⁸ to the extent possible.

Proactive consultations on the proposed Activity must be conducted. This ensures that adaptation solutions do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other stakeholders (directly impacted or interested persons). The consultation process should at least:

- Identify potentially impacted and or interested persons, assets, heritage, etc.; and
- Communicate, consult and/or provide for the participation of these persons/institutions ensuring that their concerns, desires, expectations, needs, rights, and opportunities are considered.

In this way, the adaptation solutions will ensure that there are no negative impacts as a result of implementing the Activity.

⁸ Nature-based solutions are defined as 'solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions'. Therefore, nature-based solutions benefit biodiversity and support the delivery of a range of ecosystem

2 CLASSIFICATION OF CLIMATE-RELATED HAZARDS

Table 1: Potential climate-related hazards to lead to risks and vulnerabilities

	Temperature related	Wind related	Water related	Solid mass related
Chronic	• Changing temperature (air, freshwater, marine water) • Heat stress • Temperature variability • Ecosystem degradation	• Changing wind patterns	• Changing precipitation patterns and types • Precipitation or hydrological variability • Ocean acidification • Saline intrusion • Sea level rise • Water stress • Algal blooms	• Coastal erosion • Soil degradation • Soil erosion • Solifluction
Acute	• Heat wave • Wildfire • Pest outbreaks • Invasive species spread	• Cyclone, hurricane, typhoons • Storms (including dust and sandstorms) • Tornadoes	• Drought • Heavy precipitation • Flood (coastal, fluvial, pluvial, ground water)	• Landslide • Subsidence

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3 TEMPLATE OF CRVA CHECKLIST

An example of a climate risk and vulnerability checklist is shown in Table 3. This checklist can be used as a template for evidence to be provided to assessors that climate risk and vulnerability of an Activity has been considered.

Table 2: Suggested template for CRVA checklist

Step	Item	Description	Explanation	Status
1A	Lifespan of the Activity equipment and materials	Activity description.	What is the proposed Activity?	
1B		Equipment and materials description	What equipment and materials will be used to perform this Activity?	
1C		Activity start	When will the Activity start operations?	
1D		Activity end	When will the Activity cease operations (either through deterioration of components or reduced demand for Activity)?	
1E		Operational life >10 years?	Will the operational life of the Activity be more than 10 years?: • If no, conduct assessment using current IPCC climate scenarios and trends based on extrapolated current climate data. • If yes, conduct current and future assessment using both IPCC climate scenarios and trends.	
2A	Climate related hazards	Potential climate risks to the Activity	Identify and list potential risks to the Activity from Table 1, considering location of the Activity and applicable scenarios and trends as described in 1E.	
2B		Evaluate most common potential risks	Consider the likelihood of the risk based on the location of the Activity.	

3A	Risk assessment	Projection of climate hazards	If activity has operational life >10 years, what potential hazards may occur based on using both IPCC climate scenarios and trends?	
3B		Potential impact of climate related hazards	How could climate-related hazards affect elements of the Activity? Direct impacts may not always occur; some may also be indirect (or impacts in succession). Where appropriate, use flowchart to map the anticipated risks and impacts from each identified climate-risk hazard.	
4A	Identify adequate and effective adaptation solutions	Adaptive solutions	List adequate and effective adaptation solutions under identified climate-related hazards.	

APPENDIX A: CRVA CHECKLIST WORKED EXAMPLE

The worked example in Table 3 gives an indication of the level of information required to provide evidence of avoidance or mitigation of significant harm to EO2. Where evidence is provided in another document (e.g., an EIA or ESIA), this document may be referenced in this table.

Table 3: CRVA Checklist – Worked Example

Step	Item	Description	Explanation	Status [<i>Example</i>]
1A	Lifespan of the Activity equipment and materials	Activity description.	What is the proposed Activity?	A 20 MW solar farm located in [LOCATION]
1B		Equipment and materials description	What equipment and materials will be used to perform this Activity?	(1) Solar panels; (2) Inverters; (3) Panel mounts, including concrete foundations; (4) Internal cabling; (5) Interconnector cable to substation; (6) Air-insulated switchgear equipment; (6) Ceramic insulators; (7) Monitoring and control equipment
1C		Activity start	When will the Activity start operations?	Operation will commence on 1 January 2025.
1D		Activity end	When will the Activity cease operations (either through deterioration of components or reduced demand for Activity)?	Operation will cease on 1 January 2055.
1E		Operational life >10 years?	Will the operational life of the Activity be more than 10 years?: - If no, conduct assessment using current IPCC climate scenarios and trends based on extrapolated current climate data. - If yes, conduct current and future assessment using both IPCC climate scenarios and trends.	Yes
2A	Climate related hazards	Potential climate risks to the Activity	Identify and list potential risks to the Activity from Table 1, considering location of the Activity and applicable scenarios and trends as described in 1E.	Water related: Sea level rise

2B		Evaluate most common potential risks	Consider the likelihood of the risk based on the location of the Activity.	Sea level rise may occur due to proximity of some equipment to the shoreline.
3A	Risk assessment	Projection of climate hazards	If activity has operational life >10 years, what potential hazards may occur based on using both IPCC climate scenarios and trends?	Sea level rise of up to 40 cm may occur by 2060. [CROSS-REFER TO SOURCE AS APPLICABLE]
3B		Potential impact of climate related hazards	How could climate-related hazards affect elements of the Activity? Direct impacts may not always occur; some may also be indirect (or impacts in succession). Where appropriate, use flowchart to map the anticipated risks and impacts from each identified climate-risk hazard.	See flowchart at Figure 1.
4A	Identify adequate and effective adaptation solutions	Adaptive solutions	List adequate and effective adaptation solutions under identified climate-related hazards.	EPC contract will specify that equipment must be able to operate with due consideration to impacts resulting from probable climate hazards. This includes ensuring that any equipment is built on sufficiently elevated or protected land.

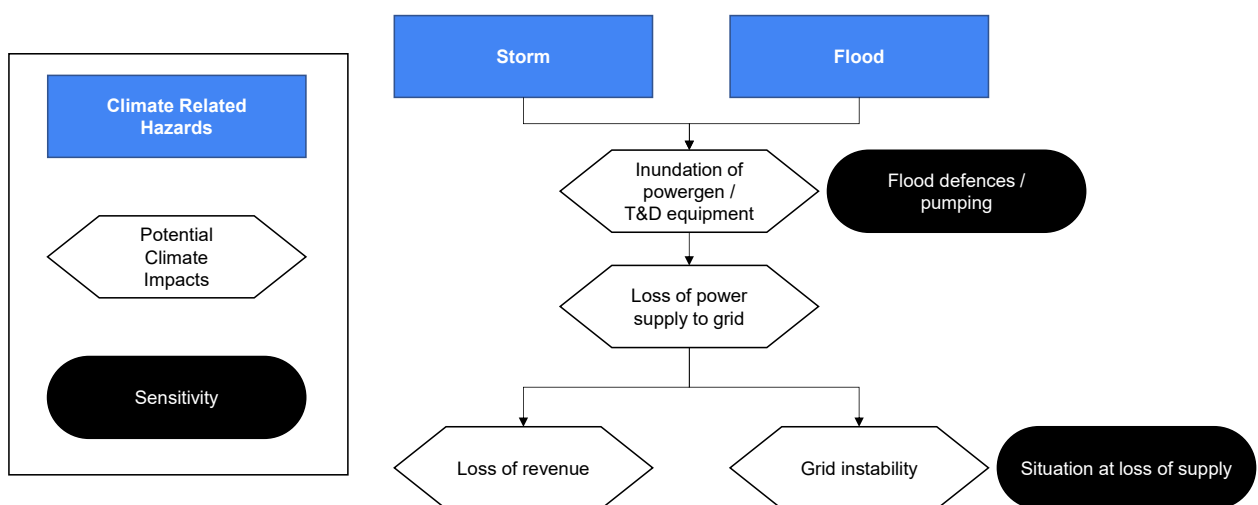


Figure 1: Example of a flowchart highlighting a climate-related hazard and its impacts

ANNEX 4. to the ASEAN Taxonomy for Sustainable Finance

Regulations pertaining to Social Aspects listed by AMS (not exhaustive)

6 November 2025

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PREAMBLE

Annex 4 of the ASEAN Taxonomy for Sustainable Finance (ASEAN Taxonomy) encompasses the national AMS regulations pertaining to the Social Aspects identified for the ASEAN Taxonomy. This Annex can be updated as and when there are changes in the regulation listed by AMS.

Key Social Aspects

Social Aspects	Definition
 Respect human rights	Promotion of human rights and fundamental freedoms, in line with the ASEAN Human Rights Declaration (AHRD) and the Phnom Penh Statement on the Adoption of the AHRD.¹
 Labour Rights and Worker Protection	The promotion of labour rights and the prohibition of forced labour, including child labour, exploitation, trafficking in persons, violence, and abuse, align with the ASEAN Declaration on the Protection of the Rights of Migrant Workers and the ASEAN Consensus on the Protection and Promotion of Rights of Migrant Workers. Additionally, recognising and including informal workers in labour and social protection systems, supporting transitions to formal employment, and promoting decent work opportunities in the informal economy are consistent with the ASEAN Declaration on Promoting Competitiveness, Resilience and Agility of Workers for the Future of Work.^{2 3 4}
 Impact on people living close to investments	Management of investment-related impacts to people (including children) living in at-risk areas by encouraging inclusive and targeted measures to reduce the impact of investments on vulnerable populations and strengthen institutional capacity to address the needs of people affected, in line with the ASEAN Declaration on Strengthening Social Protection.^{5 6}

¹ ASEAN Human Rights Declaration, https://asean.org/wp-content/uploads/2021/01/6_AHRD_Booklet.pdf

² ASEAN Consensus on the Protection of the Rights of Migrant Workers, <https://asean.org/wp-content/uploads/2017/11/ASEAN-Consensus-on-the-Protection-and-Promotion-of-the-Rights-of-Migrant-Workers1.pdf>

³ ASEAN Committee on the Implementation of the ASEAN Declaration on the Protection and Promotion of the Rights of Migrant Workers (ACMW), <https://asean.org/wp-content/uploads/images/archive/23062.pdf>

⁴ ASEAN Declaration on Promoting Competitiveness, Resilience and Agility of Workers for the Future of Work, https://asean.org/wp-content/uploads/2023/10/Guidance-Documents-ASEAN-Declaration-on-Promoting-Competitiveness-Resilience-and-Agility-of-Workers-for-the-Future-of-Work_Final-1.pdf

⁵ ASEAN declaration on strengthening social protection, https://www.asean.org/wp-content/uploads/images/archive/23rdASEANSummit/5.%20asean%20declaration%20on%20social%20protection_final.pdf

⁶ ASEAN Declaration on Strengthening Social Protection, https://nspc.gov.kh/Images/ASEAN%20Declaration%20on%20Strengthening%20Social%20Protection_2019_10_28_11_59_13.pdf

Social Regulations by ASEAN Member State (AMS)

AMS	Respect human rights	Labour rights and worker protection	Impact on people living close to investments
Brunei Darussalam	• Adoption of Children Act, Chapter 205 • Education Act, Chapter 210 • Persons with Disabilities Act, Chapter 234 • Workmen Compensation Act, Chapter 74	• Anti-Trafficking in Persons Order, 2019 • Children and Young Persons Act, Chapter 219 • Employment Order, 2009 • Prevention of People Smuggling Act, Chapter 229 • Women and Girls Protection Act, Chapter 120	• Children and Young Persons Act, Chapter 219 • Environmental Protection and Management Act, Chapter 240 • Public Health (Food) Regulations, 2001 • Public Health Act, Chapter 182 • Town and Country Planning Order, 2015
Cambodia	• Cambodia Democracy and Human Rights Act • Constitution of the Kingdom of Cambodia	• CAMFEBFA Plan of Action on the Elimination of Child Labour • Cambodian Labour Law 1997, amended 2007 • Law on Suppression of Kidnapping, Trafficking and Exploitation of Human Persons • National Plan of Action on the Elimination of the Worst Forms of Child Labour (NPA-WFCL) 2008-2012 • Prakas No. 002 of 2008 on Categories of Occupation and Light Work Permitted for Children Aged from 12 to 15 (MoSALVY)	• Constitution of the Kingdom of Cambodia • Law on Environmental Protection and Natural Resource Management 1996 • Sub-Decree on Environmental Impact Assessment 1999

AMS	Respect human rights	Labour rights and worker protection	Impact on people living close to investments
		• Prakas No. 106 of 2004 on the Prohibition of Hazardous Child Labour (MoSALVY) • Prakas No. 305 of 2007 on Work in Sea Fishing (MLVT)	
Indonesia	Law		
	• Constitution of the Republic of Indonesia Year 1945 • Law No. 13/2003 on Employment as amended by the Job Creation Law • Law on Approval of International Labor Organization Conference No. 106 concerning Weekly Rest in Trade and Offices (No. 3/1961) • Law on Approval of the International Labor Organization Conference No. 98 concerning the Applicability of the Basics of the Right to Organize and Bargain Collectively (No. 18/1956) • Law on Approval of the International Labor Organization Convention No. 120 Concerning Hygiene in Commerce and Offices (No. 3/1969) • Law on Human Rights (No. 39/1999)	• Law No. 13/2003 concerning Employment as amended by the Job Creation Law • Law No. 18/2017 on Protection of Indonesian Migrant Workers as amended by the Job Creation Law • Law No. 40/2004 concerning the National Social Security System as amended by: (1) Job Creation Law; and (2) Law No. 4/2023 concerning Development and Strengthening of the Financial Sector • Law No. 6/2023 concerning the Stipulation of Government Regulations in Lieu of Law No. 2/2022 concerning Job Creation Becomes Law (Job Creation Law). • Law on Approval of International Labor Organization Conference No. 100 concerning Equal Remuneration for Male and	• Law on Handling of the Poor (No. 13/2011) • Law No. 21/2001 concerning Special Autonomy for Papua Province as amended by Government Regulation in Lieu of Law No. 1/2008 and Law No. 2/2021 • Law No. 13/2003 concerning Employment as amended by the Job Creation Law • Law No. 19/2003 concerning State-Owned Enterprises as amended by the Job Creation Law • Law No. 20/2008 concerning Micro, Small, and Medium Enterprises as amended by the Job Creation Law • Law No. 20/2008 concerning Small and Medium Macro Enterprises as amended by the Job Creation Law

AMS	Respect human rights	Labour rights and worker protection	Impact on people living close to investments
	• Law on Persons with Disabilities (No. 8/2016) • Law on Ratification of ILO Convention No. 81 Concerning Labor Inspection in Industry and Commerce (No. 21/2003) • Law on Ratification of the Maritime Labor Convention, 2006 (No. 15/2016) • Law on Statement of Applicability of the Labor Inspection Law of 1984 No. 23 of the Republic of Indonesia for All of Indonesia (No. 3/1951) • Law on the Ratification of Convention on The Rights of Persons with Disabilities (No. 19/2011) • Law on Trade Unions (No. 21/2000) • Law on Work Safety (No. 1/1970)	Female Workers for Work of the Same Value (No. 80/1957) • Law on Criminal Acts of Sexual Violence (No. 12/2022) • Law on Elimination of Human Trafficking Crimes (No. 21/2007) • Law on Health (No. 17/2023) • Law on Job Creation (No. 11/2020) • Law on Persons with Disabilities (No. 8/2016) • Law on Ratification of ILO Convention No. 105 concerning the Abolition of Forced Labor (No. 19/1999) • Law on Ratification of ILO Convention No. 111 Concerning Discrimination in Respect of Employment and Occupation (No. 21/1999) • Law on Ratification of the Convention on the Elimination of All Forms of Discrimination Against Women (No. 7/1984) • Law on Ratification of the International Convention on the Elimination of All Forms of Racial Discrimination 1965 (No. 29/1999)	• Law No. 21/2014 concerning Geothermal Energy as amended by the Job Creation Law • Law No. 22/2001 concerning Oil and Natural Gas as amended by Government Regulation in Lieu of Law (Perppu) No. 2/2022 concerning Job Creation as has been enacted into Law through Law No.6/2023 concerning Determination of Perppu No. 2/2022 concerning Job Creation, Becomes Law (Job Creation Law) • Law No. 25/2007 concerning Capital Investment as amended by the Job Creation Law • Law No. 32/2009 concerning Environmental Protection and Management as amended by the Job Creation Law • Law No. 4/2009 as amended by Law No. 3/2020 concerning Mineral and Coal Mining and the Job Creation Law • Law No. 40/2007 concerning Limited Liability Companies as amended by the Job Creation Law • Law No. 6/2014 concerning Villages as amended by the Job Creation Law

AMS	Respect human rights	Labour rights and worker protection	Impact on people living close to investments
		• Law on Social Security Administering Bodies (No. 24/2011) • Law on the Ratification of ILO Convention on The Prohibition and Immediate Action for Elimination of The Worst Forms of Child Labour, 1999 (No. 182) (No. 1/2000) • Law on the Ratification of the ILO Minimum Age Convention No 138 (No. 20/1999) • Law on Work Safety (No. 1/1970) • Ratification of ILO Convention No. 29/1930 concerning Forced or Compulsory Labor • Regulation in Lieu of the Job Creation Law No. 2/2022 concerning Job Creation	
	Government Regulations		
	• Government Regulation in Lieu of Law No 2 of 2022 concerning Job Creation that has been enacted into Law through Law No 6 of 2023 concerning Determination of Perppu No 2 of 2022 concerning Job Creation Becomes Law (Job Creation Law)	• Government Regulation No. 28/2024 concerning Implementing Regulations of Law No. 17/2023 concerning Health • Government Regulation No. 31/2006 concerning the National Job Training System • Government Regulation No. 35/2021 concerning Specific Time Work Agreements, Outsourcing,	• Government Regulation in Lieu of Law (Perppu) No. 2/2022 concerning Job Creation as has been stipulated as Law through Law No. 6/2023 concerning Determination of Perppu No. 2/2022 concerning Job Creation into Law (Job Creation Law)

AMS	Respect human rights	Labour rights and worker protection	Impact on people living close to investments
	• Government Regulation No. 11/1979 concerning Work Safety in the Refining and Processing of Oil and Gas • Government Regulation No. 19/1973 concerning Regulation and Supervision of Work Safety in the Mining Sector • Government Regulation No. 28/2025 concerning Implementation of Risk-Based Business Licensing • Government Regulation No. 50/2012 concerning Implementation of the Occupational Safety and Health Management System (SMK3)	Working Time and Rest Time, and Termination of Employment Relations • Government Regulation No. 36/2021 as amended by Government Regulation No. 51/2023 concerning Wages • Government Regulation No. 44/2015 as amended by Government Regulation No. 82/2019 and Government Regulation No. 49/2023 concerning the Implementation of Work Accident Insurance and Death Insurance Programs • Government Regulation No. 59/2021 on Implementation of Protection of Indonesian Migrant Workers • Government Regulation No. 70/2015 as amended by Government Regulation No. 66/2017 concerning Work Accident Insurance and Death Insurance for State Civil Service Employees	• Government Regulation No. 33/2013 concerning Expansion of Job Opportunities • Government Regulation No. 47/2012 concerning Social and Environmental Responsibility of Limited Liability Companies • Government Regulation No. 96/2021 as amended by Government Regulation No. 25/2024 and Government Regulation No. 39/2025 concerning Implementation of Mineral and Coal Mining Business Activities
	Presidential Regulations		

AMS	Respect human rights	Labour rights and worker protection	Impact on people living close to investments
	• Presidential Regulation No. 21/2010 concerning Labor Inspection. • Presidential Regulation No. 34/2014 concerning Ratification of the Convention regarding the Promotional Framework For Occupational Safety And Health/Convention 187, 2006	• Presidential Regulation No. 109/2013 concerning Phases of Social Security Program Participation • Presidential Regulation No. 7/2019 concerning Occupational Diseases • Presidential Regulation No. 82/2018 as amended by Presidential Regulation No. 75/2019, Presidential Regulation No. 64/2020, and Presidential Regulation No. 59/2024 concerning Health Insurance	• Presidential Regulation No. 186/2014 concerning Social Empowerment of Remote Indigenous Communities • Presidential Regulation No. 62/2023 concerning the Acceleration of Implementation of Agrarian Reform
	Presidential Decree		
		• Presidential Decree No. 36/1990 concerning Ratification of the Convention on the Rights of the Child • Presidential Decree No. 59/2002 concerning the National Action Plan for the Elimination of the Worst Forms of Child Labor	
	Ministerial Regulations		
	• Regulation of the Minister of Energy and Mineral Resources	• Regulation of Indonesian Migrant Worker Protection Agency No.	• Regulation of the Minister of Agrarian Affairs and Spatial

AMS	Respect human rights	Labour rights and worker protection	Impact on people living close to investments
	No. 33/2021 concerning Occupational Safety and Health, Environmental Protection and Management, and Geothermal Technical Rules for Indirect Use • Regulation of the Minister of Manpower and Transmigration No. Per 01/MEN/1980 concerning Occupational Safety and Health in Building Construction • Regulation of the Minister of Manpower and Transmigration No. Per. 01/Men/2007 concerning Guidelines for Giving K3 Awards • Regulation of the Minister of Manpower and Transmigration No. Per. 08/Men/VII/2010 concerning Personal Protective Equipment • Regulation of the Minister of Manpower and Transmigration No. Per. 15/Men/VIII/2008 concerning First Aid for Accidents (P3K) in the Workplace • Regulation of the Minister of Manpower No. 12/2015 as amended by Regulation of the	6/2022 concerning Organization and Work Procedures of Indonesian Migrant Worker Protection Service Centers • Regulation of the Minister of Energy and Mineral Resources No. 33/2021 concerning Occupational Safety and Health, Environmental Protection and Management, and Geothermal Technical Rules for Indirect Use • Regulation of the Minister of Health No. 11/2022 concerning Health Services for Occupational Diseases • Regulation of the Minister of Home Affairs No. 6/2009 concerning Guidelines for the Formation of Regional Action Committees, Determination of Regional Action Plans, and Community Empowerment in Eliminating the Worst Forms of Child Labor • Regulation of the Minister of Manpower and Transmigration No. 11/2013 concerning Guidelines for	Planning/Head of the National Land Agency No. 18/2021 concerning Procedures for Determining Management Rights and Land Rights • Regulation of the Minister of Agriculture No. 38/2020 concerning Implementation of Indonesian Sustainable Palm Oil Plantation Certification • Regulation of the Minister of Cooperatives No. 5/2020 as amended by Regulation of the Minister of Cooperatives and Small and Medium Enterprises No. 5/2021 concerning the Strategic Plan of the Ministry of Cooperatives and Small and Medium Enterprises for 2020 – 2024 • Regulation of the Minister of Energy and Mineral Resources No. 25/2018 as amended by Regulation of the Minister of Energy and Mineral Resources No. 50/2018, Regulation of the Minister of Energy and Mineral

AMS	Respect human rights	Labour rights and worker protection	Impact on people living close to investments
	Minister of Manpower No. 33/2015 concerning Electrical Work Safety and Health in the Workplace • Regulation of the Minister of Manpower No. 26/2014 concerning Implementation Assessment of the Occupational Safety and Health Management System • Regulation of the Minister of Manpower No. 33/2016 as amended by Regulation of the Minister of Manpower No. 1/2020 concerning Procedures for Labor Inspection • Regulation of the Minister of Manpower No. 37/2016 concerning Occupational Safety and Health of Pressure Vessels and Storage Tanks • Regulation of the Minister of Manpower No. 38/2016 concerning Occupational Safety and Health of Power and Production Aircraft	Implementing the National Job Training System in the Region • Regulation of the Minister of Manpower and Transmigration No. 8/2014 concerning Guidelines for Organizing Competency Based Training • Regulation of the Minister of Manpower and Transmigration No. Per. 01/Men/1981 concerning the Obligation to Report Occupational Diseases • Regulation of the Minister of Manpower and Transmigration No. Per. 03/Men/1982 concerning Worker Health Services • Regulation of the Minister of Manpower and Transmigration No. Per. 11/Men/VI/2005 concerning Prevention and Management of Abuse and Distribution of Narcotics, Psychotropics and Other Addictive Substances in the Workplace • Regulation of the Minister of Manpower and Transmigration No. PER.25/MEN/XII/2008 of 2008	Resources No. 11/2019 and Regulation of the Minister of Energy and Mineral Resources No. 17/2020 concerning Mineral and Coal Mining Business • Regulation of the Minister of Environment and Forestry No. P.43/MENLHK/SETJEN/KUM.1/6/2017 concerning Community Empowerment around Nature Reserve Areas and Nature Conservation Areas • Regulation of the Minister of Environment and Forestry No. P.70/MENLHK/SETJEN/KUM.1/12/2017 concerning Procedures for Implementing Reducing Emissions from Deforestation and Forest Degradation, Role of Conservation, Sustainable Management of Forest and Enhancement of Forest Carbon Stocks • Regulation of the Minister of Environment No. 17/2012 concerning Guidelines for Community Involvement in the

