THAILAND TAXONOMY

Essential Criteria

Do No Significant Harm (DNSH) & Minimum Social Safeguards (MSS)

July 2025

THAILAND TAXONOMY BOARD

Table on Contents

Do No Significant Harm and Minimum Social Safeguards

The “Do No Significant Harm” (DNSH) and minimum social safeguards (MSS) principles are additional criteria that create necessary guardrails for taxonomies and help them to perform their functions. DNSH is applied to the taxonomies with multiple objectives in order to make sure that an activity substantially contributing to one objective does not cause damage to other objectives. MSS are included to make sure that the application of the Taxonomy is conducted in line with international treaties protecting social and labour rights and does not do damage to social peace and stability.

It is very important to note that in complying with all the rules of this Taxonomy, the entity being evaluated **must first comply with all laws, regulations and requirements established by the law of Thailand or the law of the country where the activity takes place**. The criteria below are additional to all these laws and may in no way conflict with them.

Do No Significant Harm (DNSH)

1. DNSH application mechanism

To be compliant with the Taxonomy, an activity must fulfil the basic criteria specified in the activity cards as well as the DNSH rules. The DNSH requirements for each taxonomy objective are structured as follows:

- **General requirements**: These activities must be performed by all taxonomy users who claim to comply with DNSH rules. They usually consist of two parts: assessment of potential risks to the objective and requests to mitigate those risks to the extent possible.
- **Sector and subsector specific requirements**: these requirements need only be met if the activity falls within the specified sector or subsector.

However, many DNSH requirements require substantial preparation, information gathering, and, in some cases, the acquisition of licenses or certifications. Therefore, to ensure that DNSH requirements do not impede widespread use of the Taxonomy, a three-year grace period in DNSH application and "limited taxonomy compliance" status have been introduced. This is applied as follows:

- Activities that are compliant with substantial contribution criteria, DNSH and MSS requirements at the time the Taxonomy compliance status is determined (for example, if the manager (a person seeking Taxonomy compliance status for his or her activity) wants to issue a green bond or take a green loan) are granted taxonomy compliance status for the activity or project in question. In this case, it is recommended that Taxonomy external review is conducted only upon initial attainment of this status. In the case that the audit has found that the activities in question indeed meet the requirements, further audits (e.g. every few years in the case of a green loan or green bond) are left to the discretion of the organisation making the decision to grant the status.

- Activities that are compliant with the substantial contribution criteria and comply with all laws, regulations and requirements established by the law of Thailand or the law of the country where the activity takes place, but do not meet all DNSH and/or MSS criteria, may be assigned limited taxonomy compliance status. In this case, the activity manager must publicly state which DNSH and/or MSS requirements the activity is not compliant with and publish a remediation plan to achieve DNSH and MSS compliance within a maximum of three years from the date of the assessment. The plan must be available for public assessment on a publicly accessible website until its completion.

- It is important to note that compliance with or without remediation plan is not different when it comes to substantial contribution category. Activities that are compliant with the green category of the Taxonomy will continue to be classified as green, even if the activities have not yet fully complied with, but are actively working to fulfill, DNSH and/or MSS requirements (if the remediation plan is submitted and published). Amber activities do not become green if they are compliant with DNSH and MSS requirements. The status of limited compliance with the green or amber category extends to the end of remediation period (3 years). At the end of this period, it must be revoked and replaced with either full compliance status (if its implementation was successful), or with non-compliance status (if the owner of the plan failed to implement it).

2. DNSH requirements

In order to achieve full compliance with the Taxonomy, all activities must comply with DNSH criteria listed below, with the exception of activities in the Agriculture sector (for which separate DNSHs are provided within the sector itself). These criteria must be fulfilled at the level of the activity and not at the level of the enterprise (as it is required for MSS).

Thailand's taxonomy contains six environment-related objectives:

1. Climate change mitigation;
2. Climate change adaptation;
3. Sustainable use and protection of marine and water resources;
4. Protection and restoration of biodiversity and ecosystems;
5. Pollution prevention and control;
6. Promotion of resource resilience and transition to a circular economy.

The application of a taxonomy contributes to at least one taxonomy objective (it may contribute to multiple objectives). You can see which Taxonomy objective each activity contributes to in the "Objective" row of each activity card. If more than one Taxonomy objective is listed in this column, the Taxonomy user is free to decide which of the listed objectives he wants to contribute to by applying the Taxonomy. For the remaining taxonomy objectives (to which no contribution is made via the application of the Taxonomy), the Taxonomy user must fulfil the DNSH criteria.

For example, if the activity contributes to the objective of climate change adaptation, it must fulfill DNSH requirement only for climate change mitigation, sustainable use and protection of marine and water resources, protection and restoration of biodiversity and ecosystems, pollution prevention and control and promotion of resource resilience and transition to a circular economy.

In the baseline scenario, a significant portion of DNSH requirements can be addressed through the conduct of an Environmental Impact Assessment (EIA), Environmental and Social Impact Assessment (ESIA), or through the implementation of an environmental management process. Additional requirements for specific sectors and activities that have a potential for significant harm are outlined in Section 3.

What is a significant harm?

