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INDONESIA TAXONOMY FOR SUSTAINABLE FINANCE

VERSION 2



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TKBI is the outcome of a collaborative effort between OJK, Ministries/Institutions, and various stakeholders, particularly those associated with the Energy sector, Construction & Real Estate (C&RE), Transportation & Storage (T&S), and some activities in the Agriculture, Forestry, and Other Land Uses (AFOLU), in accordance with the sectoral focus of TKBI version 2. In the formulation of TKBI, OJK actively engaged and took into account the insights and perspectives of various national and international stakeholders through a series of activities conducted throughout 2024 and early 2025, including courtesy meetings, technical discussions, workshops, focus group discussions, public dialogues, and open requests for feedback through diverse online and offline channels. In this regard, we extend our deepest gratitude and highest appreciation to:

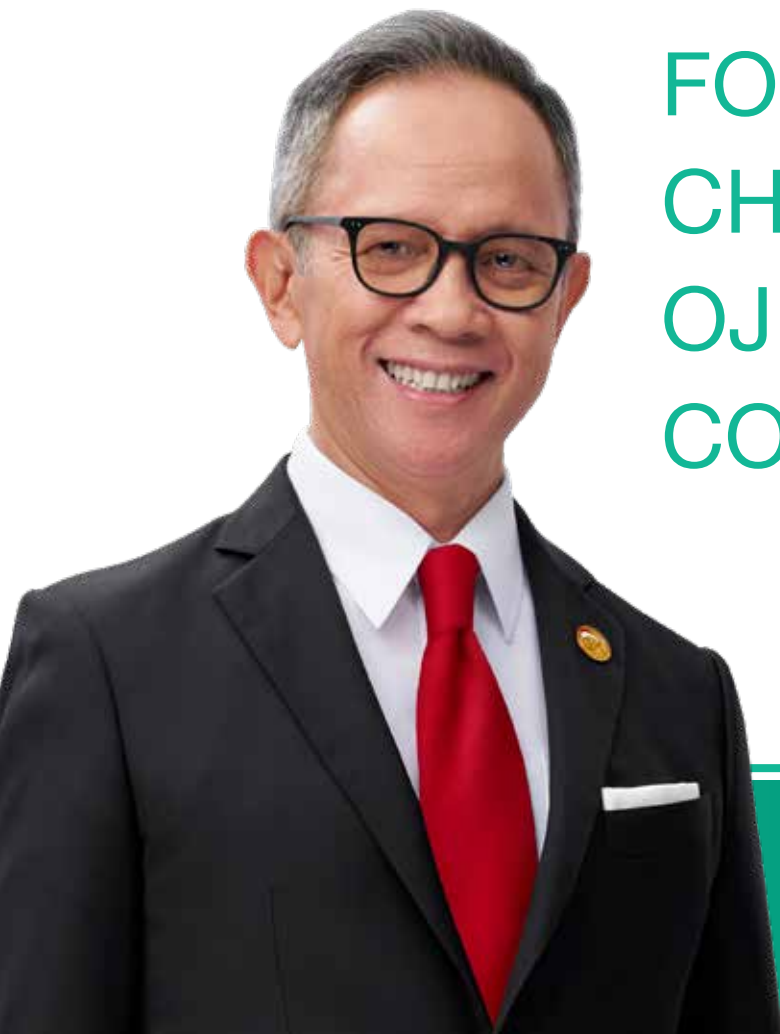
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3. National Research and Innovation Agency (BRIN)
4. Bank Indonesia
5. National Energy Council (DEN)
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2. Associations and organizations in the AFOLU sector
3. Associations and organizations in the C&RE sector
4. Associations and organizations in the Energy sector
5. Associations and organizations in the T&S sector
6. Associations and organizations in the financial services sector
7. MSME entrepreneurs' associations
8. Civil Society Organizations
9. Industries in the AFOLU sector
10. Industries in the C&RE sector
11. Industries in the Energy sector
12. Industries in the T&S sector
13. Industries in the financial services sector (banking, capital market, and non-bank financial institutions)
14. Investors
15. Indonesian Chamber of Commerce and Industry
16. International institutions with a focus on sustainable finance issues
17. Just Energy Transition Partnership Secretariat
18. Task Force of Sustainable Finance in the Financial Services Sector
19. Other supporting parties





FOREWORD BY CHAIRMAN OF OJK BOARD OF COMMISSIONERS

Mahendra Siregar

Chairman of OJK Board of
Commissioners

Assalamu'alaikum Wr. Wb.