AMS	Respect human rights	Labour rights and worker protection	Impact on people living close to investments
	• Regulation of the Minister of Manpower No. 5/2018 concerning Occupational Safety and Health in the Work Environment • Regulation of the Minister of Manpower No. 6/2017 concerning Occupational Safety and Health of Elevators and Escalators • Regulation of the Minister of Manpower No. 8/2020 concerning Occupational Safety and Health of Lifting Aircraft and Transport Aircraft • Regulation of the Minister of Manpower No. Per-01/MEN/1992 concerning Occupational Safety and Health Requirements for Carbide Aircraft	concerning Guidelines for Diagnosis and Assessment of Disabilities due to Accidents and Occupational Diseases • Regulation of the Minister of Manpower No. 11/2016 concerning Health Services and Tariffs in the Implementation of the Work Accident Insurance Program • Regulation of the Minister of Manpower No. 2/2023 concerning Procedures for Imposing Administrative Sanctions in the Implementation of the Placement and Protection of Indonesian Migrant Workers • Regulation of the Minister of Manpower No. 23/2021 concerning Revocation of Regulations of Minister of Manpower as a Result of the Enactment of Law No. 11/2020 concerning Job Creation and enforcing Regulations • Regulation of the Minister of Manpower No. 23/2021 concerning Revocation of	Environmental Impact Analysis and Environmental Permit Process • Regulation of the Minister of Home Affairs No. 51/2007 concerning Community-Based Rural Area Development • Regulation of the Minister of Investment/Head of the Investment Coordinating Board No. 1/2022 as amended by Regulation of the Minister of Investment and Downstreaming/Head of the Investment Coordinating Board of the Republic of Indonesia No. 3/2025 concerning Procedures for the Implementation of Partnerships in the Field of Investment between Large Enterprises and Micro, Small, and Medium Enterprises in the Regions • Regulation of the Minister of Marine Affairs and Fisheries No. 12/2024 concerning Community Participation and Empowerment in

AMS	Respect human rights	Labour rights and worker protection	Impact on people living close to investments
		Regulations of the Minister of Manpower as a Result of the Enactment of Law No. 11/2020 concerning Job Creation and Implementing Regulations • Regulation of the Minister of Manpower No. 4/2023 concerning Social Security for Indonesian Migrant Workers • Regulation of the Minister of Manpower No. 5/2021 as amended by Regulation of the Minister of Manpower No. 1/2025 concerning Procedures for Implementing Work Accident Insurance, Death Insurance and Old Age Security Programs • Regulation of the Minister of Manpower No. 5/2023 concerning Adjustments to Working Hours and Wages in Certain Labor-Intensive Export-Oriented Manufacturing Companies Affected by Global Economic Changes • Regulation of the Minister of Manpower No. 9/2016 concerning	Coastal Zone and Small Island Management • Regulation of the Minister of Marine Affairs and Fisheries No. 3/PERMEN-KP/2019 of 2019 concerning Community Participation in the Protection and Empowerment of Fishermen, Fish Farmers, and Salt Farmers • Regulation of the Minister of Marine Affairs and Fisheries No. 34/2022 concerning Advanced Fishing Villages • Regulation of the Minister of Social Affairs No. 9/2020 concerning Social and Environmental Responsibility of Business Entities • Regulation of the Minister of Villages, Development of Disadvantaged Regions and Transmigration No. 21/2020 as amended by Regulation of the Minister of Villages, Development of Disadvantaged Regions and Transmigration No. 6/2023 concerning General Guidelines for

AMS	Respect human rights	Labour rights and worker protection	Impact on people living close to investments
		Occupational Safety and Health at Height • Regulation of the Minister of Manpower No.10/2016 concerning Procedures for Providing Return to Work Programs as well as Promotional Activities and Preventive Activities for Work Accidents and Occupational Diseases • Regulation of the Minister of Manpower No.11/2023 concerning Occupational Safety and Health in Confined Spaces • Regulation of the Minister of Marine Affairs and Fisheries No. 18/PERMEN-KP/2016 of 2016 concerning Protection Against Risks for Fishermen, Fish Farmers, and Salt Farmers • Regulation of the Minister of Women's Empowerment and Child Protection No. 1/2020 as amended by Regulation of the Minister of Women's Empowerment and Child Protection No. 1/2023 concerning	Village Development and Village Community Empowerment

AMS	Respect human rights	Labour rights and worker protection	Impact on people living close to investments
		Providing Protective Housing for Female Workers in the Workplace	
Lao PDR	Constitution of the Lao People's Democratic Republic	Anti-Trafficking Law, 2015 (No. 73 of 2015)	- Decree 112/PM on Environmental Impact Assessment - Decree No 192/PM on Compensation and Resettlement of People Affected by Development Projects - Law on the Protection of the Rights and Interests of Children - Resistance and Prevention of Violence Against Women and Children Law, 2014 (Law No. 56/NA of 2014)
Malaysia	- Employees' Minimum Standards of Housing, Accommodations and Amenities Act 1990 [Act 446] - Employment Act 1955 [Act 256] - Federal Constitution of Malaysia - Human Rights Commission of Malaysia Act 1999 [Act 597] - Industrial Relations Act 1967 [Act 177] - Persons with Disabilities Act 2008 [Act 685]	- Anti-Trafficking in Persons and Anti-Smuggling of Migrants Act 2007 [Act 670] - Child Act 2001 [Act 611] - Children and Young Persons (Employment) Act 1966 [Act 350] - Employees' Social Security Act 1969 [SOCSSO, Act 4] - Employment Act 1955⁷ [Act 256] - Factories and Machinery Act 1967 [Act 139]	- Aboriginal Peoples Act 1954 [Act 134] - Child Act 2001 [Act 611] - Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order 2015 [P.U. (A) 195/2015] - Environmental Quality Act 1974 [Act 127] - Land Acquisition Act 1960 [Act 486]

⁷ Section 90B of the Employment Act 1955.

AMS	Respect human rights	Labour rights and worker protection	Impact on people living close to investments
	Trade Unions Act 1959 [Act 262]	- Gig Workers Act 2025 - Industrial Relations Act 1967 [Act 177] - Labour Ordinance of Sabah - Labour Ordinance of Sarawak - National Action Plan on Forced Labour - Penal Code⁸ [Act 574] - Private Employment Agencies Act 1981 [Act 246] - Sexual Offences Against Children Act 2017 [Act 792] - Trade Unions Act 1959 [Act 262]	- Land Conservation Act 1960 [Act 385] - Land Development Act 1956 [Act 474] - Occupational Safety and Health Act 1994 - Sabah Environment Protection Enactment 2002 - Sabah Land Ordinance 1930 - Sarawak Land Code 1958 - Sarawak Natural Resources and Environment Ordinance 1993 - Street Drainage and Building Act 1974 [Act 133] - Town and Country Planning Act 1976 [Act 172]
Myanmar	Constitution of the Republic of the Union of Myanmar	Order supplementing Order No. 1/1999	- Environmental Conservation Law - Law on the Rights of the Child, 2019 (Pyidaungsu Hluttaw Law No. 22/2019) the 7th Waning Day of Waso, 1381 ME (23rd July 2019) - Maternity and Child Care Law (Pyidaungsu Hluttaw Law No 34 of 2018)

⁸ Section 90B of the Employment Act 1955.

AMS	Respect human rights	Labour rights and worker protection	Impact on people living close to investments
			• The Child Law (Law No. 9/93)
Philippines	• Constitution of the Philippines	• Anti-Trafficking of Persons Act, 2003 (R.A. No. 9208) • Article 106 of the Labor Code of the Philippines (as implemented by DOLE Department Order No. 174, Series of 2017) on job contracting and subcontracting • Department of Labor and Employment (DOLE) Department Order No. 149-A of 2017 Amending the Guidelines on Assessing and Determining Hazardous Work in the Employment of Persons Below the Age of 18 Years • DOLE Department Order No. 04 on hazardous work and activities to persons below 18 years of age • DOLE Department Order No. 149 of 2016 on the Guidelines on Assessing and Determining Hazardous Work in the Employment of Persons Below the Age of 18 Years • DOLE Department Order No. 18 of 12 May 1994 on Rules and	• Child and Youth Welfare Code (Presidential Decree No. 603) • Department of Environment and Natural Resources Administrative Order No. 30 Series of 2003 • Executive Order No. 310 authorising the adoption and implementation of the Philippine National Strategic Framework for plan development for children, 2000-2025 • Indigenous Peoples' Rights Act 1997 (R.A. No. 8371) • National Commission on Indigenous Peoples (NCIP) Administrative Order No. 1, Series of 2006, also known as the Free, Prior, and Informed Consent (FPIC) Guidelines of for Indigenous Cultural Communities/Indigenous Peoples (ICCs/IPs) • Proclamation No. 855 proclaiming the adoption and implementation of the Philippine Program of Action for Children in the 1990s

AMS	Respect human rights	Labour rights and worker protection	Impact on people living close to investments
		Regulations implementing R.A. No. 7658, Act prohibiting the employment of children below 15 years of age in public and private undertakings, amending for this purpose Section 12, Article VIII of R.A. 7610 (R.A. No. 7658) • DOLE Department Order No. 5. Rules XIV of the Rules Implementing Book III of the Labour Code on Employment of Homeworkers, 1992 • Expanded Anti-Trafficking in Persons Act of 2012 (R.A. No. 10364) • Expanded Anti-Trafficking in Persons Act of 2012 [Republic Act (R.A.) No. 10364] • Jobstart Philippines Act (R. A. No. 10869) • List of Hazardous Occupations to Young Workers, 1973 (DOLE Department Order No. 4) • Rules and Regulations implementing R.A. No. 9231, Amending R.A. No. 7610, as	• R.A. No. 10066 – National Cultural Heritage Act of 2009, as amended by R.A. No. 11961 • Special Protection of Children Against Child Abuse, Exploitation and Discrimination Amendment Act (R.A No. 9231)

AMS	Respect human rights	Labour rights and worker protection	Impact on people living close to investments
		amended (DOLE Department Order 65-04) • Rules implementing R.A. No. 6727 (Wage Rationalization Act) • Social Security Act of 2018 (R.A. No. 11199) • Special Program for Employment of Students (R.A. No. 9547) • Trabaho Para sa Bayan (National Employment Master Plan) - (R. A. No. 11962)	
Singapore ⁹	• Constitution of the Republic of Singapore	• Children and Young Persons Act 1993 • Employment Act 1968 • Prevention of Human Trafficking Act 2014 • The Penal Code • Vulnerable Adults Act 2018 • Women's Charter 1961	• Children and Young Persons Act 1993 • Environmental Protection and Management Act 1999 • Planning Act 1998
Thailand	• Constitution of the Kingdom of Thailand	• Announcement of the Ministry of the Interior respecting the employment of children of 12 and under 15 years of age • Anti-human Trafficking Act B.E. 2551 (2008)	• Act Relating to the National Child and Youth Development Promotion B.E. 2550 [2007] • Child Protection Act

⁹ References to Singapore Acts include any subsidiary legislation made under the Act

AMS	Respect human rights	Labour rights and worker protection	Impact on people living close to investments
		- Homeworkers Protection Act B.E. 2553 - Ministerial Regulation No. 6 issued under the Labour Protection Act - Notification of the Ministry of Interior Regarding Description of Work and Working Place for Young Persons - Notification of the Ministry of Interior Regarding Labour Protection (No. 12) - Prevention and Suppression of Human Trafficking (2008, amended 2015) - Prevention and Suppression of White Slavery Act	Enhancement and Conservation of National Environmental Quality Act (No. 2) B.E. 2561
Viet Nam	Constitution of the Socialist Republic of Vietnam	- Circular No. 10/2013/TT-BLDTBXH promulgating the list of jobs and workplaces prohibited to young workers - Circular No. 11/2013/TT-BLDTBXH promulgating the list of light tasks permitted for persons under 15 years old - Circular No. 35/2013/TT-BLDTBXH providing guidelines for the implementation of Decree No.	- Decree No. 18/2015 - Decree No. 91/2011/ND-CP regulating the sanction of administrative violation on protection, care for and education of children - Decree No.114/2006/ND-CP defining the sanction of administrative violations on population and children

AMS	Respect human rights	Labour rights and worker protection	Impact on people living close to investments
		09/2013/ND-CP of January 11, 2013, detailing a number of articles of the Anti-Trafficking Law • Decision No. 1427/QD-TTg approving the Program of Action to prevent and combat human trafficking crimes during 2011-2015 • Decision No. 19/2004/QD-TTg ratifying the 2004-2010 program on prevention of, and solution to, the situation of street children, sexually abused children and children subjected to heavy labour or working under noxious and hazardous conditions • Decree No. 09/2013/ND-CP of January 11, 2013, detailing a number of articles of the Anti-Trafficking Law • Directive on the strengthening of the task of protecting children, preventing and tackling the problem of street children and child labour abuse (No. 6/1998/CT-TTg)	• Instructions of the Prime Minister to implement the Law on Child Protection • Law on Children (Law No. No. 102/2016/QH13) • Law on Environmental Protection • Youth Law (Law No. 53/2005/GH11)

AMS	Respect human rights	Labour rights and worker protection	Impact on people living close to investments
		• Law on the Prevention of and Combat against Human Trafficking (No. 66/2011/QH12)	

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Laws established by AMS on environmental protection and efficient use of natural resources (not exhaustive)

6 November 2025

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PREAMBLE

Annex 5 of the ASEAN Taxonomy for Sustainable Finance (ASEAN Taxonomy) encompasses the national AMS regulations pertaining to the environment. This Annex can be updated as and when there are changes in the regulation listed by the AMS.

Brunei Darussalam

Environmental policy directions and strategies are included in Brunei Darussalam Five Year National Development Plans (NDP), where the Government has continued to address the need to protect and conserve the country's environment from pollution and excessive exploitation of natural resources and maintain the country's biodiversity heritage. Further on, the country has embraced sustainable development as central to socio-economic development.

1. Antiquities and Treasure Trove Act, Chapter 31
2. Brunei Darussalam Fishery Limits Act, Chapter 130
3. Building Control Order, 2014
4. Disaster Management Order, 2006
5. Environmental Protection and Management Act, Chapter 240
6. Fisheries Order, 2009
7. Forest Act, Chapter 46
8. Hazardous Waste (Control of Export, Import and Transit) Order, 2013
9. Merchant Shipping Order, 2002
10. Plants Varieties Protection Order, 2015
11. Prevention of Pollution of the Sea Order, 2018
12. Prevention of Pollution of the Sea (Garbage) Regulations, 2008
13. Radiation Protection Order, 2018
14. Town and Country Planning Order, 2015
15. Water Supply Act, Chapter 121
16. Wild Flora and Fauna Order, 2007
17. Wild Life Protection Act, Chapter 102
18. Workplace Safety and Health Order, 2009

Cambodia

The Code of Environment and Natural Resources aims to identify all measures to improve, modernise, and ensure consistency in the management of environmental protection, conservation, and the restoration of natural resources, biodiversity, and ecological functions for sustainable living and development. Cambodia's environmental laws generally revolve around providing regulations and policy impositions on protecting and conserving biodiversity. The Royal Decree on the establishment of Natural Protected Areas was promulgated in 2008, designating protected areas. In 1996, the Law on Environmental Protection and Natural Resource Management and the Sub-decree on Environmental Impact Assessment 1999 were passed, providing policy guidelines in assessing all projects that potentially impacts the environment and encourage public participation in environmental activities. Towards the new millennium, laws on forestry, water resources management including fisheries, mineral resources, protected areas, and animal health and production provide comprehensive policy on the management and conservation of natural resources for its sustainability. As response to the impact of climate change, in 2015, Law on Disaster Management lays down important principles in the mitigation, adaptation, and immediate response to natural or man-made causes.

1. Law on Animal Health and Animal Production 2016
2. Law on Disaster Management 2015

3. Law on Environmental Protection and Natural Resource Management 1996
4. Law on Fisheries 2007
5. Law on Forestry 2002
6. Law on Mineral Resource Management and Exploitation 2001
7. Law on the Management of Pesticides and Fertilisers
8. Law on Water Resources Management of the Kingdom of Cambodia 2007
9. Royal Decree on Establishment of Natural Protected Areas 1999
10. Sub-Decree on Environmental Impact Assessment 1999
11. The Code of Environment and Natural Resources 2023

Indonesia

The primal source of authority for State control over the natural environment stems from the 1945 Constitution which states that land and water and the natural resources shall be controlled by the State and be utilised for the greatest welfare of the people. Indonesia's laws and regulations allocate natural resources access, control and use, establish the mechanism of management and articulate principles and norms of the State pertaining the natural resources and environment.

1. Cara Budidaya Ikan yang Baik (CBIB)/Good Aquaculture Practices – is a national standard under IndoGAP that ensures fish farming activities are conducted in a responsible and sustainable manner
2. Government Regulation Number 12 of 2021 concerning Amendment to Government Regulation Number 14 Year 2016 Concerning Implementation of Housing and Settlement Area, dated 2 February 2021
3. Government Regulation Number 22 Year 2021 concerning Amendments to Presidential Regulation Number 79 of 2023 concerning the Acceleration of the Battery Electric Vehicle Program for Road Transportation, dated 8 December 2023
4. Government Regulation Number 33 of 2023 concerning Energy Conservation
5. Green Industry Standard (GIS) – acts as a guideline for various industry sectors
6. Indonesian Good Agricultural Practices (IndoGAP) – acts as a good agricultural practices for food crop production
7. Law of the Republic of Indonesia Number 17 of 2019 concerning Water Resources as amended by the Job Creation Law
8. Law of the Republic of Indonesia Number 18 of 2009 concerning Livestock and Animal Health Number as amended by Law Number 41 of 2014 concerning Amendments to Law Number 18 of 2009 concerning Livestock and Animal Health and the Job Creation Law
9. Law of the Republic of Indonesia Number 21 of 2014 concerning Geothermal Energy as amended by the Job Creation Law
10. Law of the Republic of Indonesia Number 31 of 2004 concerning Fisheries as amended by the Job Creation Law
11. Law of the Republic of Indonesia Number 32 of 2009 concerning Environmental Protection and Management as amended by the Job Creation Law
12. Law of the Republic of Indonesia Number 4 of 2009 concerning Mineral and Coal Mining as amended by: (1) Mineral and Coal (Minerba) Law; and (2) Job Creation Law
13. Law of the Republic of Indonesia Number 41 of 1999 concerning Forestry as amended by Government Regulation in Lieu of Law (Perppu) Number 2 of 2022 concerning Job

Creation as has been stipulated into Law through Law Number 6 of 2023 concerning Determination of Perppu Number 2 of 2022 concerning Job Creation, which currently in effect as Job Creation Law

14. Law of the Republic of Indonesia Number 7 of 2021 concerning the Harmonization of Tax Regulations as amended by the Job Creation Law
15. Law on Disaster Management, no. 24 of 2007, dated 26 April 2007
16. Law on Energy, No. 30 of 2007, dated 10 August 2007
17. Presidential Regulation Number 109 of 2025 concerning the Management of Urban Waste through Waste Processing into Renewable Energy Based on Environmentally Friendly Technology, dated 10 October 2025
18. Presidential Regulation Number 110 of 2025 concerning the Implementation of Carbon Economic Value Instruments and National Greenhouse Gas Emission Control, dated 10 October 2025
19. Presidential Regulation Number 112 of 2022 Concerning the Acceleration of Renewable Energy Development for Power Supply, dated 13 September 2022
20. Presidential Regulation Number 83 of 2018 concerning Marine Debris Management (National Plan of Action on Marine Plastic Debris), dated 21 September 2018
21. Presidential Regulation Number 98 of 2021 concerning Implementation of Carbon Economic Values for Achieving Nationally Determined Contribution Targets and Control of Greenhouse Gas Emissions in National Development, dated 29 October 2021, which also regulates carbon market
22. Regulation of the Minister of Energy and Mineral Resources Number 16 of 2022 concerning Procedures for Implementing Carbon Economic Value in the Power Generation Sub-sector, dated 20 December 2022
23. Regulation of the Minister of Energy and Mineral Resources Number 22 of 2019 concerning Guidelines for the Implementation of Greenhouse Gas Investment and Mitigation in the Energy Sector, dated 19 November 2019
24. Regulation of the Minister of Energy and Mineral Resources Number 5 of 2021 concerning Standards for Business Activities and Products in the Implementation of Risk-Based Business Licensing in the Energy and Mineral Resources Sector, dated 1 April 2021
25. Regulation of the Minister of Environment and Forestry Number 21 of 2022 concerning the Implementation of Carbon Economic Value, dated 21 September 2022
26. Regulation of the Minister of Environment and Forestry Number 7 of 2023 concerning Procedures for Carbon Trading in the Forestry Sector, dated 15 June 2023
27. Regulation of the Minister of Environment and Forestry Number 75 of 2019 concerning Roadmap to Waste Reduction by Producers, dated 5 December 2019
28. Regulation of the Minister of Environment and Forestry Number P.7/MENLHK/SETJEN/KUM.1/2/2018 of 2018 concerning Guidelines for the Study of Vulnerability, Risks and Impacts of Climate Change, dated 6 March 2018
29. Regulation of the Minister of Environment and Forestry Number P.70/MENLHK/SETJEN/KUM.1/12/2017 of 2017 concerning Procedures for Implementing Reducing Emissions from Deforestation and Forest Degradation, Role of Conservation, Sustainable Management of Forest and Enhancement of Forest Carbon Stocks, dated 24 January 2018
30. Regulation of the Minister of Environment and Forestry Number P.75/MENLHK/SETJEN/KUM.1/10/2019 of 2019 concerning Roadmap for Waste Reduction by Producers, dated 5 December 2019

31. Regulation of the Minister of Environment Number 17 of 2012 concerning Guidelines for Community Involvement in the Environmental Impact Analysis and Environmental Permit Process, dated 10 October 2012

Lao PDR

Lao PDR's environmental regulations are greatly anchored on its Law on Environmental Protection, which defines principles, regulations and measures related to environmental management, monitoring of protection, control, preservation and rehabilitation. It also aims to provide balance between social and natural environment, to sustain and to protect natural resources and public health.

1. Decision on environmental risk rating of manufacturing industry
2. Decree on The Environmental Impact Assessment
3. Decision on the Pollution Control No. 1687/MONRE
4. Law on Environmental Protection, revised version

Malaysia

Malaysia has been rigorous in introducing laws and regulations concerning protection of the environment and natural resources, both at the State and Federal Government levels. Coordinating mechanisms between State and Federal governments are established through councils and committees to consider particular issues, policy formulation and legislative changes. In the development of environmental laws and regulations, the Malaysian government takes into consideration several international environmental principles as well as English common law principles.

National (Peninsular Malaysia and Applicable Nationwide)

1. Animal Welfare Act 2015
2. Atomic Energy Licensing Act 1984
3. Biosafety Act 2007
4. Carbon Capture, Utilisation and Storage Act 2025
5. Drainage Works Act 1954
6. Energy Efficiency and Conservation Act 2024
7. Environmental Quality Act 1974
8. Fisheries Act 1985
9. Irrigation Areas Act 1953
10. Land Conservation Act 1960
11. Local Government Act No. 171 of 1976
12. Merchant Shipping (Oil Pollution) Act 1994
13. Merchant Shipping Ordinance 1952
14. National Forestry Act 1984
15. National Land Code 1965
16. National Parks Act 1980
17. Pahang Biodiversity Enactment 2021
18. Pesticides Act 1974
19. Plant Quarantine Act 1976
20. Sewerage Services Act 1993
21. Solid Waste and Public Cleansing Management Act 2007

22. Town and Country Planning Act 1976
23. Water Services Industry Act 2006
24. Waters Act 1920 (Revised 1989)
25. Wildlife Conservation Act 2010

Sabah

1. Sabah Animal Ordinance 1962
2. Sabah Biodiversity Enactment 2000
3. Sabah Climate Change and Carbon Governance Enactment 2025
4. Sabah Inland Fisheries and Aquaculture Enactment 2003
5. Sabah Parks Enactment 1984

Sarawak

1. Land Code [Cap. 81 1958 Ed.]
2. National Parks and Nature Reserves Ordinance 1998
3. Oil Mining Ordinance 1958
4. Sarawak Environment (Reduction of Greenhouse Gases Emission) Ordinance 2023
5. Sarawak Forest Ordinance 2015
6. Sarawak Mining Ordinance
7. Sarawak Natural Resources and Environment Ordinance 1997
8. Sarawak Water Ordinance 1994
9. Sarawak Wildlife Protection Ordinance 1998

Myanmar

Myanmar's environmental laws focus on the establishment of national and institutional committees as well as policy frameworks in preparation for the implementation of conservation and protection efforts towards uplifting the country's environmental integrity. The Environmental Conservation Law was passed to provide fundamental principles and pathways for systemic integration of relevant actions towards sustainable development. As a result, the Environmental Conservation Rule was enacted creating an environmental conservation committee to prepare and develop key policies relating environmental conservation to different sectors. In 2019, National Environmental Policy of Myanmar and Myanmar Climate Change Policy was pushed into law aiming to widen the scope in environmental conservation not only on resources but also in the future impacts of human activities as well as mitigating and responding to the impacts of climate change.