- An activity is considered to do significant harm to **climate change mitigation** if it leads to significant greenhouse gas emissions;
- An activity is considered to do significant harm to **climate change adaptation** if it leads to an increased adverse impact of the current climate and the expected future climate, on the activity itself or on people, nature or assets;
- An activity is considered to do significant harm to the **sustainable use and protection of water and marine resources** if it is detrimental to the good status or the good ecological potential of bodies of water, including surface water and groundwater, or to the good environmental status of marine waters;
- An activity is considered to do significant harm to the **circular economy**, including waste prevention and recycling, if it leads to significant inefficiencies in the use of materials or in the direct or indirect use of natural resources, or if it significantly increases the generation, incineration or disposal of waste, or if the long-term disposal of waste may cause significant and long-term environmental harm;
- An activity is considered to do significant harm to **pollution prevention and control** if it leads to a significant increase in emissions of pollutants into air, water or land;
- An activity is considered to do significant harm to the **protection and restoration of biodiversity and ecosystems** if it is significantly detrimental to the good condition and resilience of ecosystems, or detrimental to the conservation status of habitats and species, including those of Union interest.

It should be noted that in some cases not all DNSH requirements are applicable to a certain activity. Guidance on how to apply different sections is given in Annex.

3. DNSH compliance tables[1]

Environmental objective: Climate change mitigation	
Generic DNSH requirements for all sectors	If an activity results in net emissions of greenhouse gases which have the potential to do significant harm with respect to factors related to climate change mitigation, the following must be implemented: ● The manager should calculate Scope 1 and Scope 2 emissions related to the activity as well as Scope 3 emissions if material to the sector in question[2]. Estimation of emissions referring to credible international or national proxies such as Intergovernmental Panel on Climate Change (IPCC) and Thailand Greenhouse Gas Management Organization (TGO) may be used; ● The manager should identify potential risk to other people or assets to directly increase their GHG emissions as the result of the activity's implementation; ● The manager should take actions to minimise GHG emissions associated with the implementation of the activity, including, but not limited to installation of monitoring and leak prevention measures (if applicable).

[1]With the exception of activities in the agriculture sector, separate DNSH requirements are provided within the sector itself

[2] Materiality of Scope 3 emissions is defined with recommendations of GHG Protocol, Refer to https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf

Environmental objective: Climate change mitigation	
Specific requirements	
Construction and Real Estate sector	Adaptation measures applied should not lead to an increase in the consumption of fossil fuels by the construction to which they are applied or any other structures.
Waste Management sector	An assessment of the potential significant harm caused to the environment by an activity must be conducted if the Activity causes GHG emissions including methane 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, Scope 2 emissions related to the Activity, as well as Scope 3 if relevant to the sector under assessment; ● Evidence that the remediation plans have been implemented and are ongoing.

Environmental objective: Climate change adaptation	
Generic DNSH requirements for all sectors	● Any activity seeking to demonstrate its compliance with DNSH related to climate change adaptation must conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance provided in Annex: Climate Risk and Vulnerability Assessment (CRVA). ● The manager of the activity should strive to minimise adaptation risks revealed throughout the CRVA. Adaptation solutions should support system adaptation that takes into

	consideration regional and national adaptation strategies and plans.

Environmental objective: Sustainable use and protection of marine and water resources	
Generic DNSH requirements for all sectors	● Risks associated with water consumption and water quality must be identified, assessed and mitigated to the biggest possible extent. Water risk analysis tools must be used for this purpose (e.g. risk assessments by national environmental authorities, water footprint, WWF Water Risk Filter[3], WRI Aqueduct[4] or comparable). ● If assets or activities are located in water-stressed areas, may be affected by floods or water quality issues, ensure that water use and conservation management plans, developed in consultation with relevant stakeholders, have been implemented. ● Ensure that water use/conservation management plans (including monitoring, reporting and verification methodology), developed in consultation with relevant stakeholders, have been developed and implemented as per international standards and guidelines. (e.g., UNEP Framework for Freshwater Ecosystem Management; ISO 13.060: Water Quality or comparable).
Specific requirements	
Transportation sector	**Sea and coastal water transport**: Releases of ballast water containing non-indigenous species must be prevented in line with

[3] World Wildlife Fund [WWF], "WWF Risk Filter Suite", 2023, https://waterriskfilter.org/

[4] World Resources Institute, "Aqueduct", 2024, https://www.wri.org/aqueduct

Environmental objective: Sustainable use and protection of marine and water resources	
	the International Convention for the Control and Management of Ships' Ballast Water and Sediments.
Construction and Real Estate sector	All relevant water appliances (shower solutions, mixer showers, shower outlets, taps, WC suites, WC bowls and flushing cisterns, urinal bowls and flushing cisterns, bathtubs) must be water efficient as per national or international water labelling systems (e.g., WELS, WaterSense, MWA Water Saving Label or comparable).