Peace be upon us all, Om Swastyastu, Namo Buddhaya, and Greetings of Virtue.

We extend our heartfelt praise and gratitude to the Almighty God, whose boundless grace and blessings have enabled the successful completion of the Indonesia Taxonomy for Sustainable Finance (TKBI) Version 2.

Over the past year, significant developments have shaped the sustainability landscape. In early 2024, the ASEAN Taxonomy for Sustainable Finance version 3 was introduced, expanding its coverage to include the Construction and Real Estate, as well as the Transportation and Storage sectors. Additionally, the 29th Conference of the Parties (COP 29) in Azerbaijan resulted in a series of global commitments, reinforcing the urgency of accelerating the transition to a low-carbon

economy. On the national front, 2024 marks the beginning of a new Government, which has outlined eight core missions, known as Asta Cita, including a strong focus on "Ensuring Environmental Preservation". Looking further ahead, Indonesia's vision of becoming a developed nation by 2045 is reflected in the 2025-2045 National Long-Term Development Plan (RPJPN), which prioritizes achieving Net Zero Emissions. These commitments underscore Indonesia's continuous and consistent progress in sustainable development, despite the evolving global landscape.

In line with the government's vision for sustainable development, OJK, as the regulator of the financial services sector, continues to develop policies to advance sustainable finance practice across Indonesia. The TKBI, now in its second version, is a key policy in promoting sustainable finance. TKBI embodies the successful collaboration between OJK, ministries and agencies, as well as

various stakeholders, and has become a critical framework for increasing the allocation of capital and financing to sustainable endeavors.

Grounded in the principles of interoperability, credibility, and inclusivity, the TKBI follows the “*Rumah Tumbuh* or Living Document” approach, ensuring a dynamic balance between economic, environmental, and social aspects. Building upon the foundation of TKBI version 1 which established the primary taxonomy framework with a focus on the Energy sector, TKBI version 2 expands its sectoral coverage while maintaining its alignment with the Nationally Determined Contributions (NDCs). TKBI version 2 extends its coverage to additional priority sectors, including Construction and Real Estate, Transportation and Storage, as well as some activities within the AFOLU (Agriculture, Forestry, and Other Land Uses) sectors. Through this broader scope, TKBI version 2 strengthens its role in advancing Indonesia’s sustainable development goals.

Aligned with the government's policies, TKBI version 2 introduces several key enhancements, including TSC activities for the construction of new buildings and residential areas for Low-Income Communities (*Masyarakat Berpenghasilan Rendah/MBR*); the adoption of Sustainable Aviation Fuel (SAF) in accordance with the Ministry Roadmap; and carbon capture and storage activities within both production and protected forests. Furthermore, TKBI addresses

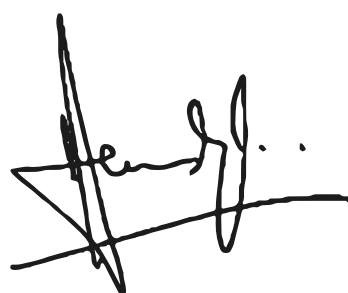
the use of proceeds for consumptive purposes, including loans, financing, insurance, and similar instruments; and establishes a framework for Climate Risk and Vulnerability Assessment (CRVA). These developments highlight OJK’s unwavering commitment to provide comprehensive guidance in advancing Indonesia’s sustainable economic growth.

As a living document, TKBI will undergo regular reviews to ensure its alignment with the latest advancements in science, technology, and sustainable finance policies at both the national and global levels. Its implementation will also continue to be guided by a regulatory framework in accordance with the Law of the Republic of Indonesia No. 4 of 2023 concerning Developing and Strengthening of the Financial Sector.

This collective endeavor is one that all Indonesians can take pride in. We extend our deepest appreciation to all ministries, agencies, and stakeholders involved, for their invaluable contributions have made this publication possible. We remain confident that this collaboration will continue to grow stronger, paving the way for a more sustainable Indonesia.

Indonesia Taxonomy for Sustainable Finance, a concrete step towards a sustainable Indonesia.

Wassalamu’alaikum Wr. Wb.