1. Environmental Conservation Law (2012)
2. Environmental Conservation Rule (2014)
3. Myanmar Climate Change Policy (2019)
4. National Environmental Policy of Myanmar (2019)

Philippines

The Philippines is considered as one of the forerunners in the region in terms introducing laws on environmental protection, with the concept of sustainable development already institutionalised as a policy even before the said term was internationally recognised. Managing the environment and natural resources by the Philippine government is enshrined in the 1987 Constitution, which expressly recognises the right of the people "to a balanced and healthful ecology in accord with the rhythm and harmony of the nature." Environment and

natural resources laws and regulations are geared threefold: environmental protection, economic development and poverty alleviation, and the promotion of social justice and equity.

1. Presidential Decree No. 1152 - Philippine Environment Code.
2. Presidential Decree No. 1586 - Environmental Impact Statement (EIS) Statement of 1978.
3. Presidential Decree No. 1899 - Small-Scale Mining Law.
4. Presidential Decree No. 705 – Revised Forestry Code.
5. Republic Act No. 11038 – Enhanced National Integrated Protected Areas System Act.
6. Republic Act No. 11285 – The Energy Efficiency and Conservation Act of 2019
7. Republic Act No. 11697 – The Electric Vehicle Industry Act (EVIDA) of 2022
8. Republic Act No. 11898 - Extended Producer Responsibility Act of 2022
9. Republic Act No. 4003 - The Fisheries Act.
10. Republic Act No. 6969 - Toxic Substances, Hazardous and Nuclear Waste Control Act of 1990.
11. Republic Act No. 7308 – Seed Industry Development Act of 1992
12. Republic Act No. 7611 – Strategic Environmental Plan for Palawan Act
13. Republic Act No. 7900 – High Value Crops Development Act of 1995
14. Republic Act No. 7942 - Philippine Mining Act of 1995.
15. Republic Act No. 8048 – Coconut Preservation Act of 1995
16. Republic Act No. 8435 – Agriculture and Fisheries Modernisation Act of 1997
17. Republic Act No. 8550 – Philippine Fisheries Code of 1998
18. Republic Act No. 8749 - Philippine Clean Air Act of 1999.
19. Republic Act No. 9003 - Ecological Solid Waste Management Act of 2000.
20. Republic Act No. 9072 – National Caves and Cave Resources Management and Protection Act
21. Republic Act No. 9147 - Wildlife Resources Conservation and Protection Act.
22. Republic Act No. 9168 – Philippine Plant Variety Protection Act of 2002
23. Republic Act No. 9175 – Chain Saw Act of 2002
24. Republic Act No. 9275 - Philippine Clean Water Act of 2004.
25. Republic Act No. 9367 – The Biofuels Act of 2006
26. Republic Act No. 9513 – The Renewable Energy Act of 2008

Singapore

Singapore's environmental laws are diverse from institutional, resource utilisation, public welfare and biodiversity. Laws such as the Resource Sustainability Act, Hazardous Waste Act, Radiation Protection Act (as amended), Sewerage and Drainage Act, Public Utilities Act, Energy Conservation Act, and Deep Seabed Mining Act, among others, impose and regulate resource-use and keeping environmental infrastructures as part of their economic agenda. Moreover, the country has developed sound economic and land-use planning policies that guarantees the protection of green places for conservation. There are also laws focused on public and commercial spaces to ensure protection of human ecology from chemicals, haze and the harmful effects of smoking. The references to the Singapore Acts here include any subsidiary legislation made under those Acts.

1. Animals and Birds Act 1965
2. Building Control Act 1989

3. Carbon Pricing Act 2018
4. Control of Plants Act 1993
5. Control of Vectors and Pesticides Act 1998.
6. Deep Seabed Mining Act 2015.
7. Endangered Species (Import and Export) Act 2006
8. Energy Conservation Act 2012
9. Environmental Protection and Management Act 1999
10. Environmental Public Health Act 1987
11. Fisheries Act 1966
12. Hazardous Waste (Control of Export, Import and Transit) Act 1997
13. Merchant Shipping (Civil Liability and Compensation for Oil Pollution) Act 1998
14. National Environment Agency Act 2002
15. National Parks Board Act 1996
16. Parks and Trees Act 2005
17. Plant Varieties Protection Act 2004.
18. Prevention of Pollution of the Sea Act 1990
19. Public Utilities Act 2001.
20. Radiation Protection Act 2007
21. Resource Sustainability Act 2019
22. Road Traffic Act 1961
23. Sewerage and Drainage Act 1999
24. Smoking (Prohibition in Certain Places) Act 1992
25. Transboundary Haze Pollution Act 2014
26. Wildlife Act 1965
27. Workplace Safety and Health Act 2006.

Thailand

Environmental laws in Thailand have been in place to provide for the establishment of protected areas such as national parks and forest reservations; resource-use regulation and prohibitions such as, but not limited to those related to fisheries, forest resources, mineral resources and hazardous substances; and biodiversity conservation, given the diverse and rare species of flora and fauna of the country. These laws have greatly contributed to the attainment of the nation's vision to sustain its resources and potentially preserve them for future generations.

1. Act on Offences Relating to Offshore Petroleum Production Places, B.E. 2530 (1987)
2. Arrest of Ship Act B.E.2534 (1991)
3. Chain Saws Act, B.E. 2545 (2002)
4. Elephant Ivory Act, B.E. 2558 (2015)
5. Emergency Decree on Control and Operation Gold Mining, B.E. 2483 (1940)
6. Enhancement and Conservation of National Environmental Quality Act, (No.2) B.E. 2561 (2018)
7. Factory Act B.E. 2535 (1992)
8. Fisheries Act B.E. 2558 (2015)
9. Forest Plantation Act, B.E. 2535 (1992)
10. Fossil Protection Act, B.E. 2551 (2008)
11. Hazardous Substance Act, B.E. 2535 (1992)

12. Land Excavation and Land Filling Act B.E.2543 (2000)
13. Minerals Act, B.E. 2560 (2017)
14. National Park Act, B.E. 2504 (1961)
15. National Reserved Forest Act, B.E. 2507 (1964)
16. Provincial Waterworks Authority Act B.E. 2522 (1979)
17. Public Health Act B.E. 2535 (1992)
18. Tin Control Act B.E. 2514 (1971)
19. Wild Elephant Protection Act, B.E. 2464 (1921)
20. Wildlife Conservation & Protection Act B.E. 2562 (2019)

Viet Nam

Environmental laws of Vietnam provide comprehensive and institutional implementation of national policies on the management and utilisation of natural resources. For example, the Law on Water Resources and Law of the Sea was passed in 2012 to ensure transboundary operations on maritime disputes as well as internal use of water resources. Similarly, for inland water usage, a legal framework was created for the investigation/exploration, usage, management, and maximisation of freshwater resources for agricultural purposes. Meanwhile, laws have been also passed on disaster management and energy conservation to impose national to local-level prevention and responsive measures on the effects of climate change. Just recently, the Environmental Protection Law communicates principles, rights, and obligations of the public towards involvement in environmental-related activities.

1. Circular Detailing the Implementation of the Law on Environmental Protection in Response to Climate Change 2022
2. Decision by the Prime Minister on Forecasting, Warning, Transmitting Information on Disaster and Disaster Risk Levels 2022
3. Decree Detailing a Number of Articles of the Law on Environmental Protection 2022
4. Law of the Sea 2012
5. Law on Biodiversity 2008
6. Law on Energy Efficiency and Conservation 2010
7. Law on Environmental Protection 2020 (Chapter II)
8. Law on Irrigation 2017
9. Law on Natural Disaster Prevention and Preparedness 2013
10. Law on Preliminary Environmental Impact Assessment 2022
11. Law on Reducing Greenhouse Gas Emissions and Protecting the Ozone Layer 2022
12. Law on Water Resources 2012

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ANNEX 6. to the ASEAN Taxonomy for Sustainable Finance

Development and Maintenance of the ASEAN Taxonomy

Updated as of 6 November 2025

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1. DEVELOPMENT OF THE ASEAN TAXONOMY

1.1. National Taxonomy Development and Alignment

The role of sustainable finance was recognised by the ASEAN Finance Ministers and Central Bank Governors' Meeting (AFMGM) in 2019. This found that a common understanding of what is sustainable is essential for ASEAN to attract and orient capital towards sustainable investments and away from non-sustainable activities. For this reason, a credible regional sustainable finance taxonomy, which is interoperable with other regional and international taxonomies, was needed.

The ASEAN Taxonomy Board (ATB) was established in March 2021 to develop, maintain, and promote the ASEAN Taxonomy. Endorsed by the AFMGM, the four ASEAN financial sector workstreams - the ASEAN Capital Markets Forum (ACMF), ASEAN Insurance Regulators' Meeting (AIRM), ASEAN Senior Level Committee on Financial Integration (SLC), and ASEAN Working Committee on Capital Market Development (WC-CMD) - came together to drive this effort

The ASEAN Taxonomy has drawn on learning from and intends to be interoperable with the EU Taxonomy, as well as other taxonomies (i.e., national taxonomies in ASEAN). These respective taxonomies have also been under development prior to and in parallel with development of the ASEAN Taxonomy.

National ASEAN Member States (AMS) taxonomies vary in scope and approaches based on the different priorities, tolerances, and pathways in their own respective jurisdictions, but all also need to reflect the expectations of international investors.

Bank Negara Malaysia (BNM)'s Climate Change and Principle-based Taxonomy (BNM, 2021) utilises a principles-based approach and considers the state of economic development of the country and their nascent stage of climate risk management at which businesses and other economic agents operate. Although this Taxonomy mainly aims to address climate change, there are some biodiversity considerations that are also integrated within the Guiding Principles. Malaysia's capital market regulator, the Securities Commission Malaysia (SCM), also developed the Sustainable and Responsible Investment (SRI) Taxonomy (SC, 2022), to enable capital market participants to identify economic activities that are aligned with the environment, social, and sustainability objectives. The intention of this is to facilitate a more informed and efficient decision-making process for fundraising and investing. Moving forward, BNM and SCM are jointly developing the Malaysia Taxonomy on Sustainable Finance to serve as a unified national taxonomy. This taxonomy will be aligned to the ASEAN Taxonomy and utilise science-based technical screening criteria, including quantitative thresholds to enhance accuracy and quality of assessment.

The Financial Services Authority (OJK) of Indonesia is advancing sustainable finance initiatives, including the development of the Indonesia Taxonomy for Sustainable Finance (TKBI), a living document classifying economic activities that support Indonesia's Sustainable Development Goals and Net Zero Emission targets across economic, environmental, and social dimensions. TKBI Version 1, launched in February 2024, focused on the energy sector, while Version 2, introduced on 11 February 2025, expanded to include Construction and Real Estate, Transportation and Storage, and select Agriculture, Forestry, and Other Land Uses (AFOLU) sectors, specifically forestry and oil palm plantations. To promote TKBI Version 2,

OJK conducted socialisation events, with Phase 1 on 24 February 2025 and Phase 2 on 24–25 April 2025 (OJK, 2025).

The Singapore-Asia Taxonomy for Sustainable Finance (SAT), launched in December 2023 by the Monetary Authority of Singapore (MAS), sets out detailed thresholds and criteria for green and transition activities that contribute to Climate Change Mitigation across the sectors of Energy, Real Estate, Transportation, Agriculture and Forestry/Land Use, Industrial, Information and Communications Technology, Waste/Circular Economy, Carbon Capture and Sequestration. (MAS, 2023). It is the first taxonomy to pioneer the concept of a “transition” category with the use of a traffic light classification, in recognition of the importance of transition finance and the need to properly contextualise “transition” for the Asian region. Since its launch, Singapore banks such as DBS, OCBC, and UOB have integrated the SAT in their sustainable financing frameworks, while several corporates have also referenced the SAT to structure their sustainable financing solutions (MAS, 2025). The Singapore Sustainable Finance Association (SSFA) supports the SAT’s adoption through initiatives including an industry-led guidance to support implementation of the SAT (SSFA, 2025), a FAQ repository, and an upcoming training curriculum on the SAT.

The Thailand Taxonomy Board, comprising the Bank of Thailand (BOT), Securities and Exchange Commission (SEC), Stock Exchange of Thailand (SET), Department of Climate Change and Environment (DCCE), and other public and private sector stakeholders, published the Thailand Taxonomy Phase 1 in June 2023, covering Energy and Transportation sectors with a focus on Climate Change Mitigation (BOT, 2023). Phase 2, initiated in February 2024 and co-led by BOT, SEC, SET, and DCCE, expanded to include Agriculture, Construction and Real Estate, Manufacturing, and Waste Management, high greenhouse gas-emitting sectors, while incorporating additional environmental objectives such as climate adaptation, pollution prevention, and circular economy principles. Following stakeholder consultations from February 2024 and a public consultation period from 28 October 2024 to 10 January 2025 (BOT, 2024), Phase 2 integrated feedback on environmental standards, certification schemes, and Thai-specific practices, with the final version available for download from 27 May 2025 via the websites of DCCE, BOT, SEC, and SET. Similar to the ASEAN Taxonomy, the Thailand Taxonomy employs a traffic light classification system, adheres to Do No Significant Harm (DNSH) principles, and considers Social Aspects, drawing from international taxonomies (e.g., European Union (EU) Taxonomy, Climate Bond Initiatives (CBI) Taxonomy) and national climate policies (SECT, 2025).

In February 2024, the Bangko Sentral ng Pilipinas (BSP) and the Philippine Securities and Exchange Commission (PSEC) adopted the Philippine Sustainable Finance Taxonomy Guidelines (SFTG) for their regulated entities (BSP, 2024). The SFTG was formulated through collaborative efforts between BSP, PSEC, and the Insurance Commission Philippines (ICP) under the auspices of the Financial Sector Forum. The SFTG serves as a guide to determine whether an Activity is environmentally and socially sustainable, providing a set of guiding questions and decision trees to support regulated entities’ assessment in its initial version, which will be enhanced until a full taxonomy is developed. The SFTG uses a traffic light system, similar to the ASEAN Taxonomy and other AMS national taxonomies and also incorporates guidelines for DNSH assessments and minimum social safeguards. Currently, the SFTG uses a principles-based approach and where relevant, refers to the ASEAN Taxonomy.

On 4 July 2025, Viet Nam issued Decision No. 21/2025/QĐ-TTg, effective 22 August 2025, establishing a legal framework for classifying investment projects as “green” to support the development of a green finance market Viet Nam Government, 2025. The regulation, part of Viet Nam’s green growth and Climate Change Mitigation strategy, outlines environmental criteria for 45 eligible sectors across seven industry groups: renewable energy, clean transportation, green buildings, agriculture and forestry, water and wastewater management, energy efficiency, and pollution prevention. Projects must comply with environmental licensing and demonstrate positive environmental contributions to qualify. Verification of green status can be conducted by competent State agencies (e.g., Ministry of Natural Resources and Environment) or registered independent organisations, with specific application requirements varying by entity. Post-verification, project owners must notify the Ministry within 30 days for national tracking (DFDL, 2025) (VBMA, 2025).

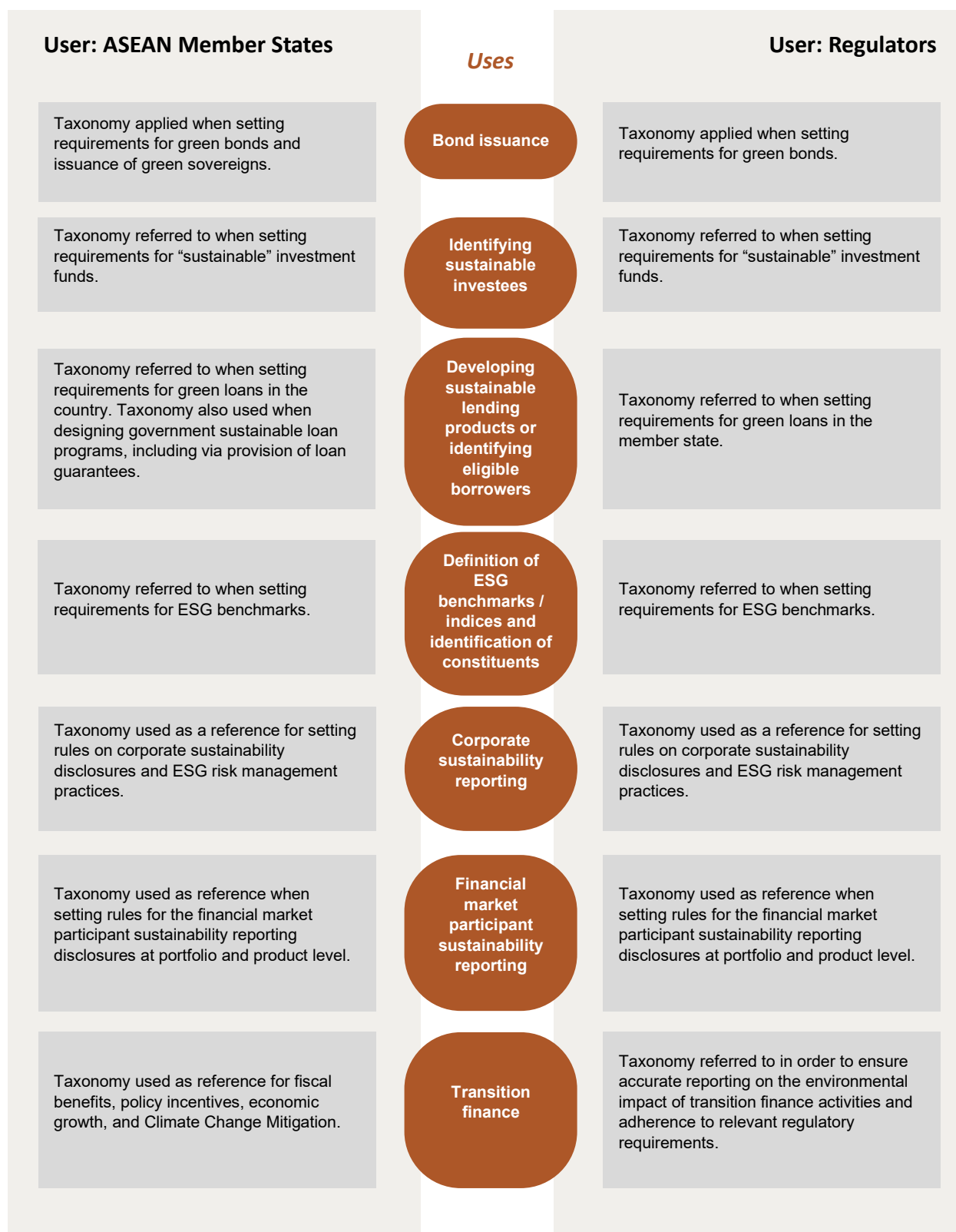
1.2. Interoperability with International Taxonomies

International investors have expressed a wish to see alignment with international standards to make green investment comparable in ASEAN. However, alignment of the ASEAN Taxonomy with international standards is not straightforward and investors understand the benefit of the ASEAN Taxonomy contextualised to the unique circumstances of ASEAN. There is a view that if the objective of the ASEAN Taxonomy is to share and standardise best practices, alignment with the other international taxonomies would provide potential benefits for bridging between the AMS and international investors. The ASEAN Taxonomy has been developed in parallel with other taxonomies in other parts of the world, including but not limited to, taxonomies which have been developed by the European Union, Australia, Canada, and South Africa, as well as AMS taxonomies, such as those developed in Singapore, Thailand and Indonesia. The ASEAN Taxonomy has sought to align its sunset dates with those of other taxonomies where feasible, noting that not all taxonomies share the same sunset dates due to differing regional priorities and timelines. All of these taxonomies are seeking to address similar Environmental Objectives (EOs) to the ASEAN Taxonomy. Due to the increasingly international nature of sustainable finance, all of these taxonomies have recognised the importance of interoperability across regions.

1.3. Taxonomy Applications

Figure 1 showcases the different potential uses for the ASEAN Taxonomy based on the following user groups (non-exhaustive):

- AMS / governments.
- Regulators (including but not limited to central banks, securities commissions, stock exchanges, etc.).
- Financial institutions.
- Providers of capital (including but not limited to investors, shareholders, asset/fund managers, companies, insurance providers etc.).
- Rating agencies.



User: Companies	Uses	User: Rating Agencies
Taxonomy applied in the process of issuing corporate bonds and reporting on bond sustainability credentials.	Bond issuance	Taxonomy applied to derive ESG ratings of bonds and issuers.
Taxonomy used as a reference for self-assessment to assess feasibility of receiving potential investments from investment funds and for promoting green credentials to potential investors.	Identifying sustainable investees	Taxonomy applied as a basis to provide ESG data to fund managers for sustainable investment fund design and investee selection.
Taxonomy used as a reference for self-assessment to assess feasibility of receiving potential green/sustainability loans and for promoting green credentials to potential lenders.	Developing sustainable lending products or identifying eligible borrowers	Taxonomy applied as basis in determining ESG ratings of credit institutions.
Taxonomy used as a reference for self-assessment to assess feasibility of being selected for ESG benchmarks and for promoting green credentials to ESG benchmark administrators and investors.	Definition of ESG benchmarks / indices and identification of constituents	Taxonomy applied to provide ESG performance data for the design of ESG benchmarks and identification of benchmark constituents.
Taxonomy applied in demonstrating green credentials without risk of greenwashing, improving competitiveness and attractiveness to sustainable investors and lenders, and improving sustainability-related risk management.	Corporate sustainability reporting	Taxonomy applied in the process of corporate sustainability reporting and to calculate ESG ratings for Companies.
N/A	Financial market participant sustainability reporting	Taxonomy applied in the process of deriving ESG ratings for Companies.
Taxonomy is applied to adapt business models and strategies that meet the demand of transition to low-carbon and sustainable economies.	Transition finance	Taxonomy applied in the process of assessing credit worthiness in light of transition mechanisms (such as incorporating ESG principles).

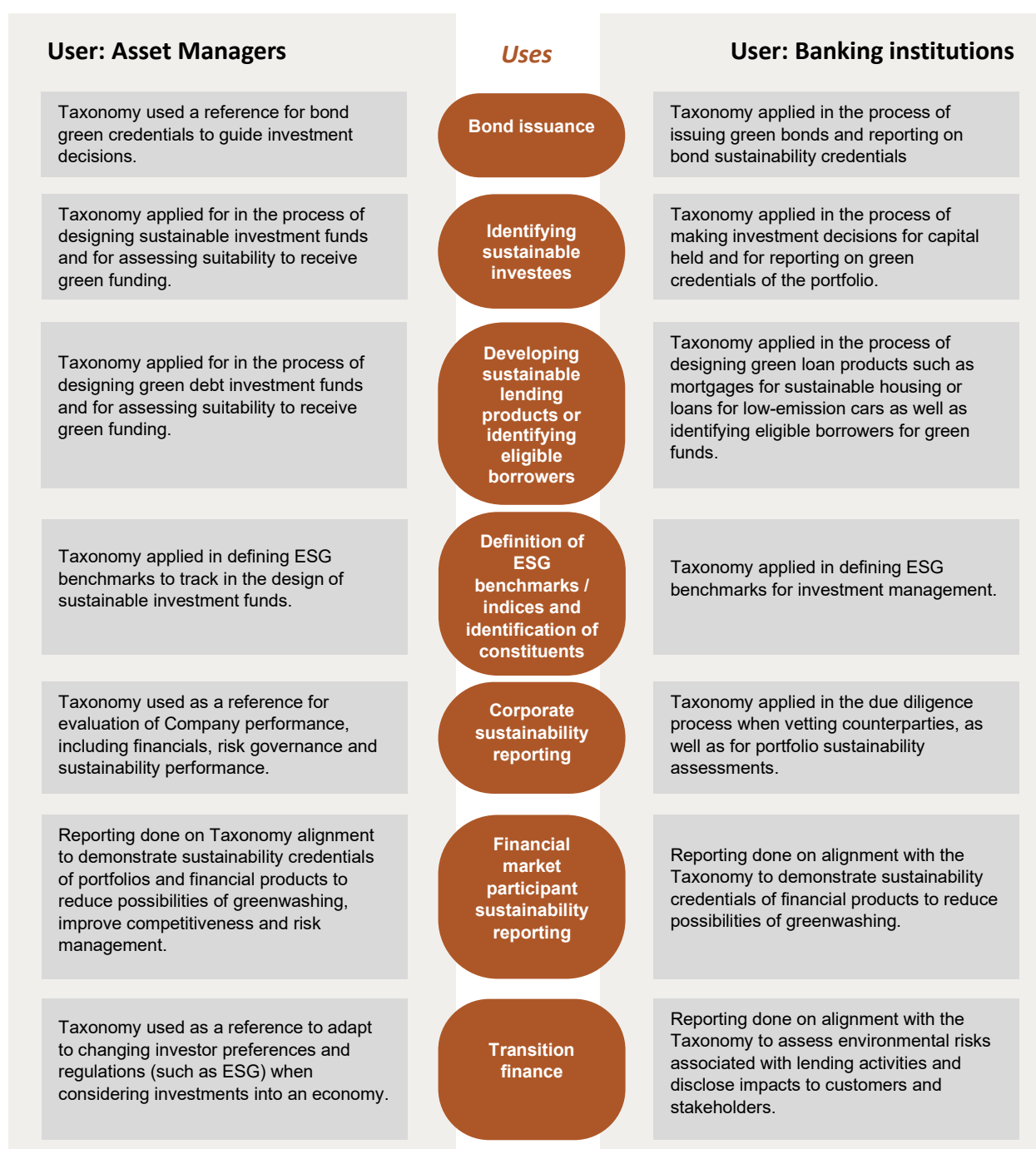


Figure 1: Potential Uses and Users of the ASEAN Taxonomy

1.4. Coal Phase-out

Greenhouse gas (GHG) emissions in ASEAN were projected to peak by 2030, with some scenarios anticipating net zero by 2050 (IEA, 2022). AMS committed to net-zero GHG emissions in the latter half of the 21st century through ambitious Nationally Determined Contributions (NDCs) and national regulations targeting high-emitting sectors, including energy, transportation, and manufacturing. Coal-fired power plants (CFPPs), the region's largest GHG emitters, remained a priority, with around 20 GW of new coal capacity under construction, mainly in Indonesia, Viet Nam, and the Philippines (IEA, 2020). As 38% of ASEAN's CFPPs were under eight years old and 90% under 35 years, with a typical lifespan of 40 years (Figure 2) (GEM, 2022), early phase-out was deemed essential.