Environmental objective: Promotion of resource resilience and transition to a circular economy	
Generic DNSH requirements for all sectors	● In order to assess whether the activity in question is doing significant harm to this objective, a lifecycle assessment in line with ISO 14040 and ISO 14044 (or any comparable international methodology) should be conducted on the products, material, process, or other measurable activities. ● The activity manager should implement concrete demonstrable measures to maximise the efficient use, reduction, repair, recycling and reuse of materials during the activity operational life cycle (e.g. through contractual agreements with recycling companies and integration of the cost of recycling), proper treatment and waste disposal (e.g. proper end-of-life management of batteries) and compliance, as a producer, with Extended Producer Responsibility standards must be demonstrated. ● New installations must be designed and manufactured for high durability, easy to dismantle, refurbishment and

Environmental objective: Promotion of resource resilience and transition to a circular economy	
	recycling to the extent possible. Potential of repair of facilities and equipment, and the accessibility and interchangeability of the activity's equipment components must be ensured. ● The activity shall apply relevant national regulations and international guidelines associated with retirement and dismantlement plans for plants and infrastructure related to the activity.
Specific requirements	
Energy Sector	● Ensure renewable energy installations and associated components have been designed and manufactured for high durability, easy dismantling, refurbishment, and recycling, aligned to international standards and guidelines (e.g., KAPSARC Guide to Circular Economy, French standard, XP X30-901, Circular economy—Circular economy project management system or comparable). ● Ensure reparability of renewable energy installations, accessibility and exchangeability of the components.
Transportation sector	Ensure proper waste management both at the use phase (maintenance) and the end-of-life for the rolling stock, e.g. reuse and recycle of parts like batteries, in compliance with international and national legislation on hazardous waste generation, management and treatment, e.g., KAPSARC Guide to circular economy, French standard, XP X30-901, Circular economy – Circular economy project management system or comparable. Measures must be in place to manage waste in

Environmental objective: Promotion of resource resilience and transition to a circular economy	
	accordance with the waste hierarchy, in particular during maintenance.
Manufacturing sector	The activity manager must strive to minimise and manage waste and material use, especially hazardous manufacturing waste as per international standards and guidelines (e.g., KAPSARC Guide to circular economy, French standard, XP X30-901, Circular economy – Circular economy project management system; ISO/TC 323 (In development Scenario 2); ISO/AWI 59014: Secondary materials — Principles, sustainability and traceability requirements; Global Recycled Standard (GRS); Strategic Approach to International Chemicals Management (SAICM); ISO 11014:2009 (en) Safety data sheet for chemical products or comparable).
Construction and Real Estate sector	● At least 80% (by weight) of the non-hazardous construction, renovation and demolition waste (excluding naturally occurring material) generated on the construction site must be prepared for re-use, recycling and other material recovery, including backfilling operations using waste to substitute other materials. ● Activities must be aligned with international standards with international standards on sustainable management in this sphere, e.g., ISO 20887:2020 – Sustainability in buildings and civil engineering works or comparable ● For new construction (buildings or portions of buildings), a cradle-to-grave life-cycle assessment of the projects structure and enclosure should be conducted.
Waste Management sector	Avoid mixing segregated waste fractions in waste storage or transfer facilities.

Environmental objective: Pollution prevention and control	
Generic DNSH requirements for all sectors	● Where an activity may cause significant pollution, a recognised environmental management system (ISO 14001, EMAS, or comparable) should be adopted for the enterprise where the activity takes place. ● Ensure the activity undergoes screening to assess whether it leads to the manufacture, placing on the market, or use of dangerous substances (as defined by relevant Thailand laws and regulations), whether on their own, in mixtures, or in articles, and causes significant harm to the environment. ● Integrated Environmental Assessment in line with the UN Environment Programme's Guidelines for Conducting Integrated Environmental Assessments[5] must be conducted for the activity to specifically identify and manage environmental detrimental risks related to the emission of pollutants, heat, light or noise to the environment. ● It must be demonstrated that neither the construction nor operation of the activity is emitting dangerous substances, noise, light or heat in excess of those allowed by relevant national or international regulations. Furthermore, the achievement of applicable air, water and soil quality targets should not be hampered due to the activity. ● In the case that the construction and/or operation of the activity is known to cause significant harm to the environment, the activity must identify risk-based measures

[5] UN Environment program, "Guidelines for Conducting Integrated Environmental Assessments", April, 2019, https://wedocs.unep.org/bitstream/handle/20.500.11822/16775/IEA_Guidelines_Living_Document_v2.pdf?sequence=1&isAllowed=y

Environmental objective: Pollution prevention and control	
	to prevent the pollution, and safely remediate any contamination caused by the activity. ● Based on the EIA, ensure that management plans are developed for every pollutant causing significant harm. Management plans are to be drafted in consultation with relevant stakeholders. Furthermore, Monitoring, Reporting and Verification strategies are to be implemented to monitor the compliance and effectiveness of the mitigation measures.
Specific requirements	
Energy sector	**Wind Energy**: Ensure any required mitigation measures for avoiding underwater noise created by the installation of offshore wind turbines
Transportation sector	**All road vehicles**: vehicles must comply with regulations on the sound level of motor vehicles and of replacement silencing systems, e.g. IFC EHS Guidelines: Air emissions and ambient air quality; ISO 13.040.50: Transport Exhaust emissions; ISO 362 Measurement of noise emitted by accelerating road vehicles; ISO 28580:2018 - Passenger car, truck and bus tyre rolling resistance measurement method — Single point test and correlation of measurement results or comparable.
Manufacturing sector	● A recognised environmental management system (ISO 14001, EMAS, or comparable) must be adopted for the enterprise where the activity takes place. ● **Production of steel**: ensure emissions to air, water and soil are prevented/minimised as per international standards and guidelines (e.g. for pH, total suspended solids (TSS), chemical oxygen demand (COD), chromium (total) and heavy metals,