Mahendra Siregar

Chairman of OJK Board
of Commissioners

TABLE OF CONTENTS

Team	04
Foreword by Chairman Of OJK Board Of Commissioners	06
List of Tables and Figures	11
List of Abbreviations and Terms	12
Executive Summary	24

01

Introduction



A. Legal Basis	26
1. The 1945 Constitution of the Republic of Indonesia (UUD 1945)	27
2. Paris Agreement and Its Ratification in Indonesia	27
3. Law of the Republic of Indonesia Number 4 of 2023 concerning Developing and Strengthening of the Financial Sector (P2SK Law)	28
4. National Long-Term Development Plan (RPJPN)	28
5. National Medium-Term Development Plan (RPJMN)	29
6. Presidential Regulation of the Republic of Indonesia Number 111 of 2022 concerning Implementation of the Achievement of Sustainable Development Goals	29
B. Taxonomy Update	29

02



Framework and Elements of Indonesia Taxonomy for Sustainable Finance

A. Principles, Objectives and Scope of Indonesia Taxonomy for Sustainable Finance	32
1. Principles of Indonesia Taxonomy for Sustainable Finance	33
2. Objectives of Indonesia Taxonomy for Sustainable Finance	34
3. Scope of Indonesia Taxonomy for Sustainable Finance	34
B. Environmental Objectives and Essential Criteria	36
1. Environmental Objectives (EO)	36
2. Essential Criteria (EC)	41
C. Assessment Methodology for Indonesia Taxonomy for Sustainable Finance	43
1. Technical Screening Criteria (TSC) Approach	43
2. Sector-agnostic Decision Tree (SDT) Approach	45
D. Activity Classifications (Classification System)	46

03

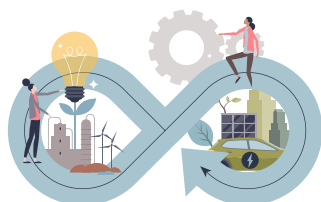


Indonesia Taxonomy for Sustainable Finance Application Guidelines

A. Users and Uses of Indonesia Taxonomy for Sustainable Finance	48
---	----

B. How to Use Indonesia Taxonomy for Sustainable Finance	48
C. Transitioning from THI to TKBI	58

04



Closing

A. Linkages to the Other Sustainable Finance Initiatives	60
B. Grandfathering and Sunsetting	60

References	62
-------------------	----

Annex 1:

Potential Uses and Users of Indonesia Taxonomy for Sustainable Finance	68
--	----

Annex 2:

Examples of User Entry Point	70
A. Use case of user entry point 1 (with 2 Environmental Objectives/EO)	71
B. Use case of user entry point 2 (with only One EO)	72

Annex 3:

Technical Criteria for Indonesia Taxonomy for Sustainable Finance	73
---	----

Energy Sector 74

A. Background Context	75
B. General Principles for Setting TSC in the Energy Sector	78
C. Rationale for TSC Activities in the Energy Sector	79
D. Energy Sector TSC	87

Construction & Real Estate Sector 110

A. Background Context	111
B. General principles for determining Technical Screening Criteria (TSC) in the Construction and Real Estate (C&RE) sector	115
C. Definitions on terms used in TSC	116
D. Rationale for TSC and Activities in the C&RE sector	117
E. TSC for C&RE sector	133

Transportation and Storage Sector 175

A. Background Context	176
B. General principles for setting Technical Screening Criteria (TSC) in the Transportation and Storage (T&S) sector	182
C. Definitions related to terminology used in TSC	183
D. Rationale for TSC activities in the T&S sector	184
E. TSC for T&S sector	193

Agriculture, Forestry and Other Land Uses (AFOLU) Sector 239

A. Background Context	240
B. General principles for determining Technical Screening Criteria (TSC) in the AFOLU sector	243
C. Rationale for TSC activities of AFOLU sector	244
D. TSC for AFOLU sector activities	256

Annex 4:

Guiding Questions for Sector-agnostic Decision Tree (SDT) Assessment	272
A. EO1-Climate Change Mitigation	273
B. EO2-Climate Change Adaptation	273
C. EO3-Protection of Healthy Ecosystems and Biodiversity	274
D. EO4-Resource Resilience and the Transition to a Circular Economy	274

Annex 5:

Do No Significant Harm (DNSH)	275
A. Significant Harm in TKBI	276
1. Definition	276
2. Carbon Lock-in	277
B. DNSH General Guidelines	277
1. EO1-Climate Change Mitigation	277
2. EO2-Climate Change Adaptation	277
3. EO3-Protection Of Healthy Ecosystems And Biodiversity	278
4. EO4-Resource Resilience And The Transition to A Circular Economy	281
C. DNSH Criteria for TSC Assessment	286
D. Guiding Questions on DNSH for SDT Assessment	287