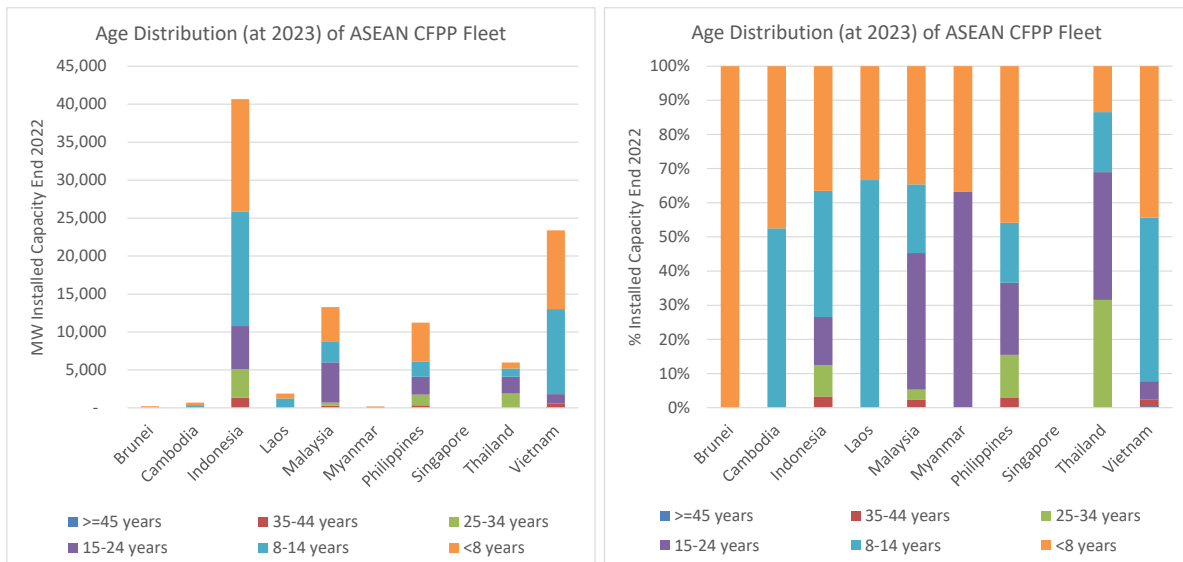


Figure 2: Average age of CFPPs in Southeast Asia

Initiatives and work programs are being developed which aim to promote the phase out of CFPPs in Asia, with proposed phase-outs already planned in ASEAN (ADB, 2022). These initiatives and work programmes include, but are not limited to:

- The Energy Transition Mechanism (ETM), developed by the Asian Development Bank, used public and private investments to finance early CFPP retirement and support clean energy adoption (ADB, n.d.).
- The Just Energy Transition Partnership (JETP) for Indonesia, backed by the US, EU, Japan, and Canada, promoted renewables and CFPP retirement while limiting new captive coal plants (Dezan Shira, 2023).
- The Managed Phaseout program by the Glasgow Financial Alliance for Net Zero (GFANZ) engaged financial institutions to fund early retirement of high-emitting assets like CFPPs (GFANZ, 2022).

A 2020 report by the Rocky Mountain Institute, Carbon Tracker, and Sierra Club recommended refinancing coal transitions, reinvesting in clean energy, and financing worker and community transitions (RMI, 2020). With much coal capacity in pre-construction, focus shifted to transitional fuels like natural gas and biowaste, alongside renewables, to replace coal.

The ASEAN Taxonomy Version 2, released in March 2023, classified coal phase-out (CPO) as a potentially Green or Amber Activity under the Plus Standard (PS) framework, with TSC outlined in Annex 1. Early phase-out relied on plant age and fixed calendar dates rather than emissions calculations, as age approximated emissions intensity—older CFPPs typically emitted more, though some newer plants could be high emitters based on design and fuel. Calendar dates ensured clear deadlines for net-zero alignment, avoiding the complexity of emissions-based methods, which were less practical for taxonomy users.

1.5. Stakeholder Consultations and subsequent versions

1.5.1. ASEAN Taxonomy Key Milestones

Since its inception in March 2021, the ASEAN Taxonomy has undergone a number of revisions enhancements. The key milestones of the ASEAN Taxonomy are shown in Figure 3



Figure 3: ASEAN Taxonomy Key Milestones 2021-2025

1.5.2. Version 1 Development

The ASEAN Taxonomy for Sustainable Finance (ASEAN Taxonomy) Version 1, published in November 2021, provided a conceptual framework to channel capital towards environmentally sustainable activities while accommodating the economic diversity of AMS. Developed through stakeholder consultations, this multi-tiered framework aligned broadly with global taxonomies, such as the EU Taxonomy, to ensure relevance and interoperability. It introduced four EOs: (EO1) Climate Change Mitigation; (EO2) Climate Change Adaptation; (EO3) Protection of Healthy Ecosystems and Biodiversity; and (EO4) Resource Resilience and Transition to a Circular Economy. Version 1 outlined two assessment frames: the Foundation Framework (FF), using qualitative guiding questions for accessible classification across diverse markets, and the Plus Standard (PS), designed to incorporate Technical Screening Criteria (TSC) for objective evaluations, though no TSC were established in this initial release.

1.5.3. Version 1 Stakeholder Consultation

After publishing Version 1 of the ASEAN Taxonomy, the ATB held a stakeholder consultation to seek feedback on the conceptual framework of the ASEAN Taxonomy. Online surveys, webinars, roundtable discussions and individual interviews were organised between May to July 2022.

The consultation covered a targeted group of stakeholders with an interest in the ASEAN Taxonomy. Survey responses were gleaned from 181 individuals representing 160 different organisations – covering all AMS and stakeholders beyond the ASEAN region. The consultation was conducted with approximately 393 registrants across 20 roundtables (of various sectors/industries), and 27 independent/individual interviews with organisations.

Generally, stakeholders are supportive of the ASEAN Taxonomy initiative and highlighted several challenges to be addressed, including:

- Clarity of definitions;
- Design of the ASEAN Taxonomy for simplicity and ease of use;
- Transparency of reporting;

- Interoperability and recognition (within ASEAN and across other regions in the world); and
- Access to usable and consistent data.

More than 80% of the stakeholders commented on the importance of the ASEAN Taxonomy providing a common language. The commonality of language was an issue raised particularly by those stakeholders whose operations are transitional by nature; such as airlines, maritime operators, and international development banks.

Clarity of definitions

Some stakeholders suggested that the term 'Sustainable Finance' implied the ASEAN Taxonomy should have 'social', as well as 'environmental' objectives. Others were of the opinion that Social Aspects should be seen as essential minimum criteria for environmental Activities but should not be seen as an explicit objective of the ASEAN Taxonomy.

Stakeholders also highlight the need for further clarity in the concept of an Amber classification. While Amber classification is positively received in principle by stakeholders, it was not necessarily clear that the function of the Amber classification was understood uniformly. This confusion is compounded by the fact that Version 1 of the ASEAN Taxonomy has differing definitions of the Amber classification under the FF and the PS. It was widely recognised by stakeholders that economic development is a key priority in ASEAN thus requiring a transition phase as the region approaches a 'pure green' future. Several stakeholders also stated that the Amber classification could be a useful tool for investors to assess the relative 'greenness' of a portfolio as well as for assessing sustainability-linked bonds. On the other hand, some stakeholders believed that the Amber classification could represent a potential investment signal which might be relevant at the Company or portfolio level.

Design of the ASEAN Taxonomy for simplicity and ease of use

While the Tier system was generally regarded as appropriate for ASEAN, there were concerns about its implementation. There was a perception that, while the same EOs and ECs are applied across ASEAN, assessment results will differ as each AMS faces different contexts. Some stakeholders also highlighted the difficulty to assess EOs 2-4 given that they seek to address an impact which may be specific to certain areas, as opposed to EO1, which is more global in nature.

Although thresholds might need to be adjusted to meet the needs of the specific AMS, it must be possible to compare projects and to track environmental performance over time. Stakeholders suggested that instead of defining thresholds, for some industries it might be easier to define the kind of technology that can be categorised as Green, Amber, or Red.

Finally, there were mixed opinions on what should be done with investments which fulfilled conditions of a Tier which has since been retired. Some participants saw dangers in grandfathering as it could pose the risk of gaming the system. New long-term projects could be implemented just before the criteria becomes stricter to avoid the need to meet higher standards. The opposing view to this was that it might be difficult to develop projects in the knowledge that future refinancing might be limited by requirements to meet newer and higher standards. In this case, a ban on grandfathering would mean that such projects could find themselves outside the ASEAN Taxonomy Green or Amber classification.

Transparency of reporting

During the stakeholder consultation process, there was considerable interest in the setting, review, and eventual retirement of metrics and tiers. Many stakeholders also highlighted the issue of information transparency by issuers which is critical to assess potential investments. Therefore, the ASEAN Taxonomy should consider useful and relevant metrics and thresholds and set minimum requirements that can help facilitate data transparency.

Interoperability and recognition (within ASEAN and across other regions in the world)

Some stakeholders shared feedback on the ASEAN Taxonomy being linked to the EU Taxonomy and expressed a desire for less restrictive thresholds to be set in ASEAN than might be the case in the EU. On the other hand, this could result in investors seeking to invest in countries with the most lenient criteria, resulting in a 'race to the bottom'. The practicality and usability of the ASEAN Taxonomy is key in ensuring its uptake. Consultations showed consensus in the necessity for clear definitions and guidance, with 53% of responses regarded that simplicity and clarity enables them to convince their organisations to adopt or align with the ASEAN Taxonomy.

There was a consensus across stakeholder interactions that commonality between national taxonomies and the ASEAN Taxonomy is desirable, as having different taxonomies could lead to a fragmented landscape, creating competition instead of cooperation. It was felt that the ASEAN Taxonomy should provide an overarching flexible framework for national taxonomies. However, it was recognised that uniting national taxonomies is not a simple expectation due to differing national priorities, tolerances, and pathways. Interoperability is thus necessary to ensure the end goal can be achieved under the various national pathways.

International investors also expressed a wish to see alignment of the ASEAN Taxonomy with international standards to make green investment easier in ASEAN. However, this is not straightforward, and investors can understand the benefit of the ASEAN Taxonomy being tailored to ASEAN circumstances. There is an opinion that if the objective of the ASEAN Taxonomy is to share and standardise best practices, alignment with the EU Taxonomy could provide potential benefits for bridging these differences between AMS and international investors. On the other hand, many stakeholders also made comparisons of the proposed ASEAN Taxonomy with the Climate Bond Standards (CBS) and associated CBI Taxonomy, as well as the International Capital Market Association (ICMA) Green Bond Principles (GBP), to determine interoperability with international standards and applications.

Access to usable and consistent data

Most stakeholders felt that data issues were the single greatest barrier to successful implementation of the ASEAN Taxonomy, as it has been in other taxonomies. The mismatch in different understandings of data may result in TSC being applied inconsistently. Some AMS and private entities evidently already collect and store data, but there is a perceived unwillingness to share data for confidentiality and competition reasons. Globally, governments already hold credible data but are not willing to disclose said data as it may have reputational implications. Continued self-reporting, which is currently the norm, could result in different organisations interpreting screening criteria thresholds differently even when applying the same taxonomy.

1.5.4. Version 2 Development

ASEAN Taxonomy Version 2, released February 2023, built on the framework established in Version 1. ASEAN Taxonomy Version 2 refined the framework based on stakeholder consultation feedback obtained in mid-2022.

ASEAN Taxonomy Version 2 clarified the two assessment frames: FF, with qualitative guiding questions and decision trees for accessibility and illustrative use cases. PS used TSC with quantitative and qualitative thresholds for rigorous classification for all EOs relevant to the respective Activity. TSC were developed for the energy sector (Electricity, Gas, Steam and Air Conditioning Supply) and Carbon Capture, Utilisation, and Storage, both critical for sustainability considering all EOs. TSC classified activities as Tier 1 (Green), Tier 2 (Amber T2), or Tier 3 (Amber T3), with Amber Tiers transitioning to Green via a “sunset” mechanism.

A significant addition to ASEAN Taxonomy Version 2 was the coal phase-out Activity, which is described in more detail in Section 1.4.

1.5.5. Version 2 Stakeholder Consultation

The ASEAN Taxonomy for Sustainable Finance Version 2 was published on 27 March 2023 and was subsequently updated on 9 June 2023 with TSC for additional activities. Upon its release, the ATB commenced a stakeholder consultation to gather feedback from a wide range of stakeholders on Version 2.

The ASEAN Taxonomy Consultation comprised three phases: a written feedback survey, roundtable discussions and stakeholder interviews. The survey garnered 132 responses from 1,303 survey recipients, forming the basis of findings. Roundtables delved into technical topics, with ten sessions held. Stakeholder interviews targeted specific groups. Additionally, consultation sessions were conducted and offline feedback was analysed for insights.

Usability and Interoperability of the ASEAN Taxonomy

The ASEAN Taxonomy is seen as valuable for guiding stakeholders who lack their own transition pathways. However, achieving compatibility with national taxonomies across the region is crucial, necessitating a common framework and understanding. There is uncertainty surrounding the application of national and regional taxonomies, especially for activities spanning multiple AMS. Conducting mapping and comparison exercises between the ASEAN Taxonomy, the EU Taxonomy, and national taxonomies could aid in identifying similarities and differences, enhancing clarity and credibility in transition efforts.

Transition Effort

There is a necessity to evaluate real transition pathways in ASEAN by examining NDCs and individual country pathways. Investors in the region remain cautious about the credibility of transition financing due to concerns about greenwashing and the absence of consistent guidelines. Addressing this may entail significant support in understanding the concept and its execution.

Environmental Objectives and Essential Criteria

The ASEAN Taxonomy's guidance on both EOs and EC is broad enough for application, but this leads to varied interpretations, hindering result comparability. Alignment with international standards is necessary to meet Social Aspect requirements for international investors. Emphasising a just transition was identified as crucial for future Taxonomy versions, underlining its significance among Social Aspects to be incorporated.

Entity/Portfolio Assessment

ATB guidance on entity/portfolio assessment methodology is preferred, although some financial institutions may opt to stick with their existing internal methods. Aligning this methodology with the EU Taxonomy is also favoured, despite adjustments needed for Amber Tiers. The complexity of calculations and data availability pose significant challenges in these assessments, underscoring the importance of validation to ensure accuracy.

Foundation Framework

There is ambiguity regarding how to assess an Activity's significant contribution to an EO. This can be addressed either by determining positive contributions or through a scoring system, but challenges may arise with the latter potentially conflicting with the principles-based nature of the FF. In a weighted scoring assessment, consistency within industries is preferred, but differences across industries are acknowledged due to varying GHG emissions. Balancing this for a sector-agnostic FF poses a challenge.

Plus Standard

Stakeholders require more guidance on the implications of decreasing thresholds and sunset dates on the classification of activities already assessed under the ASEAN Taxonomy, considering companies' readiness to transition and technological availability. Disclosure regulations are necessary to improve data availability, but credibility requires verification, substantiation, and standardised reporting. Stakeholders view the ATB's role as crucial in resolving technical issues, such as the applicability of an Amber Tier under EO2 and the segregation of activities like heating/cooling production from bioenergy exclusively, expecting thorough and robust assessments.

TSC for the Energy Sector

National policies and regulations, such as NDCs and energy accounting, serve as primary references for companies when determining TSC in the energy sector. TSC are viewed as credible and achievable, but their specific feasibility varies based on factors like national context, required investment, and technological maturity. The International Energy Agency (IEA) Southeast Asia Sustainable Development Scenario (SDS) is considered highly relevant due to its granularity and alignment with the region's circumstances, unlike global pathways. Some stakeholders also suggested alternative sources for consideration.

Coal Phase-Out

Financing CPO projects in the region has been challenging due to stakeholder complexity and disagreement over criteria. While various views on CPO criteria were shared, there is a consensus on the need to test and refine them in the market. Specific terminologies like "built" and "best-in-class" technology need clarification. Suggestions include using "financial close" instead of "built" and aligning with the Glasgow Pact's timeline. Tier 1 criteria for CPO are agreeable, but Tier 2 and Tier 3 criteria, particularly Amber Tier 3, are subject to debate. Stakeholders propose extending the operation duration for Amber Tier 3 to incentivise phase-out of older plants. Some suggest not defining timelines for phase-out, instead relying on strategic outlooks like the ASEAN Energy Outlook for guidance.

TSC Governance

The TSC validity period is suggested to be set at 5 years, with considerations for technological advancements and other developments. However, a minority of stakeholders argue for a longer lead time (up to 10 years) for any future tightening of TSC for the energy sector due to

the lengthy development cycle of large power plant projects. It is also emphasised that subsequent TSC should be published at least 12 months before the current ones expire to allow industries to adapt and plan effectively.

Future TSC Development

Sector-specific transition or decarbonisation pathways and levers, like sustainable aviation fuel for aviation and Carbon Risk Real Estate Monitor (CRREM) decarbonisation pathways for construction and real estate, could be taken into account when establishing TSC.

Grandfathering

Some stakeholders favour market-led grandfathering rules, acknowledging that various users may have differing perspectives on the specifics. However, there is a preference for the ASEAN Taxonomy to define grandfathering rules to some extent. These rules should be principles-based rather than prescriptive, aligning with market principles.

Market and Stakeholder Consultation Process

The written feedback for the consultation had a 10% response rate, slightly lower than the previous year, likely due to the technicality and depth of questions. Stakeholders expressed feeling overwhelmed by the proliferation of ESG-related standards and guidelines. Awareness levels varied across organisations, with financial institutions showing greater awareness compared to others. Responses lacked detailed information on challenges and suggestions for refinement areas, particularly in technical aspects like grandfathering and TSC governance. Financial institutions emerged as the most interested stakeholders. Language barriers may have hindered stakeholder participation, though countries with advanced national taxonomies showed more interest. Many respondents chose "don't know / no opinion," indicating a need for more time to understand the ASEAN Taxonomy, but expert feedback was received from sector experts and stakeholders with in-depth knowledge. Feedback during roundtables was limited due to participant hesitance in sharing opinions.

1.5.6. Version 3 Development

The ASEAN Taxonomy Version 3, first issued in December 2024, advanced the framework established in Version 2 by refining its structure based on stakeholder consultations conducted in 2023. It strengthened alignment with global standards such as the EU Taxonomy while addressing regional priorities. ASEAN Taxonomy Version 3 updated the PS with new TSC for these sectors:

- Construction and Real Estate
- Transportation and Storage

1.5.7. Version 3 Stakeholder Consultation

The stakeholder consultation for the ASEAN Taxonomy Version 3, conducted from June to October 2024, engaged 109 stakeholders from 94 organisations across various sectors. Stakeholders validated the ASEAN Taxonomy's robustness, structure and alignment with international sustainability standards. The ASEAN Taxonomy was generally praised for its structured approach, offering clear classification through Green and Amber Tiers which support the gradual transition to low-carbon economies, accommodating industries at different sustainability development stages. No critical flaws were identified.

Some areas were highlighted for enhancement, particularly in the practical application and specificity of sector criteria. Clarifications were requested in TSC where stakeholders felt there

was a lack of detailed explanations and examples for effective implementation. Terminology also presented challenges in certain cases, and there were requests to clarify those terms. Stakeholders further noted the need for clearer guidelines on how to transition from one Tier to the next Tier, particularly from Amber 2 to Green, to enhance the ASEAN Taxonomy's practical usability.

Beyond these specific suggested improvements, there was a call for broader market engagement through awareness campaigns, training, and capacity building to boost understanding and adoption, especially among small and medium-sized enterprises (SMEs). Additionally, with the growing number of taxonomies internationally, ensuring interoperability with global standards is vital for facilitating broader adoption.

Useability and Implementation

Key points discussed included improving the ASEAN Taxonomy's clarity, overcoming barriers to implementation, and navigating the proliferation of taxonomies globally. Whilst on the whole, stakeholders viewed the ASEAN Taxonomy positively, noting its simplicity and accessibility, there were respondents who use it as a reference rather than their primary tool or a central framework. There was a strong call for increased awareness, capacity building and clearer communication of its benefits to enhance adoption. Interoperability with other taxonomies was highlighted to align green finance initiatives regionally or globally, with suggestions for a comprehensive document on the equivalence of the different frameworks. There was a preference for digital accessibility, with stakeholders advocating for an online, searchable version of the ASEAN Taxonomy.

Transition Efforts

Stakeholders acknowledged the value of Amber Tiers in assessing environmental impacts and accommodating regional differences but highlighted challenges such as the need for clearer benchmarks in general, difficulties in attracting funding and technological constraints in specific sectors like aviation. Consultation outcomes confirmed broad support for the inclusion of Amber Tiers, with suggestions on refining distinctions between Amber subcategories and integrating external guidelines, such as those from the various Green Building Certification (GBC) schemes, for better alignment and interoperability with global standards. Sunset dates for the Amber Tiers were proposed to align with national policies and technological capacities.

TSC for Construction and Real Estate

While stakeholders generally viewed the TSC as rigorous and credible, they raised concerns about varying feasibility for implementation across AMS, the clarity of scope for Activities, and the adequacy of local standards. Specific suggestions included incorporating embodied emissions, differentiating construction from building operations and improving guidance for ASEAN Taxonomy users. Challenges related to implementation were highlighted, especially for emerging markets with limited resources, data and expertise.

Feedback also emphasised the need for clearer alignment between international standards like LEED and local certifications, addressing regional climatic and material differences. Stakeholders suggested pathways for recognising GBCs aligned with Climate Change Adaptation and proposed additional criteria for renovations, such as eliminating gas infrastructure and demonstrating performance improvements. Future updates to the TSC were recommended to align with objectives like the IEA's 'zero-carbon-ready' buildings, focusing on reducing emissions from fuels, refrigerants and materials. Expanding inclusivity and

practicality in the TSC could help foster broader adoption and enhance sustainability transitions in the region.

TSC for Transportation and Storage

Stakeholders highlighted the need for clearer definitions, particularly for terms like 'technologically and economically feasible', which could lead to inconsistent application.

Questions about fuel classification were raised, including the definitions of 'renewable' and 'fossil fuels', with calls for specific examples to avoid ambiguity. Stakeholders from the water transport industry also suggested a shift from tank-to-wake to well-to-wake emissions for water transportation to better reflect lifecycle impacts. The scope of TSC for infrastructure, including distinctions between essential and non-essential facilities, were also discussed.

Technological gaps, such as the feasibility of hydrogen-powered aircraft and unclear criteria like 'dedicated to fossil fuels', present implementation challenges. Regional disparities further complicate TSC application, with different nations having differing states of readiness.

Sector-specific challenges include the high costs of electrification for land transport, limited adoption of alternative fuels in maritime, and a supply shortage of sustainable aviation fuel for air transport. Stakeholders provided suggestions for future developments, such as electric taxiing criteria, TSC for renewable energy-ready ships, and expanding air transport coverage.

Do No Significant Harm

Discussions on DNSH focused on its appropriateness, clarity and practicality. Stakeholders highlighted challenges in implementing DNSH due to varying local regulations, underdeveloped infrastructure, and sectoral differences, which complicate alignment with global sustainability goals. Practical application also requires balancing circular economy principles with procurement realities, as these may conflict in certain contexts.

The need for clearer guidance on applying the lifecycle assessment (LCA) and climate risk and vulnerability assessment (CRVA) checklists was also raised, as interpretations of 'significant harm' vary. To address this, stakeholders recommended frequently asked question (FAQ) sheets, case studies, and clarifications.