Environmental objective: Pollution prevention and control	
	for sulphur dioxide – SO2, nitrogen oxide – NOx, particulate matter, polychlorinated dibenzo-dioxins/furans, mercury (Hg), hydrogen chloride (HCL) and hydrogen fluoride (HF). These guidelines may include IFC EHS Guidelines: Air emissions and ambient air quality; ISO 14001:2015 Environmental management systems — Requirements with guidance for use; Strategic Approach to International Chemicals Management (SAICM); ISO 11014:2009(en) Safety data sheet for chemical products or any other comparable and applicable guidelines. ● **Production of cement**: a waste management plan must be implemented to minimise and manage waste and material use as per international standards and guidelines (e.g., KAPSARC Guide to circular economy, French standard, XP X30-901, Circular economy – Circular economy project management system; ISO/TC 323 (In development Scenario 2); ISO/AWI 59014: Secondary materials — Principles, sustainability and traceability requirements; Global Recycled Standard (GRS); ETP Clean Energy Technology Guide). ● **Production of chemicals, hydrogen and plastics in primary form:** ensure emissions to air, water and soil are prevented/minimised as per international and national standards, e.g. IFC EHS Guidelines: Air emissions and ambient air quality; ISO 14001:2015 Environmental management systems — Requirements with guidance for use; Strategic Approach to International Chemicals Management (SAICM); ISO 11014:2009(en) Safety data sheet for chemical products. ● **Production of aluminium:** ensure emissions to air (e.g. sulphur dioxide - SO2, nitrogen oxide - NOx, particulate matter, Total Organic Carbon (TOC), dioxins, mercury (Hg),

Environmental objective: Pollution prevention and control	
	hydrogen chloride (HCL), hydrogen fluoride (HF), Total Fluoride, and (PFCs) polyfluorinated hydrocarbons (PFCs) are prevented/minimised as per international standards and guidelines (e.g., IFC EHS Guidelines: Air emissions and ambient air quality; ISO 14001:2015 Environmental management systems — Requirements with guidance for use; Strategic Approach to International Chemicals Management (SAICM); ISO 11014:2009(en) Safety data sheet for chemical products). ● **Manufacture of plastics in primary form**: Plastic producers should implement and maintain a certified Extended Producer Responsibility (EPR) scheme. Upon the enactment of relevant legislation, producers are required to comply with all applicable regulatory provisions. This scheme must ensure that producers bear financial and/or operational responsibility for the collection, sorting, treatment, and recycling of plastic products and packaging at the post-consumer stage of their lifecycle. ● **CCS-related activities**: fans, compressors, pumps and other equipment, must comply, where relevant, with the top-class requirements of the energy label, and represent the best available technology. Release of CO2 during operation must be prevented by implementing permanent leakage detection systems.
Construction and Real Estate sector	● Ensure that building components and materials do not contain asbestos nor substances of very high concern as per national and international standards.

Environmental objective: Pollution prevention and control	
	• If the new construction is located on a potentially contaminated site (brownfield site), the site must be subject to an investigation for potential contaminants.
Waste Management sector	Ensure emissions to air, water and soil are prevented/minimised as per international and national standards and guidelines (e.g. IFC EHS Guidelines: Air emissions and ambient air quality; ISO 14001:2015 Environmental Management systems – Requirements with guidance for use; Strategic Approach to International Chemicals Management (SAICM); ISO 11014:2019(en) Safety data sheet for chemical products). • **For activities that produce leachate such as compost of bio-waste and hazardous waste treatment:** the site must have a system in place that monitors leachate quality and minimises leachate reaching groundwater • **For activities that combust biogas or such as Landfill Gas Capture and Anaerobic Digestion:** emissions to air (e.g. Sox, NOx) after combustion must be controlled, abated (when needed) and within the limits set by national legislation. • **For wastewater related activities:** identify and manage risks related to water quality and/or water consumption at the appropriate level, in accordance with national standards.