Annex 6:	
Remedial Measures to Transition (RMT)	288

Annex 7:	
Social Aspect	290
A. Social Aspect Criteria for Corporations/Non-MSMEs	291
B. Social Aspect Criteria for MSMEs	294

Annex 8:	
Use Cases of Indonesia Taxonomy for Sustainable Finance	296
A. Use Cases of TSC-Corporation/Non-MSMEs	297
B. Example of Sector-agnostic Decision Tree (SDT) in MSMEs	302
C. Use of Proceeds for Consumptive Purposes	305

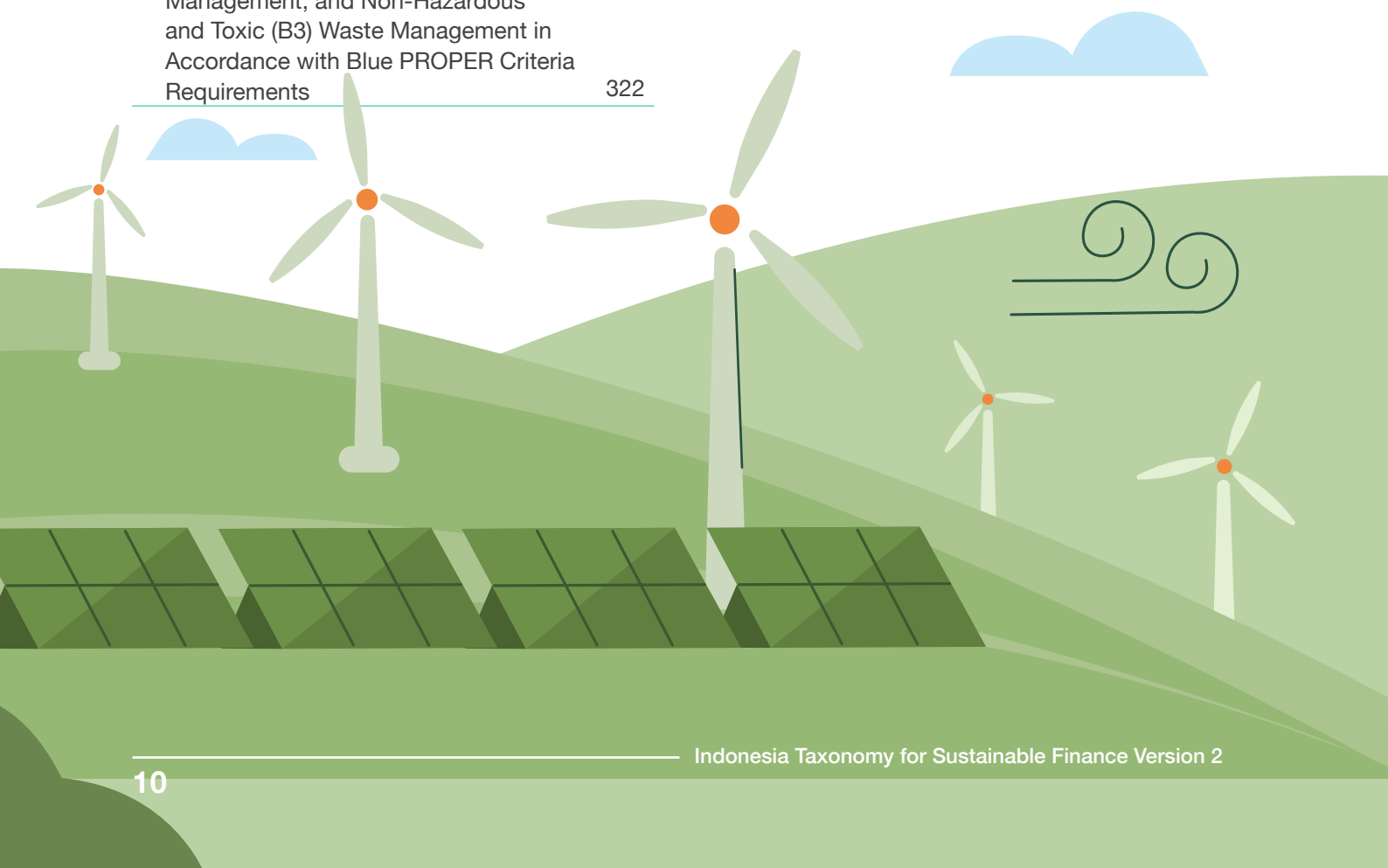
Annex 9:	
Public Disclosure Program for Environmental Compliance (PROPER)	314
A. PROPER Highlights	315
B. Aspects of Pollution Control, Environmental Damage, Waste Management, and Non-Hazardous and Toxic (B3) Waste Management in Accordance with Green PROPER Criteria Requirements	316
C. Aspects of Pollution Control, Environmental Damage, Waste Management, and Non-Hazardous and Toxic (B3) Waste Management in Accordance with Blue PROPER Criteria Requirements	322