Grandfathering

Discussions addressed the appropriateness of Green Tier grandfathering rules and potential development for Amber Tiers. Stakeholders emphasised stability and reassurance for investors while ensuring grandfathering does not hinder transitions. There was broad agreement on the 7-year grandfathering period for Green Tier TSC but flexibility may be required for certain sectors. For example, building certifications typically renew every 3 years, but airlines or shipping may need longer periods due to unique asset cycles. Clear timelines for phasing out grandfathered assets are needed to balance stability and progress. While stakeholders supported the Amber Tier grandfathering rules, specific suggestions were limited, and stakeholders looked to the ATB to develop clear guidance for these transitional categories.

Future TSC

Activities proposed for the future version include crop cultivation, regenerative farming, water management, and sustainable land management in agriculture. In manufacturing, focus areas include energy management in sectors like iron, steel, and cement. Water supply and waste management suggestions include methane avoidance and plastic recycling. Additionally,

information and communications for agriculture and energy efficiency in data centres were considered critical for future updates.

1.6. Syndication Exercise

The usability of the ASEAN Taxonomy needs to take into consideration the diverse situations that each AMS faces and the range of financial sector maturity levels that exist across the region. Therefore, the ASEAN Taxonomy must remain aligned with AMS national taxonomies, which have been developed or are in the process of being developed by Indonesia, Malaysia, the Philippines, Singapore, Thailand and Viet Nam. These national taxonomies are, or will be, consistent with the ASEAN Taxonomy, thereby reinforcing its role as the common language for sustainable finance in the region as well as the importance of an inclusive, overarching guide for ASEAN.

A syndication exercise was conducted during the development of Version 2 (September 2022 – January 2023) and Version 3 (January – March 2024). This process involved an online survey and country-level interviews with AMS national taxonomy developers. Its objective was to assess alignment of key design elements and TSC between the ASEAN Taxonomy and national taxonomies, in order to foster interoperability, while also serving as a neutral platform for knowledge sharing.

In October 2025, a further syndication exercise was undertaken to support the development of ASEAN Taxonomy Version 4. This exercise reflected the expansion of the ASEAN Taxonomy to cover three new focus sectors – Agriculture, Forestry and Fishing (AFF), Manufacturing, and Water Supply, Sewerage, Waste Management and Remediation (WSSWMR) – as well as two enabling sectors – Information and Communication (IC) and Professional, Scientific, and Technical Activities (PSTA). The new round of syndication therefore had a broader scope than earlier versions, enabling national developers to explore criteria across five additional sectors.

The exercise included a desktop review of publicly available AMS national taxonomies and applied a detailed comparison of the ASEAN Taxonomy against the Singapore, Indonesia and Thailand taxonomies, which had published sector-specific TSC.

The syndication process found that, for comparable Activities, the thresholds developed for ASEAN Taxonomy Version 4 were generally able to encompass or align with those of the AMS national taxonomies. This was consistent with the inclusivity principle of the ASEAN Taxonomy, which recognises the diverse circumstances of AMS and their different starting points. The EOs in the ASEAN Taxonomy and national taxonomies were again found to be highly comparable, giving rise to additional interoperability.

As with earlier versions, significant overlaps were found between ASEAN Taxonomy Version 4 and the AMS national taxonomies in the Energy, Transportation and Storage, and Construction and Real Estate sectors. With the addition of AFF, Manufacturing, WSSWMR, IC and PSTA, further overlaps emerged, although not all AMS have yet developed TSC for these sectors. Where comparator criteria existed, the Green TSC for EO1 were found to be largely interoperable. Variances were more pronounced in the Amber categories: AMS national taxonomies generally provide for a single Amber category, whereas ASEAN Taxonomy Version 4 retains a two-tier Amber structure (Amber Tier 2 and Amber Tier 3). This structural difference continues to reflect differing national perspectives on what constitutes a transitional Activity.

Overall, the syndication outcomes indicated that ASEAN Taxonomy Version 4 remains broadly aligned with national approaches, while expanding its coverage to new sectors. Further work is required as AMS continue to issue more detailed criteria in these sectors. Continuous syndication will remain essential to ensure interoperability and to consolidate the ASEAN Taxonomy's position as the common framework for sustainable finance in the region.

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2. MAINTENANCE OF THE ASEAN TAXONOMY

2.1. General Concepts and Responsibilities

2.1.1. Actions by the ASEAN Taxonomy Board

The ATB is responsible for ensuring proper maintenance of the ASEAN Taxonomy, including:

- Consultation with representative bodies and relevant stakeholders from the AMS;
- Delegation of tasks as appropriate to competent bodies; and
- Approval of any changes to the ASEAN Taxonomy or any of its parts.

The ATB is the ultimate approval body for Activities, Tiers, TSC, and TSC review.

TSC will be adjusted over time, in line with technological developments within AMS. This is particularly the case for Amber Tiers (Tier 2 and Tier 3), as it is expected that the TSC of these Tiers will progressively become more stringent and will ultimately be phased out. The phasing out of Tiers in this context is referred to as ‘sunsetting’.

Figure 4 shows an example of Tier setting for a representative Activity in which TSC for Tiers 2 and 3 are tightened over time and eventually sunset. This Figure is **for example purposes only**; refer to Annex 1 for planned TSC by Activity.

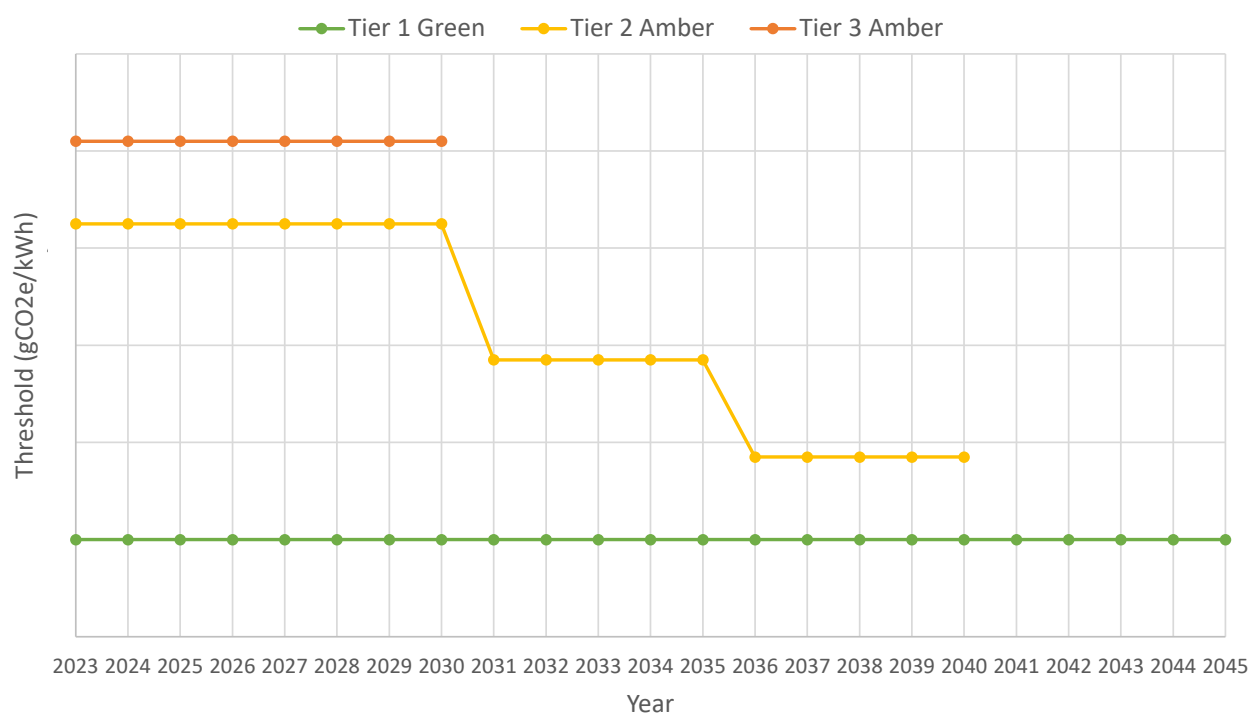


Figure 4: TSC Setting for each Activity Tier

2.1.2. Actions by the ASEAN Member States

Whilst the setting of TSC for each Activity Tier is the responsibility of the ATB (see Section 2.1.1), AMS can set the following policies for Activities conducted within their jurisdictions:

1. The applicable assessment frames (either the FF or PS, or both) for specific Activities;
2. For the PS, specify which Tier(s) may be used as a basis for classification; and

With respect to item (1), whilst the choice to allow continued use of the FF for each Activity lies with the AMS, the ATB encourages adoption of the PS for each Activity where feasible.

Item (2) above is a particularly significant policy choice as it effectively represents the pace of transition of individual AMS. AMS should align themselves with Tiers which reflect their national goals and/or transition policies on an Activity-by-Activity basis. Once AMS have selected the PS Tier as a baseline, Activities may no longer be classified under Tier(s) lower¹ than the Tier selected by the AMS. In this way, AMS may effectively exclude Tiers which have nominally still not been sunset by the ATB. For example, if an AMS has selected Tier 2 as baseline for an Activity, that Activity may be classified based on the Tier 1 or Tier 2 TSC, but not on the Tier 3 TSC, even if Tier 3 has not yet been sunset by the ATB.

Each AMS is responsible for setting out and enforcing any specific requirements for users of the ASEAN Taxonomy within its jurisdiction.

2.2. Maintenance of Tiers and TSC

2.2.1. TSC Review and Adjustment

In order to promote continued sustainability enhancement across ASEAN, Activities and their respective TSC will undergo periods of review and may be adjusted to ensure they remain relevant in their contribution toward sustainability. As technologies enabling the enhanced sustainability of an Activity develop, TSC for that Activity may become more restrictive.

The ATB will establish a TSC Review Body (TRB), which may propose setting, review, adjustment and sunseting of TSC. Refer to Section 2.5 for more information.

2.2.2. Tiers and TSC Maintenance Tasks

A summary of the tasks for the maintenance of TSC is shown in Table 1.

Table 1: Summary of Setting, Review, Adjustment and Sunseting of TSC

Type	Description / Definition
TSC Setting	- TSC are set for each Tier applicable to an Activity. - Future TSC for subsequent TSC Periods will also be set until the Tier is sunset for that Activity. - The extant TSC at the time of assessment must be used as the basis of classification of an Activity under the PS, in accordance with Section 4.4.1 of the Main Report. - TSC are considered extant until an adjusted TSC has been approved and published by the ATB.
TSC Period	- The TSC Period is the period between the setting of a TSC and the subsequent adjustment of that TSC. - A TSC Period of 5-years is set as standard but may vary by Activity at the discretion of the ATB, in line with expected developments in technology in the coming years. - The TSC for all Tiers of the same Activity may be adjusted at the end of each TSC Period, where applicable, in line with Pre-set TSC. - The TSC Period ends when an adjusted TSC come into force.

¹ In the ASEAN Taxonomy, Tier 1 is the highest Tier and Tier 3 is the lowest Tier.

	At this point, a new TSC Period commences, except when the Tier is sunset (see below).
Sunsetting	- Sunset date must be confirmed 12 months before sunset, after which time no change may be made to the sunset date. - The sunsetting recommendation must be approved by the ATB and the decision published. - When a Tier has been sunset, all TSC related to that Tier can no longer be used as the basis for classification of Activities.

2.2.3. Tiers and TSC Maintenance Cycle

With respect to the tasks described in Table 1 of Section 2.2.2, the maintenance of Tiers and TSC shall follow a standard cycle. The cycle may be adjusted with the approval of the ATB where warranted.

The cycle shown in Table 2 will only apply where the ATB decides to make changes to proposed future TSC. Where no such adjustments are made, TSC shall follow the originally proposed future TSC (see Annex 1). All revisions to TSC must be published in accordance with the timeline shown in Table 2.

Table 2: Tier and TSC Maintenance Cycle for an Activity

#	Task Cycle	Description	Time
1	TSC1 Set	The first TSC are established for Activity and become applicable. At this time, the duration of the first TSC Period (TSC Period 1) is set. Future TSC may be set for each Activity Tier until sunset date.	Start of Tier / TSC.
2	Start of TSC2 Review	The TRB commences review of TSC.	30-36 months before end of TSC Period 1.
3	TSC2 published for comments	TRB proposes adjustments to TSC1 (i.e., the proposed TSC2). With ATB approval, the proposed adjustments are published for stakeholder consultation.	24 months before end of TSC Period 1.
4	TSC2 final version published	TSC2 are published following ATB approval.	12 months before end of TSC Period 1.
5	TSC2 becomes extant	TSC1 is no longer extant and has been replaced by TSC2.	Refer to Table 3
For subsequent TSC periods, repeat steps 2 – 5 in a five-year cycle.			

2.2.4. Considerations in TSC Setting

The generic Guiding Principles for TSC setting are covered in Section 3.1 of the Main Report. The bases behind the setting of TSC for each individual sector are described in the respective sector Appendices in Annex 1.

When reviewing and setting TSC, the following items will be considered:

- Existing environmental indicators and assessment frameworks;
- Specificities of the infrastructure sector; and

3. Environmental, social, and economic externalities.

Setting of TSC must also consider whether the establishment of those TSC would:

1. Give rise to stranded assets, and lock-ins; or
2. Would result in inconsistent incentives; or
3. Would have any other adverse impact on financial markets.

TSC should ensure that relevant Activities within a specific sector can demonstrate that they are making a contribution to at least one EO. To avoid overly burdensome compliance costs on users, TSC should be clear, practical, and easy to apply. Compliance can be verified within reasonable cost-of-compliance boundaries.

2.2.5. Sunsetting

The ASEAN Taxonomy is designed to have Tiers 2 and 3 (Amber Tiers) gradually phased-out over time and that all Activities in all AMS which are assessed under the PS will eventually use the Tier 1 (i.e., Green) TSC. The process of phasing out a Tier for an Activity, and therefore the TSC associated with that Tier, is known as 'sunsetting'.

The decision to sunset a Tier must also be approved, adopted, and published by the ATB and will normally occur at the end of a TSC Period, which will effectively become the last TSC Period for that TSC.

Sunsetting of an Activity Tier does not necessarily mean that all Tiers for that Activity must be sunset; e.g., sunsetting Tier 3 for an Activity does not necessarily mean that Tier 2 will be sunset at the same time. Also, sunsetting of a Tier for one Activity does not necessarily have an impact on the same Tier for a different Activity. For example, sunsetting of a Tier 3 for a power generation Activity does not mean that Tier 3 could not exist for a transportation Activity.

2.2.6. Future pathway of the Tiers within TSC Activities

When each Activity Tier is initially established by the ASEAN Taxonomy, TSC become applicable. Future TSC may also be pre-set for each Activity for each Tier. Future TSC represent proposed changes in TSC for that Activity by Tier until sunset date and intended to be indicative. These pre-set TSC may change depending on technical advancement.

Whilst it is possible that qualitative TSC may change over time, it is not possible to provide future indications for such changes. It is assumed that Activities will adapt to any changes to qualitative TSC over time. For avoidance of doubt, an Activity classified according to its nature (e.g., wind and solar power generation) will continue to be classified in this way in the future.

2.3. Process and Maintenance of other Components

2.3.1. Review and Updating of Components

The ATB may review other components of the ASEAN Taxonomy over time. The timeline and period of review will be streamlined with the schedule for reviewing and updating the TSC for Activities under the PS.

Components that will be subjected for review may also include, but are not limited to the following:

- EO and EC guiding questions: Improve the guiding questions in response to future feedback and changes (e.g., technological advancements that affect the way Activities meet the EOs), to provide better guidance to future users;
- Social Aspects: Review the extent and scope of assessments in line with developments at the regional and international level;
- Processes and procedures for review and update of TSC;
- Changes to other processes and procedures as may be required.

2.4. Review Periods

As has been stated in Annex 1, the ASEAN Taxonomy categorises TSC into three types based on their review and update mechanisms:

1. Enduring
2. Updates Pre-set
3. Review Date Pre-set

This Section relates principally to Activity TSC marked as ‘Updates Pre-set’ in Annex 1. Notwithstanding this, the ATB retains the right to subject any TSC to the process described here.

Unless otherwise specified in Annex 1, TSC Period 1 is deemed to:

- Commence at the original publishing date for each respective Activity; and
- Conclude on 31 December 2030 for all Activities.

In accordance with this timeline, TSC1 will follow the schedule shown in Table 3.

Table 3: TSC Period 1 review schedule

Milestone	Date
TSC Period 1 starts	Original publishing date for each respective Activity
TSC Review starts not before (may vary by sector)	01 January 2028
TSC Review starts no later than (may vary by sector)	01 July 2028
Revised TSC published for comments no later than	01 January 2029
Revised TSC final version published no later than	01 January 2030
TSC Period 1 ends	31 December 2030
TSC Period 2 commences (TSC2 becomes applicable)	01 January 2031

2.5. TSC Review Body (TRB)

2.5.1. Objectives

The TRB functions as an expert advisory group to the ATB. Its purpose is to review, update, and, where necessary, retire TSC for focus and enabling sectors. Its work follows the TSC maintenance cycle set out in the Taxonomy and ensures that criteria remain robust, science-based, and regionally relevant.

2.5.2. Roles and Functions

The TRB undertakes reviews of the TSC in the three years leading up to the end of each cycle. During this period, it develops work plans, organises expert discussions, and prepares

proposals for revision. Reviews consider technological progress, sector-specific issues, environmental indicators, and wider economic and social impacts.

Proposed revisions must be endorsed by the ATB, validated through targeted consultations or crowding-in exercises, and finalised for adoption into future versions of the ASEAN Taxonomy. The TRB also engages with the ATB and its Working Groups and may work with consultants.

2.5.3. Membership and Governance

The TRB consists of at least ten members, ensuring geographical balance and expertise across public and private sectors, as well as civil society. Each AMS must be represented, either directly or through a nominated institution. Members appoint both a principal and alternate representative to maintain continuity.

Membership includes ATB and Working Group Members and additional experts may be appointed with ATB approval and given full voting rights. Other participants may join as advisers, subject matter experts, industry representatives, or observers without voting rights.

2.5.4. Working Groups and Stakeholder Engagement

The TRB may establish working groups or sub-groups to address specific issues, reporting back regularly. These groups may be permanent or temporary, depending on their mandate.

Engagement with external stakeholders is an integral part of the review process. Technical advisers, subject matter experts, industry representatives, and observers may be invited to provide input. Their contributions are not attributed publicly and confidentiality is maintained at all times, with information shared only for the purpose of fulfilling the TRB's mandate.

2.5.5. Reporting and Deliverables

The TRB reports regularly to the ATB through Activity updates, summaries of discussions, and quarterly stakeholder engagement registers.

Key deliverables include revised proposals for sector criteria, together with supporting justifications and the results of stakeholder validation. These outputs ensure that each update to the ASEAN Taxonomy reflects expert evidence, consultation feedback, and alignment with regional needs.

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ANNEX 7. to the ASEAN Taxonomy for Sustainable Finance

Use Cases

Updated as of 6 November 2025

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1. INTRODUCTION

The use cases outlined in this Annex serve as illustrative and exemplary scenarios to demonstrate the proper application and implementation of the ASEAN Taxonomy for Sustainable Finance (ASEAN Taxonomy). These examples are designed to provide clear guidance on how the ASEAN Taxonomy can be utilised effectively across various contexts. Please note that all cases presented are fictitious and do not reflect real-world entities, projects, or situations. They are crafted solely for educational and illustrative purposes to enhance understanding of the ASEAN Taxonomy's framework and its practical application. Users should refer to the ASEAN Taxonomy for current rules and requirements.

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2. USER ENTRY POINT

2.1.1 Scenario

A manufacturing company based in Viet Nam, GreenTech Manufacturing Co., operates a factory producing high-efficiency electrical components for regional export. The factory's management seeks to understand how this investment aligns with the ASEAN Taxonomy, both to demonstrate its contribution to national sustainability targets and to enhance eligibility for green financing.

2.1.2 Bases of assessment

Following the guidance in Section 4.2 of the Main Report, the exercise demonstrates the application of the user entry point framework, which helps companies identify the primary EO most relevant to their Activity. By considering multiple viewpoints, including the strategic priorities of the company, investors' preferences, and guidance from government and sectoral bodies, companies can justify which EO should be treated as primary for the purposes of sustainability assessment and reporting.

2.1.3 Results

User Viewpoints	Guiding Questions	Assessment / Response
1. Activity Relevance and Strategic Alignment	- Which EO is most relevant to the nature of the Activity? - What is the strategic focus of the Company? - Which EO(s) is most aligned to the Company's strategic focus?	The primary objective of the factory's energy-saving equipment is to reduce energy consumption and associated greenhouse gas (GHG) emissions. EO1 (Climate Change Mitigation) is most relevant, as the Activity contributes directly to improving energy efficiency and reducing carbon footprint. Strategically, the Company aims to reduce operating costs and align with sustainability targets, further supporting EO1 as the primary EO.
2. Investors / Financial Institutions' Priority	- What is the investors' priority and investment strategy? - Which EO(s) is most aligned to the investors' priority and strategy	Investors are increasingly prioritising green investments that improve energy efficiency and reduce climate risk. The installation of energy-saving equipment aligns with investor strategies focused on EO1. Energy efficiency measures are viewed as lower-risk, high-impact interventions, enhancing both financial and sustainability performance.
3. Government and Industry Guidance	- Has the government issued any guidance on taxonomy compliance, whether mandatory or voluntary? - Has the government issued any guidance (including policies, roadmaps and guidelines) which indicates that this Activity contributes	The government has not yet given direct guidance on whether compliance with any taxonomy should be mandatory. National energy policies and industrial roadmaps encourage energy efficiency improvements in manufacturing as a means to meet NDC targets for GHG reduction. ASEAN guidance on energy efficiency also highlights industrial energy-saving equipment

	to a specific EO under their NDC or national plan? • Is there guidance (including policies, roadmaps and guidelines) from the sectoral bodies which indicates that this Activity contributes to a specific EO under their sectoral plan?	as a priority. Both government and sectoral guidance reinforce EO1 as the primary EO for this Activity.

2.1.4 Conclusion

Based on strategic alignment, investor priorities, and government and sectoral guidance, EO1: Climate Change Mitigation is designated as the primary EO for the factory's installation of energy-saving equipment.

3. APPLICATION OF TECHNICAL SCREENING CRITERIA

This Chapter relates to the assessment of Technical Screening Criteria (TSC) only. It does not consider Essential Criteria, which are covered in Chapter 4 of this Annex.

3.1 Bioenergy power plant in Cambodia

3.1.1 Scenario

In 2023, the Company begins construction of a rice-husk fired bioenergy power plant in Cambodia, with a projected operational lifespan of 20 years. The project utilises locally sourced rice husks, an agricultural residue that is otherwise often left to decay or burned in open fields, leading to methane and particulate emissions. By diverting this waste stream, the plant contributes to avoided emissions. The plant has an estimated emissions intensity of 350 gCO₂e/kWh, calculated over its lifecycle (including feedstock collection, transportation, combustion, and ash disposal). In alignment with national regulations, the Company has implemented a monitoring and contingency plan to minimise methane leakage during feedstock handling and storage.

3.1.2 Bases of assessment

The case was assessed against the TSC for 351[014] Electricity generation from bioenergy, including co-firing with fossil fuels.

- EO1 – Climate Change Mitigation

3.1.3 Results

Tier	TSC	Information from Case Study	Assessment
Tier 1 (Green)	1. Lifecycle GHG emissions from the generation of electricity by the entire facility <100 gCO ₂ e/kWh.	The bioenergy plant has an estimated emissions intensity of 350 gCO ₂ e/kWh. This is above the threshold of <100gCO ₂ e/kWh for the Green. Hence, the project does not meet the Green criteria.	The Activity does not meet the Tier 1 thresholds and cannot be classified Green.
Tier 2 (Amber T2)	1. Lifecycle GHG emissions from the generation of electricity by the entire facility: ≥100 and <425 gCO ₂ e/kWh.	The bioenergy plant has an estimated emissions intensity of 350 gCO ₂ e/kWh. This falls within the threshold defined in Amber T2. Hence, the project fulfils the criteria of Amber T2.	The bioenergy plant fulfils all TSC applicable to the Activity and meets the threshold prescribed in Amber T2.
Tier 3 (Amber T3)	1. Lifecycle GHG emissions from the generation of electricity by the entire facility: ≥425 and <510 gCO ₂ e/kWh.	Not applicable since the project fulfils the criteria in Amber T2.	Hence, it can be classified as Amber T2
TSC applicable to all Tiers	1. For facilities that are equipped with CCUS, CO ₂ from power generation that is captured for underground storage, must be transported and stored in accordance with the TSC for Activity 000[010]	Since the bioenergy plant is not equipped with CCUS, criterion 1 does not have to be fulfilled. A monitoring and contingency plan is put in place to manage any leakages, which complies with requirements for the	

	Transport of CO ₂ and Activity 000[020] Underground permanent geological storage of CO ₂ .	detection and elimination of gas leaks.	
Applicable Standards	• Calculation of Lifecycle Emissions ISO 14067:2018 or ISO 14064-1:2018. • For the purpose of estimating GHG intensity: ○ 1 MJ of heat energy shall be deemed to be equivalent to 0.277778 kWh of electricity; ○ If used for heating, calculated at the point of discharge from the heat producing facility; ○ If used for cooling, calculated at the point of discharge to the equipment for producing a cooling medium. • Regulations for the detection and elimination of gas leaks must conform at least with regulations applicable in the AMS in which the Activity takes place and should demonstrate due consideration of the Methane Guiding Principles.		