Environmental objective: Protection and restoration of biodiversity and ecosystems	
Generic DNSH requirements for all sectors	● The determination of whether a biodiversity related environmental impact assessment (EIA) is required for a particular activity or not is made through a case-by-case examination of the activity[6]. If applicable, an Integrated Environmental Assessment (EIA) in line with the UN Environment Programme's Guidelines for Conducting Integrated Environmental Assessments[7] must be conducted for the activity. ● The activity manager must mitigate all potential risks for biodiversity and ecosystems associated with activity implementation that were identified throughout the EIA. ● Ensure the Biodiversity and Ecosystem Management Plans are developed in consultation with relevant stakeholders. Furthermore, ensure that the Monitoring, Reporting and Verification strategies are implemented to monitor the compliance and effectiveness of the mitigation measures. ● New financed facilities and infrastructure should not be located in ecosystems that are strategic for food security, rich in biodiversity, or that serve as habitat for endangered species (flora and fauna) that are in the Thailand lists of nationally protected areas or on the IUCN Red List[8]. Museums or technical facilities (specifically electronic

[6] As determined by Notification of MoNRE on the projects that require EIA. Refer to https://law.onep.go.th/wp-content/uploads/2021/07/law51.4.pdf

[7] UN Environment program, "Guidelines for Conducting Integrated Environmental Assessments", April, 2019, https://wedocs.unep.org/bitstream/handle/20.500.11822/16775/IEA_Guidelines_Living_Document_v2.pdf?sequence=1&isAllowed=y

[8] International Union for Conservation of Nature's Red List [IUCN], "IUCN Red List of Threatened Species", 2024, https://www.iucnredlist.org/

Environmental objective: Protection and restoration of biodiversity and ecosystems	
	communications network equipment and facilities used to originate, process, transfer, transmit or receive electronic communications calls and information signals) necessary for their functioning are exempt from this requirement. ● For sites and operations located in or near biodiversity sensitive areas (defined as areas included into, UNESCO World Heritage sites and Key Biodiversity Areas, as well as other protected areas), an appropriate assessment must be carried out in line with the criteria set by IFC Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources[9]. For these sites, a long-term biodiversity monitoring and assessment programme must be adopted.
Specific requirements	
Forestry subsector	● Measures must be taken to ensure sustained or improved long term conservation status at the landscape level. ● In designated conservation areas, actions should be demonstrated to be in line with the conservation objectives for those areas. ● A forest management plan (or equivalent) that includes provisions for maintaining biodiversity must be developed. ● The ecosystem service provision with the aim to not decrease the amount and quality of ecosystem services provided must be evaluated.

[9] International Finance Corporation [IFC], "Performance Standard 6: : Biodiversity Conservation and Sustainable Management of Living Natural Resources", January 1, 2012, https://www.ifc.org/en/insights-reports/2012/ifc-performance-standard-6

Environmental objective: Protection and restoration of biodiversity and ecosystems	
Transportation sector	● **Sea and coastal water transport**: the measures must be in place to prevent the introduction of non-indigenous species by biofouling the hull and niche areas of ships, taking into account the IMO Biofouling Guidelines. Noise and vibrations are limited by using noise-reducing propellers, hull design, or onboard machinery in line with the guidance given in the IMO Guidelines for the Reduction of Underwater Noise. ● **Sea and coastal water transport**: the measures to minimise toxicity of anti-fouling paint and biocides must be introduced.
Construction and Real Estate sector	● At least 80% of all timber products used in the new construction for structures, cladding and finishes must have been either recycled/reused or sourced from sustainably managed forests as defined by the Forestry criteria of the Thailand Taxonomy.

Minimum Social Safeguards (MSS)

The eligible asset or activity must ensure that it does not generate a negative social impact and observe minimum social safeguards (MSS). For this, the owner of the activity must adhere to the relevant Thai regulatory framework and policies, relevant internationally recognised principles and conventions, and have a social management system in place. MSS must be adhered to at the enterprise level (not a single activity) at the time an activity is assigned taxonomy compliant status and throughout the lifetime of the activity in that status. Similar to the DNSH criteria, the enterprise must comply with all laws, regulations, or legal requirements that are mandated by the law of Thailand or the law of the country where the activity occurs. For MSS criteria that are not legally required, it is recommended to comply with them at the time of assessment. Otherwise, the enterprise may be assigned limited taxonomy compliance status. In this case, the enterprise must publicly state the non-

compliant MSS requirements and publish a plan to achieve the MSS compliance within a maximum of three years from the date of the assessment.

MSS must be applied to all workers, including informal workers, regardless of their employment status or contractual agreements. In activities involving informal workers, particularly within hazardous sectors like electronic waste dismantling in Thailand, a thorough due diligence process is crucial to understand the social welfare of these workers. This assessment should go beyond simply acknowledging their presence and delving into the specific risks they face. For example, in e-waste dismantling, this includes evaluating exposure to toxic substances, the use of appropriate personal protective equipment (PPE), working conditions (including ventilation and workspace safety), access to healthcare (including occupational health services), and fair compensation. Based on the identified risks, robust mitigation measures must be implemented. These measures might include providing appropriate PPE and training on its use, establishing safe handling and disposal procedures for e-waste, ensuring access to regular health check-ups and treatment for occupational illnesses, promoting fair wages and working hours, and facilitating access to social security schemes where possible, even for informal workers. Furthermore, these safeguards should be regularly monitored and adapted to ensure their effectiveness and responsiveness to the evolving needs of informal workers in the e-waste sector.