Annex 10:	
List of Provisions Associated with Activities in the Energy, C&RE, T&S, and AFOLU Sectors	328

A. List of Provisions Related to Activities in the Energy Sector	329
B. Other provisions in the Energy and Environmental Sectors	359
C. List of Provisions Related to Activities in the C&RE Sector	361
D. List of Provisions Related to Activities in the T&S Sector	368
E. List of Provisions Related to Activities in the AFOLU Sector	380

Annex 11:	
List of Social Aspect Provisions	385
A. For Corporations/Non-MSMEs	386
B. For MSMEs	397

Annex 12:	
Climate Risk and Vulnerability Assessment (CRVA)	408
A. Background Context	409
B. Classification of climate-related hazards	411
C. CRVA Checklist Template	412



LIST OF TABLES AND FIGURES

List of Tables

Table 1.	Projections for Business as Usual (BaU) and emission reductions within the NDC sector	35
Table 2.	TKBI Environmental Objectives	36
Table 3.	Social Aspects	42
Table 4.	Types of Technical Screening Criteria	44
Table 5.	MSME Criteria	45
Table 6.	Classifications of TKBI	46
Table 7.	Determining the User Entry Point for TKBI	51
Table 8.	Examples of Criteria for Environmental Objectives (EO)	54
Table 9.	Examples of Do No Significant Harm (DNSH) Criteria	55

List of Figures

Figure 1.	THI update to become Indonesia Taxonomy for Sustainable Finance	32
Figure 2.	Principles of Indonesia Taxonomy for Sustainable Finance	33
Figure 3.	Focus Sectors of TKBI	34
Figure 4.	TKBI Framework	42
Figure 5.	TKBI General Flow	49
Figure 6.	Technical Screening Criteria (TSC) Assessment Flow	52
Figure 7.	Sector-agnostic Decision Tree (SDT) Assessment Flow	56

LIST OF ABBREVIATIONS AND TERMS

Abbreviation	Terminology	Definition/Description
-	Activities	An economic activity that can be assessed based on the Indonesian Taxonomy for Sustainable Finance. Activities consist of resource inputs, production processes and outputs in the form of goods or services.
ABKT/HCVA	High Conservation Value Area / <i>Areal Bernilai Konservasi Tinggi</i>	Areas that have critical role for biodiversity and ecosystem conservation, ecosystem services, social functions, and cultural functions for communities include High Conservation Value Forest (HCVF) or High Conservation Value Area (HCVA). <i>Regulation of the Director General of Natural Resources and Ecosystem Conservation Number: P.1/KSDAE/BPE2/KSA.4/2/2021 concerning Technical Guidelines for Assessing the Effectiveness of Essential Ecosystem Area Management)</i>
ADB	Asian Development Bank	International development bank dedicated to accelerate economic growth and social prosperity in Asia Pacific.
AER	Annual Efficiency Ratio	A metric that measures a ship's carbon emissions per unit of transport work.
AFMGM	ASEAN Finance Ministers' and Central Bank Governors' Meeting	Formal meeting of Finance Ministers and Central Bank Governors of ASEAN Member States.
AMDAL	Environmental Impact Assessment / <i>Analisis Mengenai Dampak Lingkungan Hidup</i>	Assessment of significant environmental impacts of a proposed business and/or activity, which is to be used as a prerequisite for decision-making regarding the implementation of the business and/or activity and is included in the Business License or approval of the Central Government or Regional Government. <i>(Government Regulation in Lieu of Law of the Republic of Indonesia Number 2 of 2022 on Job Creation)</i>
ASEAN	Association of Southeast Asian Nations	The Association of Southeast Asian Nations, established on August 8, 1967, which accommodates the cooperation of countries in Southeast Asia.
ATB	ASEAN Taxonomy Board	A body formed under the auspices of AFMGM to develop the ASEAN Taxonomy.
ATSF	ASEAN Taxonomy for Sustainable Finance	Taxonomy of the ASEAN region published by ATB.