3.1.4 Conclusion

The scenario meets the TSC for Amber T2 because it meets the criteria under the AND structure. It satisfies all the relevant criteria under the TSC applicable to all tiers as well as the GHG emission threshold prescribed in Amber T2, pending assessment of Essential Criteria.

3.2 New mixed-used commercial and residential complex in Thailand

3.2.1 Scenario

A property developer launches a project to construct a mixed-use commercial and residential complex in Bangkok, Thailand. The project includes two high-rise office towers, retail space, and residential apartments, with an estimated gross floor area of 120,000 m². The construction is expected to be completed by 2027. The project has been certified Platinum under the LEED Building Design and Construction (LEED BD+C) certification, with incorporation of energy-efficient HVAC systems, high-performance building envelopes, LED lighting, and low-flow water fixtures.

3.2.2 Bases of assessment

The case was assessed against the TSC for 410[001] Construction of new buildings.

- EO1 – Climate Change Mitigation

3.2.3 Results

Tier	TSC	Information from Case Study	Assessment
Tier 1 (Green)	1. Construction of new buildings for which: a. The building has been certified under a national GBC program, that is recognised by AMS or through an industry association and relevant for that jurisdiction, that achieves an advanced level of certification and is applicable to Climate Change Mitigation; OR b. The building has been certified under one of the applicable internationally recognised GBC programmes, achieving an advanced level of certification and is applicable to Climate Change Mitigation.	The new mixed-use commercial and residential building has been certified Platinum under the LEED BD+C certification. LEED BD+C certification has 4 levels with Platinum being the highest level of achievement. Hence, the building meets criterion 1.b.	Green – Because of the OR logic, the project would have to meet either 1.a or 1.b. The building did not obtain a national GBC, hence did not meet criterion 1.a. The building has achieved the highest level of LEED certification and hence meets criterion 1.b.
Tier 2 (Amber T2)	1. Construction of new buildings for which: a. The building has been certified under a national GBC program, that is recognised by AMS or through an industry association and relevant for that jurisdiction, that	Not applicable since the Activity meets the Green criteria	

	includes criteria relevant to Climate Change Mitigation; OR b. The building has been certified under an applicable internationally recognised GBC program: AND 2. An Energy Efficiency Improvement Plan for the building is prepared and provided that upon implementation will lead to a reduction of the current Energy Usage Intensity (EUI).		
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	There are no TSC for Amber T3	

3.2.4 Conclusion

The scenario meets the TSC for Green because it meets the criterion 1.b: it obtained the highest level under the internationally recognised certification. Thus, it satisfies the required requirements under the Green classification, pending assessment of Essential Criteria.

3.3 Development of interurban rail transport in the Philippines

3.3.1 Scenario

The Department of Transportation of the Philippines launches the North–South Commuter Railway (NSCR) Extension Project, a major interurban rail development connecting the residential areas to the central business districts, covering approximately 147 km with 37 stations. The railway is designed for electric multiple-unit (EMU) trains, with a maximum operating speed of 160 km/h and an annual passenger capacity of over 300 million passengers.

3.3.2 Bases of assessment

The case was assessed against the TSC for 4911[001] Passenger interurban rail transport.

- EO1 – Climate Change Mitigation

3.3.3 Results

Tier	TSC	Information from Case Study	Assessment
Tier 1 (Green)	1. The Activity complies with one or both of the following criteria: a. The trains and wagons have zero direct tailpipe CO ₂ emissions; OR b. The trains and wagons have zero direct tailpipe CO ₂ emissions when operated on a track with necessary infrastructure and use a conventional engine where such infrastructure is not available (bimodal); AND 2. The trains and wagons are not dedicated to the transport of fossil fuels.	The railway under development are electric multiple-unit (EMU) trains and hence, have zero direct tailpipe emissions. This fulfils criterion 1.a. The trains are developed for the purpose of carrying passengers, with an expected annual passenger capacity of over 300 million passengers, fulfilling criterion 2 whereby the trains are not dedicated to the transport of fossil fuels.	Green criterion 1.a is met; therefore, criterion 1.b does not need to be met. In addition, criterion 2 is also satisfied.
Tier 2 (Amber T2)	1. Passenger rolling stock is aligned if its direct emissions are below 50 gCO ₂ e/p-km until 2027 (after this year only rolling stock with zero direct emissions will be aligned).	Not applicable since the Activity meets the Green criteria	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	There are no TSC for Amber T3	

3.3.4 Conclusion

The scenario meets the TSC for Green because it fulfils the criterion of zero direct tailpipe CO₂ emissions (criterion 1.a) and is not dedicated to the transport of fossil fuels (criterion 2). Thus, it satisfies the required requirements under the Green classification, pending assessment of Essential Criteria.

3.4 Fish farming in Malaysia

3.4.1 Scenario

In 2024, BlueDelta Aquafarms, a medium-sized enterprise in Sarawak, Malaysia, launched a 70-hectare integrated mud crab aquaculture project using an aquasilviculture system that preserves native mangrove forests, harnesses natural tidal flows, and utilises organic feed from local fish offcuts. Although BlueDelta does not hold a valid national or international third-party certification, it developed a comprehensive Integrated Farm Management Plan (“IFMP”) aligned with Malaysia’s national aquaculture standards. This plan was verified by AgroSphere Advisory, an independent expert appointed by a Malaysian development bank as part of a green loan application. The IFMP includes GPS-based geophysical mapping, a full natural resource stocktake, baseline and projected input data, identification of environmental and climate risks, and a five-year implementation and monitoring strategy. BlueDelta also conducted a self-assessed GHG inventory using Food and Agriculture Organisation of the United Nations (FAO) methodology for measuring soil carbon stocks, accounting for emissions from feed production and sequestration in mangrove ecosystems. The project’s documented outcomes include enhanced biodiversity, increased blue carbon storage, and contributions to Malaysia’s Nationally Determined Contributions (NDCs), with additional safeguards like community-led mangrove clean-ups and zero-discharge protocols.

3.4.2 Bases of assessment

The case was assessed against the TSC for 03[002] Aquaculture.

- EO3 – Protection of Healthy Ecosystems and Biodiversity.

3.4.3 Results

Tier	TSC	Information from Case Study	Assessment
Tier 1 (Green)	To meet the TSC, (1) OR (2) must be satisfied; criterion (3) applies in all cases. The Activity: - Has obtained certification at a national or international level that is aligned with internationally recognised standards (Certification is defined in Section D.3); OR - Provides an IFMP which demonstrates ongoing adoption of all applicable core practices, or as many as feasible, to ensure alignment with certification. Adoption of non-core practices is voluntary; AND - Undertakes a self-assessment of GHG sources and sinks on the farm, following national or	The case does not mention that BlueDelta holds a valid national or international third-party certification. Therefore, criterion 1 is not met. However, it developed and submitted a detailed IFMP to a Malaysian development bank as part of a green loan application. The IFMP was verified by the bank’s appointed independent verifier (AgroSphere Advisory). The company also undertook a self-assessed GHG inventory, using FAO’s “Measuring and modelling soil carbon stocks” methodology to estimate emissions from feed production and land use, and carbon sinks in the mangroves. Since it’s an OR requirement, the analysis to criterion 2 can be conducted.	Since criterion 2 is satisfied, the project passes as Green even without certification. Criterion 3 is a mandatory criterion which the scenario has achieved.

	international carbon accounting standards for project-based or organisation-based carbon accounting¹. Verification of the GHG assessment is not required. Criterion 3 is satisfied if the GHG assessment is included in the IFMP under criterion (2) or in the certification under criterion (1).	The case meets the minimum required content, including geophysical mapping, resource stock take, GHG source and sink data, climate risks, and detailed implementation / monitoring plan. It also provides reference and alignment to Malaysia's national aquaculture standards. As there is an AND separator, analysis to criterion 3 is required. BlueDelta has conducted a self-assessment of GHG emissions and sinks, using: • FAO's internationally recognised methodology, • Estimations from mangrove sequestration and feed production emissions, • Clear documentation of calculation method and data sources. This concludes that the project has undertaken a self-assessment GHG assessment of source of emissions and sinks on the farm. Verification is not required.	
Tier 2 (Amber T2)	To meet the TSC, (1) OR (2) must be satisfied; criteria (3) and (4) apply in all cases. The Activity: 1. Provides an IFMP to describe the nature of transformation. IFMP provides a clear, timebound work plan to achieve a certification at a national or international level that is aligned with internationally recognised standards	Not applicable since the Activity meets the Green criteria	

¹ Agricultural Activities should assess carbon impacts using project-based or organisation-based carbon accounting, such as ISO 14064-2, which focuses on quantifying emission reductions from specific projects and aligns with schemes like CORSIA or Core Carbon Principles.

	(Certification is defined in Section D.3); OR 2. Provides a time-bound IFMP aiming to adopt all applicable core practices, or as many as feasible, to ensure alignment with proxy certification. Adoption of non-core practices is voluntary; AND 3. Undertakes a self-assessment of GHG sources and sinks on the farm, following national or international carbon accounting standards for project-based or organisation-based carbon accounting. Verification of the GHG assessment is not required. Criterion 3 is satisfied if the GHG assessment is included in the IFMP under criterion (2) or in the certification under criterion (1); AND 4. The Activity may remain Amber for 5 calendar years after the assessment as Amber or until the Amber Tier is sunset, whichever time comes first. Within this time the Activity must transit to Green or will be reclassified as Red.		
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	There are no TSC for Amber T3	

3.4.4 Conclusion

The scenario meets the TSC for Green because it meets the criteria under the OR/AND structure: it does not have a third-party certification (OR), but it provides a credible IFMP verified by an independent expert, AND it includes a self-assessed GHG assessment using an internationally recognised FAO methodology. Thus, it satisfies the required combination of conditions under the Green classification, pending assessment of Essential Criteria.

3.5 Cement production in Indonesia

3.5.1 Scenario

CementWorks Co., located in Indonesia, is a mid-sized cement factory producing both grey clinker and blended cement products for domestic infrastructure projects. The facility currently emits an average of 0.865 tCO₂e per tonne of grey clinker produced. Its cement production from grey clinker and supplementary materials results in emissions of 0.582 tCO₂e per tonne of cementitious product. The plant has not implemented carbon capture, utilisation and storage (CCUS) technologies, though it has assessed feasibility options through regional partnerships. CementWorks has developed a transition plan aligned with international climate objectives, including a shift to electric kilns, the introduction of alternative fuels such as rice husk biomass, and the gradual replacement of clinker with industrial by-products. Implementation is scheduled for completion before the end of 2029, and the plan has been externally reviewed for alignment with recognised net-zero frameworks. The factory's ongoing improvements are guided by national climate commitments and international best practices.

3.5.2 Bases of assessment

The case was assessed against the TSC for 2394[001] Manufacture of cement.

- EO1 – Climate Change Mitigation

3.5.3 Results

Tier	TSC	Information from Case Study	Assessment
Tier 1 (Green)	1. Manufactures grey clinker where the specific GHG emissions are lower than 0.800 tCO₂e per tonne of grey clinker produced; OR 2. Manufactures cement from grey clinker or an alternative hydraulic binder, where the specific GHG emissions from the production are lower than 0.520 tCO₂e per tonne of cementitious product.	CementWorks manufactured both grey clinker and cement. Hence, we need to look at both criterion 1 (grey clinker) and criterion 2 (cement). For criterion 1, it addresses the production of grey clinker. CementWorks' grey clinker emissions are at 0.865 tCO₂e which is higher than the GHG emissions threshold of 0.800 tCO₂e. For criterion 2, it addresses the production of cement. CementWorks' cement production results in emissions of 0.582 tCO₂e per tonne of cementitious product, which is higher than the GHG emission threshold of 0.520 tCO₂e per tonne of cementitious product.	Neither criterion 1 nor criterion 2 were met. Since the Activity failed to pass criteria 1 and 2, it cannot be classified Green.
Tier 2 (Amber T2)	1. Have a transition plan that aligns with the Paris Agreement commitments or a credible net-zero GHG emissions reduction target,	To be classified as Amber T2, the project would have to meet 1 of the 3 criteria listed. 1. CementWorks has developed a transition plan	Amber - Because of the OR logic, meeting 1 of the 3 criteria

	following an internationally recognised framework for consistency and accountability, where the plan includes a switch to low-carbon process technologies; OR 2. Manufactures grey clinker where the specific GHG emissions are lower than 0.900 tCO₂e per tonne of grey clinker produced; OR 3. Manufactures cement from grey clinker or an alternative hydraulic binder, where the specific GHG emissions from the production are lower than 0.585 tCO₂e per tonne of cementitious product.	aligned with international climate objectives with specific upgrades in plans including a shift to electric kilns, the introduction of alternative fuels such as rice husk biomass, and the gradual replacement of clinker with industrial by-products and is scheduled for completion before 2029. Additionally, CementWorks had its transition plan externally reviewed and it is found to be aligned with a recognised net-zero framework. The above fulfils criterion 1. 2. For criterion 2, it addresses the production of grey clinker. CementWorks' grey clinker emissions are at 0.865 tCO₂e which is lower than the GHG emissions threshold of 0.900 tCO₂e. 3. For criterion 3, it addresses the production of cement. CementWorks' cement production results in emissions of 0.582 tCO₂e per tonne of cementitious product, which is lower than the GHG emission threshold of 0.585 tCO₂e per tonne of cementitious product.	would be sufficient. CementWorks met all 3 criteria and hence, it would be recognised as Amber T2.
Tier 3 (Amber T3)	1. The Activity must have a transition plan that aligns with supporting the NDC reduction targets of the AMS jurisdiction in which it operates, if that jurisdiction does not have a net-zero by 2050 timeline.	Not applicable since the Activity meets the Amber T2 criteria	Not applicable
TSC applicable to all Tiers	1. If facilities are using biomass, hydrogen, or waste as a fuel source, they are	None of these criteria are applicable to this case.	Criterion 3 does not need to be assessed

	aligned only if they meet the following criteria: a. Hydrogen: Complies with the criteria for hydrogen production as established under Activity 2011[001] Manufacture of low-carbon gases, including hydrogen; OR b. Biomass: Complies with the criteria applicable for biomass sourcing as established under Activity 351[014] Electricity generation from bioenergy, including co-firing with fossil fuels; OR c. Waste: Complies with the criteria applicable for waste-derived fuels as established under Activity 3821[001] Anaerobic digestion of bio-waste; AND i. All waste of recycling potential must be removed prior to burning; AND ii. Municipal solid waste is not aligned as a fuel type after 2040. 2. If facilities implement CCS / CCUS, CO₂ that is captured must be transported and stored in accordance with the TSC: a. Activity 000[010] Transport of CO₂; AND b. Activity 000[020] Underground permanent geological storage of CO₂.		against as no aspects are applicable.

3.5.4 Conclusion

The scenario does not qualify as Green because it did not meet neither criterion 1 nor criterion 2. The scenario meets the TSC for Amber T2 because it meets at least 1 of the 3 criteria under the OR structure. Thus, it satisfies the required conditions under the Amber T2 classification, pending assessment of Essential Criteria.

3.6 Manufacturing of steel in Thailand

3.6.1 Scenario

A steel manufacturing facility located in Thailand operates using a traditional Blast Furnace-Basic Oxygen Furnace (BF-BOF) process, producing primary steel from iron ore. The facility is one of the largest steel producers in the region, providing a significant portion of the steel used in construction and infrastructure projects across Southeast Asia. However, the production process is energy-intensive, relying primarily on coal to generate the required heat for the furnaces. The company's roadmap includes a commitment to switch to lower-carbon process technologies by 2030, including the integration of renewable energy sources such as solar and wind power into its operations. The facility's current carbon intensity is 2.27 tCO₂e per tonne of steel produced, largely due to the heavy reliance on coal. While the facility does not yet use carbon capture, utilisation and storage (CCUS) technology, it has committed to researching and implementing this technology by 2030 to further mitigate emissions.

3.6.2 Bases of assessment

The case was assessed against the TSC for 241[001] Manufacture of ferrous metals and materials.

- EO1 – Climate Change Mitigation

3.6.3 Results

Tier	TSC	Information from Case Study	Assessment
Tier 1 (Green)	- Facilities operating exclusively with Electric Arc Furnaces (EAF) are automatically aligned; OR - Facilities operating with Direct Reduced Iron (DRI), DRI-EAF, or Blast Furnace-Basic Oxygen Furnace (BF-BOF), comply with the following criteria: 100% green hydrogen-based DRI; OR - Manufactures steel from iron ore, where the specific GHG emissions from the production are lower than 1.24 tCO₂e per tonne of steel produced.	The steel manufacturing facilities are operating using a traditional Blast Furnace-Basic Oxygen Furnace (BF-BOF) process. Criterion 1 is not applicable to the case. Criterion 2 is applicable to the case as it addresses facilities operating with BF-BOF. To meet the Green classification, the facility would have to meet either criteria 2.a or 2.b. Criterion 2.a is not applicable as the DRI is not 100% green hydrogen based. The facility's current carbon intensity is 2.27 tCO₂e per tonne of steel produced. This exceeds the threshold of 1.24 tCO₂e per tonne of steel produced. Hence, the facility did not meet criterion 2.b.	Not Green. Because of the OR logic, facilities should meet either 1 OR 2, dependent on the facility type. Since this facility is a BF-BOF facility, it should meet either criteria 2.a or 2.b, due to the OR logic. Since both criteria 2.a and 2.b are not met, this facility cannot be classified as Green.

Tier 2 (Amber T2)	1. Have a transition plan that aligns with the Paris Agreement commitments or a credible net-zero GHG emissions reduction target, following an internationally recognised framework for consistency and accountability, where the plan includes a switch to low-carbon process technologies; OR 2. Where the facility currently operates BF-BOF technology to manufacture steel from iron ore, the specific GHG emissions from the production are lower than 2.30 tCO₂e per tonne of steel produced.	A roadmap is referred to; more evidence might be needed to investigate if this meets the requirements for a transition plan. The facility's current carbon intensity is 2.27 tCO ₂ e per tonne of steel produced. This is lower than the threshold of 2.3 tCO ₂ e per tonne of steel produced. Hence, the facility meets criterion 2.	Because of the OR logic, meeting either 1 OR 2 is sufficient. Since criterion 2 is satisfied, the project passes as Amber T2.
Tier 3 (Amber T3)	1. The Activity must have a transition plan that aligns with supporting the NDC reduction targets of the AMS jurisdiction in which it operates, if that jurisdiction does not have a net-zero by 2050 timeline.	Not applicable since the Activity meets the Amber T2 criteria	Not applicable
TSC applicable to all Tiers	1. If facilities implement CCS / CCUS, CO₂ that is captured must be transported and stored in accordance with the TSC: a. Activity 000[010] Transport of CO₂; AND b. Activity 000[020] Underground permanent geological storage of CO₂. 2. Use of fossil gases or coal as a reducing agent and/or for energy generation is only aligned for facilities prior to 2040. To qualify after 2040, the facilities must comply with the following criteria:	The case states that while the facility does not yet use CCS / CCUS technology, it has committed to researching and implementing this technology by 2030 to further mitigate emissions. Criterion 1 is not relevant. Criterion 2 is not relevant as the assessment is happening before 2040.	No TSC applicable to all Tiers need to be assessed as no aspects are applicable. However, annual reporting on any financial instrument must address the alignment of any future technical additions,

	a. Must be combined with CCS/CCUS measures in accordance with the TSC set out in Activity 000[010] Transport of CO₂ and Activity 000[020] Underground permanent geological storage of CO₂; AND b. Direct CO₂ captured is not utilised for enhanced oil recovery and/or the production of other forms of fossil energy sources; AND c. Appropriate on-site activities for the monitoring and mitigation of methane leakage are implemented; AND 3. Use of biomass as a reducing agent is only eligible if facilities comply with the following criteria: a. Source of biomass is food or feed crops that meet the eligibility criteria classified under Activity 01[001] General perennial or non-perennial crops or Activity 02[002] Forestry plantation; OR b. Source of biomass is plantation wood that is in accordance with the TSC set out in Activity 02[001] Sustainable forest management; OR c. Source of biomass is from industrial crops.		such as CCS / CCUS.

3.6.4 Conclusion

Since the facility is a BF-BOF facility, the facility should be assessed against criterion 2 of Green. The scenario does not qualify as Green because it did not meet either criterion 2.a or criterion 2.b. The scenario meets the TSC for Amber T2 because it meets at least 1 of the 2 criteria under the OR structure, pending assessment of Essential Criteria.

3.7 Waste-to-energy facility in Singapore

3.7.1 Scenario

EcoWaste Recovery Ltd., a leading waste-to-energy company in Singapore, operates a state-of-the-art facility that processes municipal solid waste. The facility handles pre-sorted waste and has a process to ensure that recyclable materials such as plastics, paper, and metals are removed before incineration. The plant utilises advanced high-efficiency combustion technology, converting residual waste into electricity with an overall plant efficiency of 28%, which is supplied to the national grid. To further enhance resource recovery, the company processes bottom ash at a dedicated off-site facility, where up to 80% of recoverable metals (including iron, aluminium, and copper) are extracted and sent for recycling. The remaining inert ash is repurposed in construction applications, where permitted under local regulations. EcoWaste Recovery Ltd. ensures full compliance with Singapore's Environmental Protection and Management (Air Impurities) Regulations, operating continuous emissions monitoring systems ("CEMS") to track and control pollutants. Additionally, wastewater from the flue gas cleaning process is treated to meet national water quality standards before discharge, safeguarding local waterways.

3.7.2 Bases of assessment

The case was assessed against the TSC for 3821[003] Waste-to-Energy.

- EO4 – Resource Resilience and the Transition to a Circular Economy.

3.7.3 Results

Tier	TSC	Information from Case Study	Assessment
Tier 1 (Green)	1. The Activity uses residual or pre-sorted waste (so that high-quality recyclables can be recovered); AND 2. Plant net energy efficiency is not less than 25%; AND 3. Bottom ash recovery to the extent permitted by national law. At least 75% of metal contained within the ash must be recovered. This activity could take place in an off-site location; AND 4. Based on the location of the plant, technology used and plant discharges, including emissions to air and emissions to waterways, shall comply with the relevant national regulations and emission standards.	The facility handles pre-sorted waste and has a process to recover recyclable materials before incineration, fulfilling criterion 1. It is stated that the overall plant efficiency is 28%, which is higher than the minimum prescribed efficiency of 25%. This fulfils criterion 2. The facility also processes bottom ash at a dedicated off-site facility, where up to 80% of recoverable metals (including iron, aluminium, and copper) are extracted and sent for recycling. This fulfils criterion 3. As the facility is located in Singapore, it adheres to and complies with Singapore's Environmental Protection and Management (Air Impurities) Regulations, as well as local regulations to meet national	Green – Because of the AND logic, the facility must fulfil all four criteria to pass the Green assessment. Failure to meet any one of the criteria would result in the project not passing. In this scenario, the facility meets all four criteria and the Activity is therefore

		water quality standards before discharge. This fulfils criterion 4.	assessed as Green.
Tier 2 (Amber T2)	1. The Activity uses residual or pre-sorted waste (so that high-quality recyclables can be recovered); AND 2. Plant net energy efficiency between 10% and 25%; AND 3. Bottom ash recovery to the extent permitted by national law. At least 50% of metal contained within the ash must be recovered. This activity could take place in an off-site location; AND 4. Based on the location of the plant, technology used and plant discharges, including emissions to air and emissions to waterways, shall comply with the relevant national regulations and emission standards.	Not applicable since the Activity meets the Green criteria	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	There are no TSC for Amber T3	

3.7.4 Conclusion

The scenario meets the TSC for Green because it meets all the criteria listed under the AND logic, pending assessment of Essential Criteria.

3.8 Extension and operation of wastewater treatment plant in Brunei Darussalam

3.8.1 Scenario

A municipal utility water service operates a wastewater treatment plant that previously served a population equivalent (p.e.) of 80,000. With urban expansion and regional development incentives, the company undertook an upgrade and capacity extension project to serve 110,000 p.e. under a public–private partnership model. Following the upgrade, the wastewater treatment plant in Brunei Darussalam, would achieve a net energy consumption of 19.4 kWh per p.e. per year, meeting the performance threshold for facilities serving more than 100,000 people. The plant integrates solar photovoltaic panels, which supply approximately 12% of the total electricity required for aeration and pumping. Upstream pollutant loads have been reduced through mandatory pre-treatment measures implemented by nearby textile and food processing industries. As part of the project, an older anaerobic lagoon system, previously a significant source of methane and nitrous oxide emissions, was decommissioned and replaced with a modern activated sludge process. A GHG assessment indicated a 70% reduction in direct emissions compared to the previous system. The results have been publicly disclosed on the company’s website and shared with project lenders to ensure transparency.

3.8.2 Bases of assessment

The case was assessed against the TSC for 37[001] Construction, extension and operation of wastewater collection and treatment.