The minimum number of laws, standards and regulations that should be observed by the manager includes (including, but not limited to):

- United Nations Guiding Principles on Business and Human Rights (2011)

International Labour Organization core conventions:

- Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87)
- Right to Organise and Collective Bargaining Convention, 1949 (No. 98)
- Forced Labour Convention, 1930 (No. 29) (and its 2014 Protocol)
- Abolition of Forced Labour Convention, 1957 (No. 105)
- Minimum Age Convention, 1973 (No. 138)
- Worst Forms of Child Labour Convention, 1999 (No. 182)

- Equal Remuneration Convention, 1951 (No. 100)
- Discrimination (Employment and Occupation) Convention, 1958 (No. 111)

International Bill of Human Rights conventions:

- Universal Declaration of Human Rights (1948)
- International Covenant on Civil and Political Rights (1966)
- International Covenant on Economic, Social and Cultural Rights (1966)

The practices of activity that manager must not contradict the following IFC Performance Standards[10], where applicable:

- Performance Standard 1: Assessment and management of environmental and social risks and impacts.
- Performance Standard 2: Labour and working conditions
- Performance Standard 3: Resource efficiency and pollution prevention (in parts where it does not contradict to the DNSH requirements of the present Taxonomy)
- Performance Standard 4: Community Health and Safety
- Performance Standard 5: Land Acquisition and Involuntary Resettlement
- Performance Standard 6: Biodiversity Conservation
- Performance Standard 7: Indigenous Peoples
- Performance Standard 8: Cultural Heritage

If the manager of the activity in question considers some of the standards inapplicable, he or she should justify it and attach this justification to the relevant set of documents.

[10] IFC, “IFC's Performance Standards on Environmental and Social Sustainability” , January 1, 2012, https://www.ifc.org/en/insights-reports/2012/ifc-performance-standards

Annex: Application of DNSH criteria to Thailand taxonomy activities

No.	Sector	Activity	Climate change mitigation	Climate change adaptation	Sustainable use and protection of marine and water resources	Promotion of resource resilience and transition to a circular economy	Pollution prevention and control	Protection and restoration of biodiversity and ecosystems
1	Energy	Solar energy generation	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for energy sector	Generic criteria	Generic criteria
2	Energy	Wind energy generation	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for energy sector	Generic criteria + Specific criteria for energy sector	Generic criteria
3	Energy	Hydropower generation	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for energy sector	Generic criteria	Generic criteria
4	Energy	Geothermal power generation	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for energy sector	Generic criteria	Generic criteria
5	Energy	Bioenergy generation and production	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for energy sector	Generic criteria	Generic criteria

No.	Sector	Activity	Climate change mitigation	Climate change adaptation	Sustainable use and protection of marine and water resources	Promotion of resource resilience and transition to a circular economy	Pollution prevention and control	Protection and restoration of biodiversity and ecosystems
6	Energy	Energy production from natural gas	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for energy sector	Generic criteria	Generic criteria
7	Energy	Marine energy generation	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for energy sector	Generic criteria	Generic criteria
8	Energy	Electricity generation from renewable non-fossil gaseous and liquid fuels, including green hydrogen	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for energy sector	Generic criteria	Generic criteria
9	Energy	Cogeneration of heating/cooling and power using renewable sources of energy	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for energy sector	Generic criteria	Generic criteria

No.	Sector	Activity	Climate change mitigation	Climate change adaptation	Sustainable use and protection of marine and water resources	Promotion of resource resilience and transition to a circular economy	Pollution prevention and control	Protection and restoration of biodiversity and ecosystems
10	Energy	Production of heating and cooling using waste heat	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for energy sector	Generic criteria + Specific criteria for energy sector	Generic criteria
11	Energy	Installation and operation of electric heat pumps	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for energy sector	Generic criteria	Generic criteria
12	Energy	Heating and cooling distribution	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for energy sector	Generic criteria + Specific criteria for energy sector	Generic criteria
13	Energy	Transmission and distribution networks for renewable and low-carbon gases, including green hydrogen	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for energy sector	Generic criteria + Specific criteria for energy sector	Generic criteria
14	Energy	Storage of electricity, thermal energy and green hydrogen	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for energy sector	Generic criteria	Generic criteria

No.	Sector	Activity	Climate change mitigation	Climate change adaptation	Sustainable use and protection of marine and water resources	Promotion of resource resilience and transition to a circular economy	Pollution prevention and control	Protection and restoration of biodiversity and ecosystems
15	Energy	Transmission and distribution of electricity	Generic criteria	Generic criteria	N/A	Generic criteria + Specific criteria for energy sector	Generic criteria	Generic criteria
16	Transportation	Transport via railways	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for transportation sector	Generic criteria + Specific criteria for transportation sector	Generic criteria
17	Transportation	Other passenger land transport	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for transportation sector	Generic criteria + Specific criteria for transportation sector	Generic criteria
18	Transportation	Urban and suburban passenger land transport	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for transportation sector	Generic criteria + Specific criteria for transportation sector	Generic criteria
19	Transportation	Freight transport by road	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria	Generic criteria + Specific criteria	Generic criteria