Abbreviation	Terminology	Definition/Description
BaU	Business-as-Usual	-
-	Water Body (<i>Badan Air</i>)	Water collected in a natural or artificial container that has a hydrological character, physical, chemical, and biological form. <i>(Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 5 of 2022 concerning Wastewater Treatment for Mining Businesses and/or Activities Using the Artificial Wetland Method)</i>
BEMS	Building Energy Management Systems	An electrical control and monitoring system that has the ability to communicate data between control nodes (monitoring points) and operator terminals. These systems can have attributes of all aspects of building control and management functions such as Heating, Ventilation, and Air Conditioning (HVAC), lighting, fire, security, maintenance management, and energy management. <i>(IEA, 1997. Technical Synthesis Report: A Summary of Annexes 16 & 17 Building Energy Management Systems. Energy Conservation in Buildings and Community Systems)</i>
BGH	Green Building / <i>Bangunan Gedung Hijau</i>	Building that meets Building Technical Standards and has significant measurable performance in saving energy, water, and other resources through the application of BGH principles in accordance with the function and classification in each stage of its implementation. <i>(Regulation of the Minister of Public Works and Housing of the Republic of Indonesia Number 21 of 2021 concerning Green Building Performance Assessment)</i>
CA	Single-deck vehicle	-
CB	Double-deck vehicle	-
CD	Double-deck articulated vehicle	-
CCS	Carbon Capture and Storage	Carbon Capture and Storage, hereinafter abbreviated as CCS, is a business activity that includes capturing Carbon and/or transporting captured Carbon, injecting and storing Carbon into Zone Target Injection (ZTI)* safely and permanently in accordance with good engineering principles. *) Injection Target Zone (ZTI) is a rock system in a geological formation including storage zone layers, buffer zone layers, impermeable zone layers and geological traps capable of containing injected Carbon, safely and permanently and meeting environmental safety standards. <i>(Presidential Regulation (PERPRES) Number 14 of 2024 concerning the Implementation of Carbon Capture and Storage Activities)</i>

Abbreviation	Terminology	Definition/Description
CII	Carbon Intensity Indicator	A rating system that measures the efficiency of ships carrying passengers or cargo. The CII determines the annual reduction factor required to ensure continuous improvement of a ship's operational carbon intensity within a given rating level. <i>(The International Maritime Organization, EEXI and CII – ship carbon intensity and rating system)</i>
-	Circular Economy	A system in which products and materials remain in circulation through various processes such as maintenance, reuse, repair, remanufacture, recycling, and composting. The circular economy addresses climate change and other global challenges, such as biodiversity loss, waste, and pollution, by decoupling economic activity from consumption of finite resources. <i>(Ellen MacArthur, 2015)</i>
CRVA	Climate Risk Vulnerability Assessment	A systematic methodology/process for assessing the climate exposure and vulnerability of a country or region and the adaptation strategies most likely to mitigate those risks.
COP	Conference of the Parties	An international conference on climate change held in the framework of the United Nations Framework Convention on Climate Change (UNFCCC)
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation	A global program that aims to reduce carbon emissions from international aviation. The program was established by the International Civil Aviation Organization (ICAO).
DNSH	Do No Significant Harm	The part of EC that relates to the principle that an activity contributing to an EO must not harm, adversely affect, or cause damage to other EOs.
EC	Essential Criteria	The minimum criteria comprising DNSH, RMT, and SA. Further explanation of each EC is provided in the taxonomy.
EDGE	Excellence in Design for Greater Efficiencies	A green building certification program issued by the International Finance Corporation (IFC).
EEDI	Energy Efficiency Design Index	The amount of CO ₂ emissions from a ship when it sails carrying one ton of cargo for one nautical mile, reflecting the energy efficiency of the ship. EEDI is a design index applicable to new ships.
EEXI	Energy Efficiency Existing Ship Index	The amount of CO ₂ emissions from a ship when it sails carrying one ton of cargo for one nautical mile, reflecting the ship's energy efficiency. EEXI is a design index applicable to existing ships.
EIA/ESIA	Environmental Impact Assessment / Environmental and Social Impact Assessment	A comprehensive document on the potential environmental (and social) impacts and risks of a project.
Enabling Activities		Activities that improve the performance of other sectors and Activities and do not pose risks to environmental objectives. <i>(TEG EU, 2020)</i>