- EO1 – Climate Change Mitigation

3.8.3 Results

Tier	TSC	Information from Case Study	Assessment
Tier 1 (Green)	1. The net energy consumption of the wastewater treatment plant is equal to or is lower than: 35 kWh per population equivalent (p.e.) per annum for treatment plant capacity below 10,000 p.e.; 25 kWh per population equivalent (p.e.) per annum for treatment plant capacity between 10,000 p.e and 100,000 p.e.; 20 kWh per population equivalent (p.e.) per annum for treatment plant capacity above 100,000 p.e.; Net energy consumption of the operation of the	The facility is undergoing expansion and would serve 110,000 p.e. The plant would achieve a net energy consumption of 19.4 kWh per p.e. per year. This fulfils criterion 1.c, whereby the net energy intensity consumption is lower than the prescribed threshold of kWh per p.e. A GHG assessment has been done, with results indicating a 70% reduction in direct emissions compared to the previous system. The results have been publicly disclosed on the company’s website and shared with project lenders to ensure transparency. The company promises to share the outcome of the net energy intensity as	Green – Because of the AND logic, the facility must fulfil both criteria to pass the Green assessment. Failure to meet any one of the criteria would result in the project not passing. In this scenario, the facility meets both criteria and is

	wastewater treatment plant may take into account measures decreasing energy consumption due to source control (reduction of stormwater or pollutant load inputs), and as appropriate, energy generation within the system (such as hydraulic, solar, thermal and wind energy); AND 2. For the construction and extension of a wastewater treatment plant or a wastewater treatment plant with a collection system, which are substituting more GHG-intensive treatment systems (such as septic tanks, anaerobic lagoons), an assessment of the direct GHG emissions is performed. The results are disclosed to investors and clients on demand.	well as the GHG assessments with the public and their project lenders. This fulfils criterion 2.	therefore assessed as Green.
Tier 2 (Amber T2)	1. The net energy consumption of the wastewater treatment plant is equal to or is lower than 68 kWh/p.e. per annum and is applicable for all treatment plant capacities. Net energy consumption of the operation of the wastewater treatment plant may take into account measures decreasing energy consumption due to source control (reduction of stormwater or pollutant load inputs), and as appropriate, renewable energy generation; AND 2. The sunset date for this Activity under the Tier 2 (Amber T2) criteria is 31 December 2035 after which the facilities must meet the	Not applicable since the Activity meets the Green criteria	

	Green Criteria. Criteria and sunset dates are not fixed and will be reviewed and possibly revised periodically based on emerging science and technology.		
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined	There are no TSC for Amber T3	

3.8.4 Conclusion

The scenario meets the TSC for Green because it meets both criteria listed under the Green Tier, pending assessment of Essential Criteria.

3.9 Monitoring software for agriculture in Viet Nam

3.9.1 Scenario

A technology firm in Viet Nam developed an AI-powered system to monitor and analyse the health and growth of crops in rural farming communities, aimed at helping farmers adapt to the effects of climate change. The system uses satellite imagery, weather data, and soil moisture sensors to provide farmers with insights into optimal planting times, irrigation needs, and pest management. By predicting weather patterns and offering real-time data on soil conditions, the system aims to help farmers make more informed decisions, improving crop resilience to extreme weather events like droughts or floods. The platform collects and processes data to enhance the ability of farmers to adapt to changing climate conditions, contributing to climate resilience.

3.9.2 Bases of assessment

The case was assessed against the TSC for 620[001] Computer programming and software.

- EO2 – Climate Change Adaptation

3.9.3 Results

Tier	TSC	Information from Case Study	Assessment
Tier 1 (Green)	1. Computer programming and software are considered to make a substantial contribution to climate change adaptation and resilience; AND 2. The Activity enables a focus sector Activity to apply methodologies and data that are consistent with the requirements of a Climate Risk and Vulnerability Assessment (CRVA) as described in Annex 3.	The AI-powered system is designed to support farmers in adapting to climate change by providing insights on optimal planting times, irrigation requirements, and pest management through the use of weather data, satellite imagery, and soil moisture sensors. By strengthening decision-making and enhancing crop resilience to extreme weather events, the system makes a substantial contribution to climate change adaptation and resilience in the agricultural sector. Therefore, the Activity meets criterion 1. The system provides relevant climate-related data that helps identify potential risks to crops and supports the implementation of adaptive measures. These data-driven insights enable agricultural stakeholders to apply CRVA consistent methodologies in managing climate risks and vulnerabilities. Therefore, the Activity meets criterion 2.	The facility must fulfil both criteria to pass the Green assessment. Failure to meet any one of the criteria would result in the project not passing. In this scenario, the facility meets both criteria and is therefore assessed as Green.

Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	There are no TSC for Amber T2	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	There are no TSC for Amber T3	

3.9.4 Conclusion

The scenario meets the TSC for Green because it meets all the criteria listed under the AND logic, pending assessment of Essential Criteria.

3.10 CCUS technology research and development in the Philippines

3.10.1 Scenario

Air Clean Innovations Pty Ltd is based in the Philippines and is a research-focused company. The company is currently researching and developing an advanced direct air capture (“DAC”) system designed to remove CO₂ from the atmosphere. The company’s technology uses a novel solid sorbent-based capture method, improving energy efficiency compared to existing DAC solutions. DAC system is designed to be powered by renewable energy sources, minimising indirect emissions from energy consumption. Life-cycle assessments indicate that once commercialised, the technology has the potential to capture 1,000,000 tons of CO₂ annually, contributing to net GHG reductions in the atmosphere.

3.10.2 Bases of assessment

The case was assessed against the TSC for 721[002] Research, Development and innovation for direct air capture of CO₂.

- EO1 – Climate Change Mitigation

3.10.3 Results

Tier	TSC	Information from Case Study	Assessment
Tier 1 (Green)	1. The enabling Activity researches, develops or provides innovation for technologies, products or other solutions that are dedicated to the direct air capture of CO ₂ in the atmosphere; AND 2. The implementation of the technologies, products or other solutions being researched for the direct air capture of CO ₂ in the atmosphere has the potential to result in overall net GHG emissions reductions once commercialised.	Air Clean Innovations is researching and developing a technology dedicated to the direct air capture of CO ₂ . The technology, once commercialised, has the potential to achieve net GHG emissions reductions. The described scenario fulfils criteria 1 and 2.	In this scenario, the facility meets both criteria and is therefore assessed as Green.
Tier 2 (Amber T2)	TSC are presently not available for the Activity Tiers defined.	There are no TSC for Amber T2	
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.	There are no TSC for Amber T3	

3.10.4 Conclusion

The scenario meets the TSC for Green because it meets all the criteria listed under the AND logic, pending assessment of Essential Criteria.

4. APPLICATION OF ESSENTIAL CRITERIA (DNSH AND SA)

Specific criteria and approaches for identifying and assessing the harm caused by Activities are set out in Annex 2. Companies and assessors should refer to the categories of potential significant harm which may be caused by Activities and evaluate the harm caused by the Activity based on the guidance provided in Annex 2.

4.1 Hydropower plant

4.1.1 Scenario

A company is seeking to issue a Green Bond to finance the construction of a new 200 MW run-of-river hydropower plant in Southeast Asia. The project is confirmed not to include an artificial reservoir.

4.1.2 Bases of assessment

The case has been assessed against the TSC for 351[040] Electricity generation from hydropower, under EO1 (Climate Change Mitigation) and was classified as Green, pending assessment of Essential Criteria.

Activities to be assessed as aligned with EOs as defined by the ASEAN Taxonomy must also demonstrate that they will Do No Significant Harm (DNSH) to other EOs.

4.1.3 EO2: Climate Change Adaptation DNSH

The developer has conducted a climate risk assessment. Furthermore, using the Climate Risk and Vulnerability Assessment (CRVA) checklist template in Annex 3, the following evidence should be submitted to assessors to show that climate risks and vulnerabilities have been identified and properly considered. An example of the CRVA checklist for this scenario is as follows:

Step	Item	Description	Status
1A	Lifespan of the Activity equipment and materials	Activity description	The proposed Activity is the construction of a run-of-the-river hydropower plant.
1B		Equipment and materials description	• Civil Works: Excavators, cranes; concrete, steel, aggregates. • Hydraulic Structures: Weir, intake gates, penstocks; steel/HDPE pipes. • Mechanical: Turbines, generators, draft tubes; steel, bronze, lubricants. • Electrical & Control: Transformers, switchgear, SCADA; copper/aluminium cables, sensors. • Environmental & Auxiliary: Dewatering pumps, sediment control; geotextiles, fish ladders.
1C		Activity start	Operation will commence on 31 July 2026.
1D		Activity end	The plant is expected to have a lifespan of 50 years and will cease operation 31 July 2076.
1E		Operational life >10 years?	Yes. Current and future assessment should be done using both IPCC climate scenarios and trends.
2A	Climate related hazards	Potential climate risks to the Activity	A physical risk assessment has been conducted and “river flooding” and “extreme rainfall flooding” shows

			the highest risk score for the hydropower in consideration.
2B		Evaluate most common potential risks	The hydropower is directly exposed to: • Seasonal river flow changes which affect generation. • Extreme flooding due to rainfall variability and flash floods during intense monsoon events. • Sedimentation from upstream erosion reducing efficiency.
3A	Risk assessment	Projection of climate hazards	Rainfall variability and extreme precipitation • More frequent heavy precipitation events under both RCP4.5 and RCP8.5. Intensified monsoon rainfall, but also longer dry spells in between. • Increased probability of 1-in-50 or 1-in-100 year flood events.
3B		Potential impact of climate related hazards	• Extreme rainfall and floods: infrastructure damage, flooding impacts. • Droughts and reduce river flow: lower electricity generation, supply unreliability. • Hydrological variability: seasonal mismatches in generation, contract risks. • Sedimentation and erosion: higher maintenance cost, shortened lifespan.
4A	Identify adequate and effective adaptation solutions	Adaptive solutions	• Hydrological monitoring: Installation of real-time flow and rainfall monitoring stations. • Flexible operations: Adaptive reservoir and turbine scheduling to optimise during droughts/floods. • Infrastructure design: Flood-resilient powerhouse and spillway sized to accommodate 1-in-100-year events. • Sediment management: Flushing gates and regular dredging to maintain capacity.

The hydropower project has undergone physical risk assessments as well as a CRVA, demonstrating that DNSH requirements for EO2 have been considered.

4.1.4 EO3: Protection of Healthy Ecosystems and Biodiversity DNSH

This assessment evaluates the hydropower plant's compliance with DNSH under EO3. The assessment draws on the Environmental Impact Assessment (EIA), periodic environmental management and monitoring plans, and additional measures to ensure no significant harm to water, soil, air, noise, and biodiversity.

Impact on Water Resources:

The hydropower project has undergone an EIA, physical risk assessments, ensuring alignment EO3 requirements. Ongoing environmental monitoring confirms that river water quality remains within water quality standards. However, construction activities may increase total suspended solids (TSS) through erosion, elevate biological oxygen demand (BOD) due to organic matter from

construction camp sewage, and risk pH changes from oil or concrete contamination. To mitigate these risks, the developer implements:

- A solid waste management plan to control erosion and sediment runoff.
- A wastewater treatment plan, ensuring all sewage and process water is treated in sedimentation ponds before discharge.
- A hazardous substances management plan to prevent oil or chemical spills.
- An emergency preparedness and response plan for rapid spill containment.

Groundwater contamination risks during construction are addressed through similar measures, with monthly monitoring to ensure no impact. Process water is collected in sedimentation ponds, treated to maintain pH within allowable limits, and discharged only after meeting regulatory standards.

Impact on Soil

The hydropower project addresses issues related to sedimentation, data integration, modelling, and upstream/downstream impacts.

- Inflow Data Coverage: River flow data is collected at 15-minute intervals.
- Climate Change Effects: Modelling results indicate that climate change is not expected to cause substantial increases in maximum flood levels.
- Quality Assurance/Control (QA/QC): All hydrological data is verified through HMFS, with the developer confirming that data undergo quality checks and validation under its management system, which is certified to ISO9001:2015, ISO14001:2018, ISO27001:2022, and ISO45001:2015.

The developer is actively managing sedimentation and hydrological concerns through digital tools and an extensive gauging network, while continuing to enhance data integration, modelling, and transparency.

Impacts related to Noise, Impact on Air

The EIA conducted by the developer indicates that the project site currently maintains good air quality, with TSP and PM10 levels well below established standards, as confirmed by a three-day monitoring exercise. Construction activities are expected to have a medium, localised, and short-to-medium-term impact from dust and vehicle emissions, potentially affecting workers and nearby communities. Mitigation measures include the resettlement of the nearby village and regular maintenance of equipment to minimise emissions. No significant air quality impacts are anticipated during the operational phase, as the findings are limited to the construction period. The EIA further notes that no noise-related impacts are expected during operation.

Impact on Biodiversity

The EIA indicates that the company will manage environmental quality in compliance with applicable laws and regulations. A biodiversity action plan has been established, and biodiversity considerations have been incorporated into the developer's overall strategy.

A fish species survey identified 120 species, the majority of which are classified as Least Concern by the IUCN. To mitigate impacts on aquatic biodiversity, the developer has implemented a fish ladder system, through which over 125 fish species have been observed successfully migrating, demonstrating a balance between power generation and fish movement.

4.1.5 EO4: Resource Resilience and the Transition to a Circular Economy DNSH

During the operation phase, waste and wastewater treatment measures are implemented to safeguard water quality. Waste is segregated into recyclable, organic, and hazardous categories for proper disposal. The developer's Environmental Policy underscores its commitment to the efficient and optimal use of resources throughout the production process. An example of the Lifecycle Assessment (LCA) checklist for this scenario is as follows:

Step	Item	Description	Explanation	Status
1A	Activity Definition	Activity	What is the proposed Activity?	A 200 MW run-of-river hydropower plant in Southeast Asia.
1B		Period of Activity (Start / End)	When will the Activity start and what is its expected life?	Operation will commence on 31 July 2026 and is expected to run until 31 July 2076 (50-year lifespan).
2A	Inputs and outputs throughout Activity lifecycle	Initial infrastructure / equipment	High level view of main equipment items	(1) Civil works: concrete, steel, aggregates; (2) Hydraulic structures: weir, intake, penstocks, pipes; (3) Mechanical: turbines, generators, draft tubes; (4) Electrical & control: transformers, switchgear, SCADA, cabling; (5) Environmental & auxiliary: fish ladders, sediment control, pumps.
2B		Raw materials used	What type of raw materials will be used for the Activity? (Mainly applies to manufacturing Activities)	Concrete, steel, copper, aluminium, HDPE, lubricants, bronze.
2C		Replacements and Spares	What spares are likely to be consumed during Activity life?	Regular replacement of turbines and generator components, lubricants, electrical parts, and sensors will be needed as part of operations and maintenance.
2D		Energy use	What forms of energy does the Activity consume?	Plant generates electricity but consumes small amounts of grid electricity for auxiliary operations (control systems, pumps).
2E		Emissions	What emissions does the Activity make?	No direct greenhouse gas emissions during operation. Limited construction-phase emissions (dust, machinery exhaust) are temporary and mitigated

2F		Waste Streams	What forms of waste will the Activity generate in its lifetime?	Construction waste (concrete offcuts, steel, packaging). Operational waste includes lubricants, replaced turbine parts, electrical components. Treated wastewater and sediment are managed under environmental plans.
3A	Potential impacts from the Activity on EO4 (circular economy and resource resilience)	Initial infrastructure / equipment	For each of these categories, what are or could be the impact on EO4?	Significant upfront use of materials (steel, concrete, turbines, cables). Resource intensity is high, but mitigated by long asset life (50 years).
3B		Raw materials used		Moderate impact due to high volume of concrete, steel, and metals required in construction.
3C		Replacements and Spares		Periodic need for spares (turbine parts, electrical equipment) increases resource use but is planned under maintenance schedules.
3D		Energy use		Low operational demand for external energy. Majority of energy generated is renewable hydropower.
3E		Emissions		Minimal emissions in operation; construction-phase dust and emissions mitigated via EIA measures
3F		Waste Streams		Moderate construction-phase waste and limited operational waste. Waste is managed through solid waste, wastewater, and hazardous waste management plans.
4A	Proposed actions and improvements to mitigate impact	Initial infrastructure / equipment	What actions are or will be implemented to avoid harm to EO4?	EPC and O&M contracts include end-of-life management, recycling of steel/cabling, reuse of aggregates, and sediment management systems.
4B		Raw materials used		Procurement policies favour responsible sourcing of steel, concrete, and lubricants.
4C		Replacements and Spares		Maintenance contracts require recovery and recycling of replaced parts (turbine blades, electrical components).

4D		Energy use		Auxiliary consumption minimised through efficient SCADA and automation systems.
4E		Emissions		Construction-phase mitigation: dust suppression, equipment maintenance, and relocation of nearby village to reduce localised exposure.
4F		Waste Streams		Wastewater treatment, hazardous waste management, sediment flushing gates, and spill response plans ensure waste minimisation and compliance.

4.1.6 Social Aspects

To comply with ASEAN Taxonomy requirements, an Activity must avoid negative social impacts and meet prescribed Social Aspects criteria. In this case, the developer has conducted a social impact assessment, which serves to demonstrate adherence to these requirements, as shown below.

S/N	Guiding questions - Essential Criteria 3 (Social Aspects)	Findings
4A 4B	Does the Company meet minimum national standards relating to human rights, labour rights and worker protection and impact on people living close to investments? In the absence of minimum standards established through national regulations or legislations, the following guiding questions will be used: 1. Promotion and protection of human rights - Does the Company have policies or guidelines that uphold an individual's right to enjoy just, decent and favourable working conditions? - Does the Company have a clear and transparent policy that sets out measures to create a positive environment in overcoming discrimination? - Does the Company have a policy that provides decent wages to all workers, taking into account adequate standards of living? 2. Labour rights and worker protection - Does the Company employ occupational health and safety practices? - Does the Company have a clear and transparent policy that sets out measures taken to prevent and eliminate all forms of exploitation, trafficking, violence and abuse in its entire supply chain? - Does the Company have a clear and transparent policy that prohibits child labour and ensures compliance with minimum age requirements for	1. Promotion and protection of human rights The developer follows a human rights policy aligned with the UN Guiding Principles. Employees receive regular training, and due diligence is conducted every three years. PM2.5 air quality risks are mitigated with purifiers and monitoring. No discrimination or violations have been reported, and wages meet national living standards. 2. Labour rights and worker protection The company maintains ISO 45001-aligned health and safety procedures, providing protective equipment, training, and medical checks. Policies

	employment in its operations and supply chain, in line with international standards? d. Do all workers have the right to enter into, and leave, employment voluntarily and freely? e. If the Company employs migrant workers, are the migrant workers treated fairly? f. Does the Company ensure all its workers free access to their documentation? g. If the Company employs private employment agencies, do they conduct measures to ensure that such agencies are not involved in any form of exploitation, trafficking, violence and abuse? h. Does the Company conduct assessments to understand the risks and vulnerabilities faced by informal workers and their communities, and implement measures to address them? i. Are there efforts to involve local communities or informal worker groups in creating solutions for better working conditions or social protections? j. Does the Company raise awareness among informal workers about their rights, available resources, or risks, and provide platforms (e.g., collectives or associations) to empower them to meet their basic needs? 3. Impact on people living close to investments a. Does the Company conduct risk and vulnerability assessments to ensure targeted response measures that would contribute to the progressive implementation, effective monitoring and evaluation, as well as optimum impact of social protection? b. Does the Company engage and strengthen the capacity of the community for better responsiveness, coordination and effectiveness of risk reduction and management policies? c. Does the Company promote public awareness of their exposure and vulnerability and establish platforms to empower people to meet their basic needs?	prohibit child and forced labour, and employment is voluntary and transparent. Migrant workers receive equal protections, and supply chain oversight prevents exploitation. Engagement with workers and communities supports continuous improvements and awareness of rights. 3. Impact on people living close to investments Social Impact and Resettlement Plans provide full compensation for land and assets, with special provisions for vulnerable groups. Ongoing community engagement, consultations, and grievance mechanisms ensure participation and transparency. Public awareness campaigns and risk mitigation measures help protect communities and share project benefits equitably.

4.2 Water treatment infrastructure

4.2.1 Scenario

A company is seeking to issue a Green Bond to finance the construction of a new water treatment plant.

4.2.2 Bases of assessment

The case has been assessed against the TSC for 36[003] Desalination under EO1 (Climate Change Mitigation), and it has been shown that the Activity may be classified Green if Essential Criteria are achieved.

Activities to be assessed as aligned with EOs as defined by the ASEAN Taxonomy must also demonstrate that they will Do No Significant Harm (DNSH) to other EOs. In addition, the Social Aspects (SA) must be met.

4.2.3 EO2: Climate Change Adaptation DNSH

To ensure water security, the company continuously monitors precipitation, reservoir levels, and weather forecasts, using data from models such as those provided by the International Research Institute for Climate and Society (IRI). To address drought risks, the company has implemented a water grid stabilisation plan, which emphasises increasing water supply capacity, expanding the pipeline network, and collaborating with relevant agencies, including weather forecasting authorities. This proactive strategy aims to maintain stable water resources and meet customer demand despite climate variability. An example of the CRVA checklist for this scenario is as follows:

Step	Item	Description	Status
1A	Lifespan of the Activity equipment and materials	Activity description	The proposed Activity is a water treatment plant.
1B		Equipment and materials description	• Pre-treatment Equipment – Screens, filters, flocculators. • Coagulation and flocculation system – chemical dosing system, mixers, flocculation tanks. • Sedimentation equipment. • Filtration equipment – Sand, Activated Carbon, or membrane filters. • Disinfection equipment. • Chemical treatment equipment. • Sludge and residue management. • Water storage and distribution equipment – tanks, pipes and fittings. • Monitoring and control – flow meters, water sensors.
1C		Activity start	Operation will commence on 1 January 2026
1D		Activity end	The plant is expected to have a lifespan of 30 years.
1E		Operational life >10 years?	Yes. Current and future assessment should be done using both IPCC climate scenarios and trends.

2A	Climate related hazards	Potential climate risks to the Activity	A physical risk assessment has been conducted, and “Heavy rain and storms” have been identified as a potential risk to the asset.
2B		Evaluate most common potential risks	• Flooding and landslides can rupture underground water pipes, causing leaks and loss of water supply. • Floodwaters can submerge treatment facilities, damaging pumps, filters, and electrical systems.
3A	Risk assessment	Projection of climate hazards	• Research indicates that extreme rainfall events (over 100 mm in a single day) are likely to occur more frequently as a result of climate change. • Typhoon occurrences in the country are expected to rise between 2013 and 2043, whereas monsoon storm frequency is projected to remain largely stable. The combined effect of rising sea levels and increased pre-monsoon rainfall amplifies the risk of severe flooding.
3B		Potential impact of climate related hazards	Heavy rainfall and storms can increase the risk of flooding and landslides, which may damage underground water pipes, leading to leaks and disruptions in water supply. Floodwaters can also inundate water and wastewater treatment facilities, potentially harming pumps, filters, and electrical systems.
4A	Identify adequate and effective adaptation solutions	Adaptive solutions	The company has implemented a range of measures to address climate change by enhancing the resilience of its water grid, ensuring effective water management, and maintaining sufficient water supply across all sectors, as outlined in their sustainability strategy.

4.2.4 EO3: Protection of Healthy Ecosystems and Biodiversity DNSH

The company is committed to maintaining ecological balance, developing water resources, and promoting the efficient use of water. The company integrates ecological, socioeconomic, and institutional knowledge to support the long-term sustainability and health of ecosystems. Its broader strategy includes initiatives such as mangrove forest restoration, ecosystem monitoring, water conservation, water quality monitoring, pollution reduction, CO₂ emissions mitigation, and community engagement, all aimed at preserving marine environments and enhancing coastal resilience.

The water treatment plant has undergone an EIA. An example of how the EIA could be used to support DNSH assessment is as follows.

The EIA for the proposed water treatment plant assesses potential environmental and social impacts throughout its construction and operational phases. Key findings include:

- **Air Quality:** Construction activities may generate dust and emissions from machinery, mitigated through dust suppression, vehicle maintenance, and equipment controls. Operational emissions are minimal.
- **Water Quality:** Wastewater treatment measures and proper discharge controls are designed to prevent contamination of local water bodies. Continuous monitoring ensures compliance with regulatory standards.
- **Biodiversity:** Site surveys indicate limited ecological sensitivity. Mitigation measures, including habitat preservation and management plans, are implemented to minimise impacts on flora and fauna.
- **Waste Management:** Construction and operational waste is segregated into recyclable, organic, and hazardous types. Disposal is conducted in compliance with international standards.
- **Climate Resilience:** The plant's design includes measures to withstand extreme weather events, maintain water supply reliability, and support sustainable water management.

Overall, with implementation of mitigation measures and ongoing monitoring, the project is expected to operate with minimal adverse environmental and social impacts while ensuring safe and reliable water supply.