No.	Sector	Activity	Climate change mitigation	Climate change adaptation	Sustainable use and protection of marine and water resources	Promotion of resource resilience and transition to a circular economy	Pollution prevention and control	Protection and restoration of biodiversity and ecosystems
						for transportation sector	for transportation sector	
20	Transportation	Enabling infrastructure for low-emission transport	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for transportation sector	Generic criteria	Generic criteria
21	Transportation	Sea and coastal water transport	Generic criteria	Generic criteria	Generic criteria + Specific criteria for transportation sector	Generic criteria + Specific criteria for transportation sector	Generic criteria	Generic criteria + Specific criteria for transportation sector
22	Transportation	Inland water transport	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for transportation sector	Generic criteria	Generic criteria
23	Transportation	Retrofitting of sea and coastal freight and	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria	Generic criteria	Generic criteria

No.	Sector	Activity	Climate change mitigation	Climate change adaptation	Sustainable use and protection of marine and water resources	Promotion of resource resilience and transition to a circular economy	Pollution prevention and control	Protection and restoration of biodiversity and ecosystems
		passenger water transport				for transportation sector		
24	Transportation	Passenger and freight transport by air	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for transportation sector	Generic criteria + Specific criteria for transportation sector	Generic criteria
25	Construction and Real Estate	Construction of new buildings	Generic criteria + Specific criteria for Construction and real estate sector	Generic criteria	Generic criteria + Specific criteria for Construction and real estate sector	Generic criteria + Specific criteria for Construction and real estate sector	Generic criteria + Specific criteria for Construction and real estate sector	Generic criteria + Specific criteria for Construction and real estate sector
26	Construction and Real Estate	Renovation of the existing residential or commercial buildings	Generic criteria + Specific criteria for Construction and real estate sector	Generic criteria	Generic criteria + Specific criteria for Construction and real estate sector	Generic criteria + Specific criteria for Construction and real estate sector	Generic criteria + Specific criteria for Construction and real estate sector	Generic criteria + Specific criteria for Construction and real estate sector

No.	Sector	Activity	Climate change mitigation	Climate change adaptation	Sustainable use and protection of marine and water resources	Promotion of resource resilience and transition to a circular economy	Pollution prevention and control	Protection and restoration of biodiversity and ecosystems
27	Construction and Real Estate	Acquisition or ownership of buildings	Generic criteria + Specific criteria for Construction and real estate sector	Generic criteria	Generic criteria + Specific criteria for Construction and real estate sector	Generic criteria + Specific criteria for Construction and real estate sector	Generic criteria + Specific criteria for Construction and real estate sector	Generic criteria + Specific criteria for Construction and real estate sector
28	Construction and Real Estate	Installation, maintenance, and repair of special-purpose building equipment	Generic criteria + Specific criteria for Construction and real estate sector	Generic criteria	Generic criteria + Specific criteria for Construction and real estate sector	Generic criteria + Specific criteria for Construction and real estate sector	Generic criteria + Specific criteria for Construction and real estate sector	N/A
29	Construction and Real Estate	Demolition and site preparation	Generic criteria + Specific criteria for Construction and real estate sector	Generic criteria	Generic criteria + Specific criteria for Construction and real estate sector	Generic criteria + Specific criteria for Construction and real estate sector	Generic criteria + Specific criteria for Construction and real estate sector	Generic criteria + Specific criteria for Construction and real estate sector

No.	Sector	Activity	Climate change mitigation	Climate change adaptation	Sustainable use and protection of marine and water resources	Promotion of resource resilience and transition to a circular economy	Pollution prevention and control	Protection and restoration of biodiversity and ecosystems
30	Construction and Real Estate	All activities contributing solely to adaptation objective	Generic criteria + Specific criteria for Construction and real estate sector	Generic criteria	Generic criteria	Generic criteria	Generic criteria	Generic criteria
31	Manufacturing	Manufacture of basic chemicals	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for Manufacturing sector	Generic criteria + Specific criteria for production of chemicals, hydrogen and plastics in primary form	Generic criteria
32	Manufacturing	Manufacture of cement	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for Manufacturing sector	Generic criteria + Specific criteria for production of cement	Generic criteria

No.	Sector	Activity	Climate change mitigation	Climate change adaptation	Sustainable use and protection of marine and water resources	Promotion of resource resilience and transition to a circular economy	Pollution prevention and control	Protection and restoration of biodiversity and ecosystems
33	Manufacturing	Manufacture of basic iron and steel	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for Manufacturing sector	Generic criteria + Specific criteria for production of steel	Generic criteria
34	Manufacturing	Manufacture of aluminium	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for Manufacturing sector	Generic criteria + Specific criteria for production of aluminium	Generic criteria
35	Manufacturing	Manufacture of hydrogen	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for Manufacturing sector	Generic criteria + Specific criteria for production of chemicals, hydrogen and plastics in primary form	Generic criteria
36	Manufacturing	Manufacture of plastics in primary form	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria	Generic criteria + Specific criteria	Generic criteria

No.	Sector	Activity	Climate change mitigation	Climate change adaptation	Sustainable use and protection of marine and water resources	Promotion of resource resilience and transition to a circular economy	Pollution prevention and control	Protection and restoration of biodiversity and ecosystems
						for Manufacturing sector	for production of chemicals, hydrogen and plastics in primary form	
37	Manufacturing	Manufacture of batteries	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for Manufacturing sector	Generic criteria + Specific criteria for Manufacturing sector	Generic criteria
38	Manufacturing	Manufacture of renewable energy technologies	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for Manufacturing sector	Generic criteria + Specific criteria for Manufacturing sector	Generic criteria
39	Manufacturing	Manufacture of low-carbon technologies for transport	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for Manufacturing sector	Generic criteria + Specific criteria for Manufacturing sector	Generic criteria