Abbreviation	Terminology	Definition/Description
EO	Environmental Objectives	Prioritized environmental performance targets to be achieved. The description of each EO is further explained in the taxonomy.
ETC	Energy Transitions Commission	A global coalition of energy sector leaders committed to achieving net zero emission targets, in line with the Paris Agreement's goal of limiting global warming to below 2oC and ideally below 1.5oC.
-	Early retirement of Coal-Fired Power Plant (CFPP)	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. This activity is also known as Coal-phased out activity in ATSF
EV	Electric Vehicle	-
FC	Financial Close	A condition of which all financing and agreements have been obtained for the power plant, and construction can begin.
FCP	G20/OECD High Level Principles on Financial Consumer Protection	International standards for an effective and comprehensive financial consumer protection policy framework.
FOLU	Forestry and Other Land Uses	The forestry and land use sector is a key sector in achieving the Nationally Determined Contribution target. <i>(Enhanced NDC, 2022)</i>
FSC	Forest Stewardship Council	-
GBC	Green Building Certification	-
-	Greenwashing	• The practice of marketing financial products as if they are more environmentally friendly or climate compatible than they actually are <i>(OECD, 2022)</i>. • The practice of gaining an unfair competitive advantage by recommending financial products as environmentally friendly or sustainable, when in reality they do not meet any sustainability-related baseline or standard <i>(European Commission, 2022)</i>. • The practice of financial service providers making unsubstantiated claims about their sustainability conditions to gain a competitive advantage <i>(European Securities and Markets Authority, 2022)</i>.
G20	Group of Twenty	A forum for international economic cooperation, the world's largest economy consists of 19 countries and 1 EU institution.
GHG	Greenhouse Gas	Gases contained in the atmosphere, both natural and anthropogenic, that absorb and re-emit infrared radiation. <i>(Presidential Regulation Number 98 of 2021 concerning the Implementation of Carbon Economic Value for Achieving Nationally Determined Contribution Targets and Controlling Greenhouse Gas Emissions in National Development and Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 7 of 2023 concerning Forestry Sector Carbon Trading Procedures)</i>

Abbreviation	Terminology	Definition/Description
ICAO	International Civil Aviation Organization	The International Civil Aviation Organization which is a specialized agency of the United Nations (UN).
ICMA	The International Capital Market Association	Self-regulatory organizations and trade associations for international capital market participants.
IEA	International Energy Agency	An international energy body that aims to help governments, industry, and the general public make good energy choices by providing data, analysis, and solutions for each fuel and its technology.
IFCC	Indonesian Forest Certification Cooperation	-
IGAHP	Indonesia Green Affordable Housing Program	Housing provision program to realize affordable, resilient, environmentally friendly, and climate-resilient MBR (Masyarakat Berpenghasilan Rendah) housing by applying technical standards and BGH (Bangunan Gedung Hijau) principles to achieve SDG targets and Enhanced NDC.
IJK	Financial Services Industry / <i>Industri Jasa Keuangan</i>	Companies/institutions and supporting institutions that engage in financial services.
ILO	International Labour Organization	An agency of the United Nations (UN) that continues to encourage the creation of opportunities for women and men to obtain decent and productive work freely, fairly, safely and with dignity.
IMO	International Maritime Organization	A specialized organization of the United Nations (UN) in charge of regulating international shipping.
-	Impact washing	The risk of buying investment products that claim to have an impact on the real economy but cannot be verified, quantified or overstated. <i>(OECD, 2023)</i>
IPPU	Industrial Processes and Production Use	Any industrial activity that chemically or physically alters materials and includes a wide range of production process activities. <i>(Intergovernmental Panel on Climate Change, 2023)</i>
IPCC	Intergovernmental Panel on Climate Change	-
ISCC	International Sustainability and Carbon Certification	-
ISPO	Indonesian Sustainable Palm Oil	A series of conformity assessment activities for Palm Oil Plantation Businesses related to providing written assurance that the products and/or governance of Palm Oil Plantations have met the principles and criteria of ISPO. <i>(Presidential Regulation of the Republic of Indonesia Number 44 of 2020 concerning the Indonesian Sustainable Palm Oil Plantation Certification System).</i>