4.2.5 EO4: Resource Resilience and the Transition to a Circular Economy DNSH

The LCA checklist could be used in this case to show compliance to EO4 DNSH. An example is as follows:

Step	Item	Description	Status
1A	Activity Definition	Activity	Water treatment plant.
1B	Period of Activity (Start / End)	When will the Activity start and what is its expected life?	Operation will commence on 1 January 2026 with an expected lifespan of 30 years.
2A	Inputs and outputs throughout Activity lifecycle	Initial infrastructure / equipment	• Pre-treatment Equipment – Screens, filters, flocculators. • Coagulation and flocculation system – chemical dosing system, mixers, flocculation tanks. • Sedimentation equipment. • Filtration equipment – sand, activated carbon, or membrane filters. • Disinfection equipment. • Chemical treatment equipment. • Sludge and residue management. • Water storage and distribution equipment – tanks, pipes and fittings. • Monitoring and control – flow meters, water sensors.
2B		Raw materials used	Not applicable in this context as they are not manufacturing Activities.

2C		Replacements and Spares	Replacements of pipes, valves, flow meters, water sensor, filtration materials.
2D		Energy use	Electricity needed for pumps to supply water, operation of flow meters, sensors, primary, secondary and tertiary treatment.
2E		Emissions	Activity will have indirect emissions from electricity consumption and direct emissions from diesel generators during an electricity failure. Emissions from diesel generations will be small.
2F		Waste Streams	Degraded pipes, non-functional sensors and meters, membrane filters, activated carbon filters, reverse osmosis membrane.
3A	Potential impacts from the Activity on EO4 (circular economy and resource resilience)	Initial infrastructure / equipment	Activity will result in significant use of pipes, valves, sensors and meters, membrane filters, activated carbon filters, reverse osmosis membrane.
3B		Raw materials used	Not applicable.
3C		Replacements and Spares	Replacements and spares are likely to be minimal during operation and will be defined in operations and maintenance plans.
3D		Energy use	Low impact.
3E		Emissions	No impact.
3F		Waste Streams	Waste during operation is likely to be minimal.
4A	Proposed actions and improvements to mitigate impact	Initial infrastructure / equipment	The company would typically use refurbished assets if possible. Replaced equipment will be recycled.
4B		Raw materials used	Not applicable.
4C		Replacements and Spares	The company would typically use refurbished assets if possible. Replaced equipment will be recycled.
4D		Energy use	Not applicable.
4E		Emissions	Not applicable.
4F		Waste Streams	The company would typically use refurbished assets if possible. Replaced equipment will be recycled.

4.2.6 Social Aspects

To comply with ASEAN Taxonomy requirements, an Activity must avoid negative social impacts and meet prescribed Social Aspects criteria. In this case, the developer has conducted a social impact assessment, but the results highlight significant shortcomings in meeting these requirements, as shown in the table below.

S/N	Guiding questions - Essential Criteria 3 (Social Aspects)	Findings
4A	Does the Company meet minimum national standards relating to human rights, labour rights and worker protection and impact on people living close to investments? In the absence of minimum standards established through national regulations or legislations, the following guiding questions will be used: 1. Promotion and protection of human rights - Does the Company have policies or guidelines that uphold an individual's right to enjoy just, decent and favourable working conditions? - Does the Company have a clear and transparent policy that sets out measures to create a positive environment in overcoming discrimination? - Does the Company have a policy that provides decent wages to all workers, taking into account adequate standards of living? 2. Labour rights and worker protection - Does the Company employ occupational health and safety practices? - Does the Company have a clear and transparent policy that sets out measures taken to prevent and eliminate all forms of exploitation, trafficking, violence and abuse in its entire supply chain? - Does the Company have a clear and transparent policy that prohibits child labour and ensures compliance with minimum age requirements for employment in its operations and supply chain, in line with international standards? - Do all workers have the right to enter into, and leave, employment voluntarily and freely? - If the Company employs migrant workers, are the migrant workers treated fairly? - Does the Company ensure all its workers free access to their documentation? - If the Company employs private employment agencies, do they conduct measures to ensure that such agencies are not involved in any form of exploitation, trafficking, violence and abuse? - Does the Company conduct assessments to understand the risks and vulnerabilities faced by informal workers and their communities, and implement measures to address them? - Are there efforts to involve local communities or informal worker groups in creating solutions for better working conditions or social protections?	1. Promotion and protection of human rights Community groups and observers have reported unresolved cases of gender and ethnic discrimination, yet the company lacks formal policies to address such issues. No documented framework exists to guarantee just working conditions or ensure wages meet adequate living standards. The absence of policies, together with widely raised grievances, shows clear gaps in human rights protection. 2. Labour rights and worker protection Labour groups and NGOs have highlighted unsafe conditions, missing protective equipment, and under-reported accidents. These concerns are reinforced by the absence of clear occupational health and safety policies or supply chain oversight. Migrant workers have publicly reported withheld passports, wage deductions, and poor housing, with no reliable grievance channels in place. The lack of documented procedures leaves workers unprotected.
4B		

	j. Does the Company raise awareness among informal workers about their rights, available resources, or risks, and provide platforms (e.g., collectives or associations) to empower them to meet their basic needs? 3. Impact on people living close to investments a. Does the Company conduct risk and vulnerability assessments to ensure targeted response measures that would contribute to the progressive implementation, effective monitoring and evaluation, as well as optimum impact of social protection? b. Does the Company engage and strengthen the capacity of the community for better responsiveness, coordination and effectiveness of risk reduction and management policies? c. Does the Company promote public awareness of their exposure and vulnerability and establish platforms to empower people to meet their basic needs?	3. Impact on people living close to investments Residents and local press have raised disputes over land acquisition, access restrictions, and incomplete compensation. The company has no formal resettlement or community engagement policies, and consultations are irregular. Risk assessments and public awareness measures are absent, leaving communities exposed without adequate protections.

Overall, the water treatment plant fails to meet the ASEAN Taxonomy's Social Aspects requirements. Inadequate grievance mechanisms, unresolved community impacts, and weak human rights safeguards indicate that the Activity cannot be classified as compliant with any Green or Amber Tier. As such, this Activity must be classified as Red.

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5. APPLICATION OF THE FOUNDATION FRAMEWORK

5.1.1 Scenario

The Company is classified as a Medium Enterprise based on Indonesian regulation: Government Regulation Number 7 of 2021 on Facilities, Protection and Empowerment for Cooperatives and Micro, Small and Medium Enterprises (MSMEs). The Company is a housing developer that provides sub-urban and rural housing that supports government programs to promote inclusive and sustainable residential development. The Company is looking to construct green housing in a rural district. They will initiate new project financing to develop affordable green housing² for low-income communities³ with a building area of 36 m².

Sustainability efforts:

- The Company supports a national green affordable housing program that has a long-term target of achieving 100% net-zero housing by 2050.
- The Company supports the government-initiated certification system for sustainable construction and design namely Green Buildings Certification, which also focuses on buildings that aims to reduce GHG emissions.
- The Company is committed to building affordable housing options to support low-income communities and enhance community diversity.
- The Company has conducted an Environmental Impact Assessment (EIA).
- The Company has taken the initiative in developing green housing project by using environmentally friendly materials that are sourced locally, applying the 3R Principle (Reuse, Reduce, Recycle) in waste management, and providing a wastewater treatment facility.
- The Company joins industry groups/association focused on sustainable development to learn best practices and stay informed about emerging trends.
- The Company has policies related to occupational safety and health, social security for workers, and the protection of human rights and workers' rights.

5.1.2 Bases of assessment

The Activity is assessed using the Foundation Framework (FF) using the guiding questions below. In this use case, alignment with EO and EC is assessed. Other uses cases can be found at the website of the Sustainable Finance Institute Asia (SFIA)⁴.

² 'Green Building' as a building that meets building technical standards and has considerable measurable performance in terms of energy, water, and other resource savings through the application of GBC principles in accordance with the purpose and classification in each stage of its implementation (Regulation of the Ministry of Public Works and Public Housing Number 21 of 2021 concerning Green Building Performance Assessment)

³ 'Low-Income Communities (Masyarakat Berpenghasilan Rendah/MBR)' are defined as those with low purchasing power who require government assistance to obtain a house (Regulation of the Ministry of Public Works and Public Housing Number 1 of 2021 on Criteria for Low-Income Communities and Requirements for Ease of Construction and Acquisition of Houses).

⁴ <https://www.sfinstitute.asia/wp-content/uploads/2024/12/ASEAN-Taxonomy-FF-Use-Cases-20Dec2024.pdf>

5.1.3 Result

Assessment	Guiding questions – EO1 (Climate Change Mitigation)	Assessment
EO1 Assessment	1A. Does the Activity avoid / reduce GHG emissions?	
	How does the Activity avoid or help reduce emissions?	The construction of affordable green buildings for low-income families incorporates various initiatives to avoid or help reduce emissions. In this context, the company is undertaking efforts to comply with Green Building Certification related to energy efficiency according to Regulation of the Ministry of Public Works and Public Housing Number 21 of 2021 concerning Green Building Performance Assessment, such as: • Use of building envelopes with optimal energy levels: The ratio of transparent building envelope to massive building envelope or Window to Wall Ratio (WWR) is 13%. • Energy efficient lighting system: Utilisation of natural lighting to reduce electricity consumption, as well as use of 5-7 Watt energy-saving LED lights and an automatic switch/sensor system for outdoor lighting in accordance with SNI 6197:2020 (Energy Conservation for Lighting System) or the latest edition. • Use of electricity from renewable energy sources: Implementation of a solar PV system with 900-1000 Watts peak power (Wp). • Reduce electrical energy consumption: Has a plan to lower electrical energy consumption compared to the baseline, with reference to energy efficiency calculations based on SNI 6197:2020 (Energy Conservation for Lighting System), SNI 6389:2020 (Energy Conservation of the Building Envelope in Buildings), SNI 6390:2020 (Energy conservation for air conditioning system in building).
	Does the Activity avoid locking in high-carbon activity?	Yes, green houses can incorporate energy-efficient designs that reduce overall energy demand, thereby minimising reliance on fossil fuels.
	Yes, the Activity avoids/reduces GHG emissions.	
DNSH / RMT Assessment	2A. Does the Activity avoid causing potential significant harm to other EOs?	
	Has an EIA been conducted and approved on the Activity?	Yes
	What are the results of the EIA?	The construction is located near water catchment areas. It can reduce the natural permeability of the

		land, leading to increased surface runoff and a higher risk of flooding in both the development area and downstream. Runoff from constructed areas also may carry pollutants (e.g., sediments, chemicals, waste) into water bodies, degrading water quality and harming aquatic ecosystems. Furthermore, construction can disrupt local habitats, leading to a loss of biodiversity and fragmentation of ecosystems that are crucial for various plant and animal species. Without proper planning, it can exacerbate vulnerability to climate impacts.
(EO3) Does the Activity avoid leading to a significant increase in pollutant emissions into the air, land and/or natural bodies of water, relative to the situation before the commencement of said economic Activity?		Green housing development can introduce pollutants from residential areas, such as chemicals, sewage, and waste, into water catchment areas, harming local ecosystems and water quality. Furthermore, water catchment areas often host diverse flora and fauna. It can also lead to habitat destruction, resulting in a loss of biodiversity and the services these ecosystems provide.
The activity is potentially causing significant harm to EO3.		
2B. Has implementation of remedial measures commenced at the time of assessment?		
Has the implementation of remedial measures already commenced at the time of assessment?		Yes. To mitigate this harm, the Company has done several programs that meet requirements including: • Adopting best practices to minimise habitat disturbance, in accordance with the Regulation of the Minister of Environment Number 16 of 2012 13 concerning the Guidelines for Preparation of Environmental Document. • Creating small retention basins or swales to manage runoff and allow for natural filtration as well as planting native vegetation along the perimeter of the construction site to filter runoff and provide habitat. • Set up designated areas for waste disposal and recycling to prevent contaminants from entering water bodies, in line with Regulation of the Ministry of Public Works and Public Housing No. 21 of 2021 concerning Green Building Performance Assessment. • Using basic monitoring tools (e.g., water testing kits) to regularly check for contaminants such as sediment, nutrients, or pollutants. The Company also

		develop flexible management plans that can be adjusted based on monitoring results. If issues are detected, implement corrective actions promptly without requiring significant funds. • Create a simple reporting system where findings can be documented and shared with stakeholders.
	3A. Post-mitigation harm	
	Does the Activity no longer cause significant harm to other EOs at the time of assessment?	Yes. Based on the assessment date, harm has been mitigated. Remedial efforts have been made and will be monitored regularly.
Initial Classification	Green	
Social Aspects Assessment	4A. Does the Company meet minimum national standards relating to human rights, forced labour, child labour and impact on people living close to investments?	The Company's operations meet minimum national standards/regulations as follows: • Respect of human rights (Constitution of the Republic of Indonesia Year 1945) • Prevention of forced and child labour (Labour Law 2003 as amended in 14 Law Number 11 of 2020 concerning Job Creation). • The Company provides a decent wage for the workers (MSMEs based on Law Number 11 of 2020 concerning Job Creation). • The Company has efforts and policies to ensure occupational health and safety practices in the workplace. • The Company guarantees workers' rights (social security and health). • The Company has implemented community and environmental empowerment programs in the area close to investment. Yes, the Company meets minimum national standards relating to human rights, forced labour, child labour and impact on people living close to investments.
Final Classification	Green	

5.1.4 Conclusion

The green housing project reduces GHG emissions and mitigates harm through implemented measures, achieving a final Green classification under the FF.

6. APPLICATION OF GRANDFATHERING RULES

6.1 Bond for power station O&M

6.1.1 Scenario

A 10-year Amber T2 bond is issued on 1 June 2028 to finance operations and maintenance of a gas-fired power station with a proven lifecycle emission of 418 gCO₂/kWh. At issuance, \$200 million in proceeds are immediately allocated to the power station O&M and utilised over a period of 3 years. The bond matures on 31 May 2038.

Plan for quantitative TSC for power generation which emits GHG (including 351[011] Electricity generation from fossil gas)

TSC Period	TSC Years	Tier 1 TSC	Tier 2 TSC	Tier 3 TSC
1	2024 - 2030	Lifecycle GHG emissions from the generation of electricity by the entire facility <100 gCO ₂ e/kWh.	Lifecycle GHG emissions from the generation of electricity by the entire facility: ≥100 and <425 gCO ₂ e/kWh.	Lifecycle GHG emissions from the generation of electricity by the entire facility: ≥425 and <510 gCO ₂ e/kWh.
2	2031 - 2035	Lifecycle GHG emissions from the generation of electricity by the entire facility <100 gCO ₂ e/kWh.	Lifecycle GHG emissions from the generation of electricity by the entire facility: ≥100 and <285 gCO ₂ e/kWh.	Sunset.
3	2036 - 2040	Lifecycle GHG emissions from the generation of electricity by the entire facility <100 gCO ₂ e/kWh.	Lifecycle GHG emissions from the generation of electricity by the entire facility: ≥100 and <185 gCO ₂ e/kWh.	Sunset.
4	2041 - 2045	Not published as of this Annex date.	Sunset.	Sunset.

6.1.2 Grandfathering implication

On 1 January 2031, the Amber T2 TSC are tightened. The Activities of the power station are reclassified as Red because its emissions no longer meet the revised Amber T2 TSC. As proceeds were allocated to the power station at the time of issuance, the bond retains its label based on the original TSC until maturity. The phased utilisation of these proceeds over 3 years (2030–2033) does not affect their label, as allocation was committed at issuance.

Date	TSC Period	Amber T2 Energy TSC applicable	Property of underlying Activity	Classification of underlying Activity	Bond label (considering grandfathering)				
June 28	1	Lifecycle emissions ≥100 and <425 gCO2e/kWh.	Power station: Lifecycle emissions 418 gCO ₂ /kWh.	Amber T2	Amber T2				
Jan 29									
June 29									
Jan 30									
June 30									
Jan 31	2	Lifecycle emissions ≥100 and <285 gCO2e/kWh.		Power station: Lifecycle emissions 418 gCO ₂ /kWh.		Red			
June 31									
Jan 32									
June 32									
Jan 33									
June 33									
Jan 34									
June 34									
Jan 35									
June 35									
Jan 36	3	Lifecycle emissions 100 and <185 gCO2e/kWh					Power station: Lifecycle emissions 418 gCO ₂ /kWh.	Red	Amber T2
June 36									
Jan 37									
June 37									
Jan 38									
June 38									
								Bond matures	

6.2 Bond issuance for transmission and distribution (T&D) integration

6.2.1 Scenario

A 15-year Amber T2 bond is issued on 1 June 2028 by an ASEAN government body and raises \$400 million allocated to financing transmission infrastructure aimed at integrating electricity networks across a large island. Proceeds are utilised for new transmission lines and substations, but do not fund direct connections to Green power stations or smart grid technology. The transmission system has lifecycle emissions of 400 gCO₂e/kWh over the period 2028–2031. Between 2031 and 2037, lifecycle emissions on the transmission system reduce to 300 gCO₂e/kWh. The Activities are assessed against 351[071] Transmission and distribution (T&D) of electricity; see Section 6.1.1 for table of future power generation and T&D thresholds.

On 1 June 2037, assets funded by the bond are sold to a private operator and the proceeds released are reallocated for immediate utilisation for construction of lines on a subordinate distribution system with lifecycle emissions of 180 gCO₂e/kWh; these are also on a gradual decarbonisation pathway and to drop below 150 gCO₂e/kWh at the start of 2042.

6.2.2 Grandfathering implications

The initial allocation of proceeds on 1 June 2028 is aligned with Amber T2 as they were allocated to an underlying Activity with lifecycle emissions of 400 gCO₂e/kWh. The TSC are subsequently tightened in January 2031, causing the underlying Activity to be classified Red. However, the bond retains its Amber T2 label.

The proceeds are reallocated to the distribution system on 1 June 2037. Under grandfathering rules, this allocation must be treated like a new bond issuance. As this Activity meets the Amber T2 TSC applicable reallocation, the bond may retain its Amber T2 label until maturity, even after Amber T2 is sunset on 1 January 2041.

Date	TSC Period	Amber T2 TSC applicable	Property of underlying Activity (1)	Property of underlying Activity (2)	Classification of underlying Activity (1)	Classification of underlying Activity (2)	Bond label (considering grandfathering)
June 28	1	Lifecycle emissions ≥100 and <425 gCO2e/kWh.	T&D system: lifecycle emissions 400 gCO ₂ e/kWh		Amber T2		Amber T2
Jan 29							
June 29							
Jan 30							
June 30							
Jan 31	2	Lifecycle emissions ≥100 and <285 gCO2e/kWh.	T&D system: Reduction to 300 gCO ₂ e/kWh	No proceeds allocated	Red	No proceeds allocated	
June 31							
Jan 32							
June 32							
Jan 33							
June 33							
Jan 34							
June 34							
Jan 35							
June 35							
Jan 36	3	Lifecycle emissions 100 and <185 gCO2e/kWh	No proceeds allocated	Distribution system: lifecycle emissions 180 gCO ₂ e/kWh	No proceeds allocated	Amber T2	
June 36							
Jan 37							
June 37							
Jan 38							
June 38							
Jan 39							
June 39							
Jan 40							
June 40							
Jan 41	4	Sunset	No proceeds allocated	Distribution system: <150 gCO ₂ e/kWh		Red	
June 41							
Jan 42							
June 42							
Jan 43							
June 43							Bond matures

6.3 Bond issuance programme for freight transport services

6.3.1 Scenario

A bond issuance programme is set up in 2028 to fund a logistics company in an ASEAN country. Two 10-year bonds are issued under this programme to finance a fleet of freight transport vehicles. The fleet consists of N3 vehicles (>7.5 tonnes) with direct emissions of 18 gCO₂e/t-km, not dedicated to fossil fuel transport.

4923[001] Freight transport services by road – EO1 TSC

Tiers	TSC
Tier 1 (Green)	- The Activity complies with one of the following criteria: - Vehicles of category N1 have zero direct (tailpipe) CO₂ emissions; - Vehicles of category N2 and N3 with a technically permissible maximum laden mass not exceeding 7.5 tonnes are 'zero-emission heavy-duty vehicles'; - Vehicles of category N2 and N3 with a technically permissible maximum laden mass exceeding 7.5 tonnes are one of the following: - Zero-emission heavy-duty vehicle; OR - Where technologically and economically not feasible to comply with the criterion in point (i), until 31 December 2030 have direct (tailpipe) CO₂ emissions less than 21 gCO₂e/t-km; AND - Vehicles are not dedicated to the transport of fossil fuels.
Tier 2 (Amber T2)	- The Activity complies with one of the following criteria: - vehicles of category N2 and N3 with a technically permissible maximum laden mass exceeding 7.5 tonnes are one of the following: - Where technologically and economically not feasible to achieve zero emissions, until 31 December 2030, have direct (tailpipe) CO₂ emissions less than 42 gCO₂e/t-km, and 1 January 2031 onwards, less than 21 gCO₂e/t-km; AND - Vehicles are not dedicated to the transport of fossil fuels.
Tier 3 (Amber T3)	TSC are presently not available for the Activity Tiers defined.

- Bond 1: Issued on 1 June 2028, \$120 million, proceeds allocated and utilised immediately for capital expenditure (CapEx) for purchasing vehicles.
- Bond 2: Issued on 1 January 2030, \$80 million, proceeds remain unallocated at issuance, held in reserve for future fleet investments. On 1 January 2032, proceeds are allocated to CapEx for additional vehicles, with utilisation over 3 years.

6.3.2 Grandfathering implications

Bond 1: The Green TSC change on 1 Jan 2031 to exclude all but zero emissions vehicles and the Amber Tier is subset. Since the proceeds were allocated to specific Activities prior to the TSC change on 1 January 2031, the bond retains its Green alignment until maturity on 31 May 2038.

Bond 2: The bond was issued in TSC Period 1, but proceeds were unallocated at the time of the TSC change (1 January 2031). They can be allocated to fleet investments after the TSC change under TSC Period 1 for up to 7 years from the TSC change with the bond retaining the Green label until 1 January 2038. After 1 January 2038, the bond must be labelled Red unless these proceeds

are reallocated to a Green Activity. If, however, the proceeds are allocated after 1 Jan 2038 and are aligned with the TSC extant at the period of time, the Bond may be labelled according to the relevant Tier.

	Date	TSC Period	Green TSC applicable	Property of underlying Activity	Classification of underlying Activity	Bond 1 label (considering grandfathering)	Bond 2 label (considering grandfathering)		
7-years from TSC change	June 28	1	Zero-emission vehicle; OR Direct (tailpipe) CO2 emissions less than 21 gCO2e/t-km	Freight vehicles: Direct emissions18 gCO ₂ e/t-km	Green		Not yet issued		
	Jan 29								
	June 29								
	Jan 30								
	June 30						No proceeds allocated		
	Jan 31	2	Zero-emission vehicle		Red	Green			
	June 31								
	Jan 32								
	June 32								
	Jan 33								
	June 33								
	Jan 34								
	June 34								
	Jan 35								
	June 35								
	Jan 36	3	Zero-emission vehicle						
	June 36								
	Jan 37								
	June 37								
	Jan 38						Bond matures		
June 38	Red								
Jan 39									
June 39									
Jan 40						Bond matures			

7-years from TSC change

6.4 Loan for power station construction

6.4.1 Scenario

A 10-year loan is issued on 1 June 2028 to finance a gas-fired power station with a proven lifecycle emission of 418 gCO₂/kWh. At the time of issuance, the Activities of the power station is classified as Amber T2; consequently, the loan is also classified as Amber T2. The Activities are assessed against 351[011] Electricity generation from fossil gas; see Section 6.1.1 for table of future power generation and T&D thresholds.

6.4.2 Grandfathering Implication

In 2031, the criteria for Amber T2 were revised to be more stringent, and Amber T3 was sunset. As of 1 January 2031, the Activities of the power station is now classified as Red, as it no longer meets the revised criteria.

However, the loan associated with the power station may retain its label under the grandfathering rules for other financial instruments. Accordingly, the loan can continue to be labelled as Amber T2 for seven years following the change or sunset of the TSC, remaining an Amber T2 loan until 1 January 2038.

Date	TSC Period	Amber T2 Energy TSC applicable	Property of underlying Activity	Classification of underlying Activity	Loan label (considering grandfathering)					
June 28	1	Lifecycle emissions ≥100 and <425 gCO ₂ e/kWh.	Power station: Lifecycle emissions 418 gCO ₂ /kWh.	Amber T2	Amber T2					
Jan 29										
June 29										
Jan 30										
June 30										
Jan 31	2	Lifecycle emissions ≥100 and <285 gCO ₂ e/kWh.		Power station: Lifecycle emissions 418 gCO ₂ /kWh.		Red	Amber T2			
June 31										
Jan 32										
June 32										
Jan 33										
June 33										
Jan 34										
June 34										
Jan 35										
June 35										
Jan 36	3	Lifecycle emissions 100 and <185 gCO ₂ e/kWh						Power station: Lifecycle emissions 418 gCO ₂ /kWh.	Red	Amber T2
June 36										
Jan 37										
June 37										
Jan 38										
June 38										
					Red					
					Loan repaid					

7-years from TSC change

7-years from TSC change

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