No.	Sector	Activity	Climate change mitigation	Climate change adaptation	Sustainable use and protection of marine and water resources	Promotion of resource resilience and transition to a circular economy	Pollution prevention and control	Protection and restoration of biodiversity and ecosystems
40	Manufacturing	Manufacture of energy efficiency equipment for buildings	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for Manufacturing sector	Generic criteria + Specific criteria for Manufacturing sector	Generic criteria
41	Manufacturing	Manufacture of other low-carbon technologies	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for Manufacturing sector	Generic criteria + Specific criteria for Manufacturing sector	Generic criteria
42	Manufacturing	CCS: Point-source capture of CO2	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for Manufacturing sector	Generic criteria + Specific criteria for CCS/CCUS related activities	Generic criteria
43	Manufacturing	Transportation of captured CO2	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for Manufacturing sector	Generic criteria + Specific criteria for CCS/CCUS related activities	Generic criteria

No.	Sector	Activity	Climate change mitigation	Climate change adaptation	Sustainable use and protection of marine and water resources	Promotion of resource resilience and transition to a circular economy	Pollution prevention and control	Protection and restoration of biodiversity and ecosystems
43	Manufacturing	Permanent sequestration of captured CO2	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for Manufacturing sector	Generic criteria + Specific criteria for CCS/CCUS related activities	Generic criteria
44	Manufacturing	Utilisation of captured CO2	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for Manufacturing sector	Generic criteria + Specific criteria for CCS/CCUS related activities	Generic criteria
45	Manufacturing	Introduction of energy efficiency and decarbonisation measures in manufacturing activities not specified in the Thailand Taxonomy	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for Manufacturing sector	Generic criteria + Specific criteria for Manufacturing sector	Generic criteria

No.	Sector	Activity	Climate change mitigation	Climate change adaptation	Sustainable use and protection of marine and water resources	Promotion of resource resilience and transition to a circular economy	Pollution prevention and control	Protection and restoration of biodiversity and ecosystems
46	Waste	Anaerobic digestion of bio-waste or wastewater	Generic criteria + Specific criteria for Waste sector	Generic criteria	Generic criteria	Generic criteria + Specific criteria for Waste sector	Generic criteria + Specific criteria for Waste sector	Generic criteria
47	Waste	Composting of bio-waste	Generic criteria + Specific criteria for Waste sector	Generic criteria	Generic Criteria	Generic criteria + Specific criteria for Waste sector	Generic criteria + Specific criteria for Waste sector	Generic criteria
48	Waste	Collection and transport of waste	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for Waste sector	Generic criteria + Specific criteria for Waste sector	Generic criteria
49	Waste	Depollution and dismantling of end-of-life products	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for Waste sector	Generic criteria + Specific criteria for Waste sector	Generic criteria
50	Waste	Waste to Energy	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for Waste sector	Generic criteria + Specific criteria for Waste sector	Generic criteria

No.	Sector	Activity	Climate change mitigation	Climate change adaptation	Sustainable use and protection of marine and water resources	Promotion of resource resilience and transition to a circular economy	Pollution prevention and control	Protection and restoration of biodiversity and ecosystems
51	Waste	Landfill gas capture and utilisation	Generic criteria + Specific criteria for Waste sector	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for Waste sector	Generic criteria
52	Waste	Remediation of contaminated sites and areas	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for waste sector	Generic criteria + Specific criteria for Waste sector	Generic criteria
53	Waste	Remediation of legally non-conforming landfills and abandoned or illegal waste dumps	Generic criteria + Specific criteria for waste sector	Generic criteria	Generic criteria	Generic criteria + Specific criteria for waste sector	Generic criteria + Specific criteria for Waste sector	Generic criteria
54	Waste	Sorting and material recovery from non-hazardous waste	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for Waste sector	Generic criteria + Specific criteria for Waste sector	Generic criteria
55	Waste	Treatment of hazardous waste	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for Waste sector	Generic criteria + Specific criteria for Waste sector	Generic criteria

No.	Sector	Activity	Climate change mitigation	Climate change adaptation	Sustainable use and protection of marine and water resources	Promotion of resource resilience and transition to a circular economy	Pollution prevention and control	Protection and restoration of biodiversity and ecosystems
56	Waste	Construction, extension, upgrade, operation and renewal of decentralised wastewater collection and treatment	Generic criteria + Specific criteria for waste sector	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for Waste sector	Generic criteria
57	Waste	Construction, extension, upgrade, and operation of centralised wastewater collection and treatment	Generic criteria + Specific criteria for waste sector	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for Waste sector	Generic criteria
58	Waste	Renewal of centralised wastewater collection and treatment	Generic criteria + Specific criteria for waste sector	Generic criteria	Generic criteria	Generic criteria	Generic criteria + Specific criteria for Waste sector	Generic criteria