Abbreviation	Terminology	Definition/Description
KB	Sustainable Finance/ <i>Keuangan Berkelanjutan</i>	An ecosystem with comprehensive support in the form of policies, regulations, norms, standards, products, transactions and financial services that align economic, environmental and social interests in financing sustainable activities and financing transitions towards sustainable economic growth. <i>(Law of the Republic of Indonesia Number 4 of 2023 concerning Developing and Strengthening of the Financial Sector)</i>
KBLI	Indonesian Standard Industrial Classification/ <i>Klasifikasi Baku Lapangan Usaha Indonesia</i>	Classification of Indonesian economic activities that produce products/outputs, both in the form of goods and services, based on business fields that are used as standard references and tools for coordination, integration, and synchronization of statistical implementation.
L	-	Classification of Vehicles with less than 4 (four) wheels, for example 2 (two) wheel motorcycles.
LCA	Life Cycle Assessment	The compilation and evaluation of inputs, outputs and potential environmental impacts of a product system throughout its life cycle. LCA is a cradle to grave approach to quantitatively assessing a product system. <i>(Indonesia National Standard (SNI) ISO 14040:2016 and SNI ISO 14044:2017)</i>
LCCP	Low Carbon Scenario - Compatible with Paris Agreement	-
LEED	Leadership in Energy and Environmental Design	A green building certification program published by the U.S. Green Building Council (USGBC).
LJK	Financial Services Institutions / <i>Lembaga Jasa Keuangan</i>	Institutions that carry out activities in the banking sector, capital markets, insurance, pension funds, financing institutions, and other financial services institutions based on the provisions of laws and regulations in the financial services sector. <i>(Law of the Republic of Indonesia Number 4 of 2023 concerning Developing and Strengthening of the Financial Sector)</i>
LTS-LCCR	Long-Term Strategy for Low Carbon and Climate Resilience	-
MBR	Low Income Communities/ <i>Masyarakat Berpenghasilan Rendah</i>	People who have limited purchasing power need government support to obtain housing. <i>(Law of the Republic of Indonesia Number 1 Year 2011 on Housing and Residential Areas)</i>
MSPO	Malaysian Sustainable Palm Oil	A national scheme in Malaysia for oil palm plantations, independent and organized smallholder plantations, and palm oil processing facilities to be certified against the requirements of the MSPO Standard. <i>(https://mspo.org.my/)</i>

Abbreviation	Terminology	Definition/Description
M1	-	Classification of motor vehicles used for transportation of persons and having no more than 8 seats excluding the driver's seat.
M2	-	Classification of motor vehicles used for transportation of people and have more than 8 seats excluding the driver's seat and have a Gross Vehicle Weight/GVW of up to 5 tons.
M3	-	Classification of motor vehicles used for transportation of people and have more than 8 seats excluding the driver's seat and have a GVW of more than 5 tons.
N1	-	Classification of motor vehicles used for freight transport and have a GVW of not more than 0.75 tons.
N2	-	Classification of motor vehicles used for freight transport and have a GVW of more than 3.5 tons and less than 12 tons.
N3	-	Classification of motor vehicles used for freight transport and have a GVW of more than 12 tons.
NDC	Nationally Determined Contribution	A document containing a country's climate commitments and actions communicated to the world through the United Nations Framework Convention on Climate Change.
NZE	Net Zero Emissions	A condition where the amount of carbon emissions released into the atmosphere does not exceed the amount of emissions that the earth is able to absorb.
OECD	Organisation for Economic Co-operation and Development	An international organization with over thirty member countries that seeks to shape policies that promote prosperity, equality, opportunity, and well-being for all.
-	Power Density	The power capability of an energy storage expressed in W/m ² .
-	Acceleration of the termination of the operational period of the coal-fired power plant	An activity that involves the combustion of coal in the electricity sector, such as coal-fired steam power plants (PLTU), which is being phased out or accelerated to end its operational period with the aim of reducing GHG emissions.
PBG	Building Approval / <i>Persetujuan Bangunan Gedung</i>	Licenses given to building owners to build new, change, expand, reduce, and/or maintain Building in accordance with Building technical standards. <i>(Regulation of the Minister of Public Works and Housing of the Republic of Indonesia Number 21 of 2021 concerning Green Building Performance Assessment)</i>
PBN	Performance Based Navigation	-
PEFC	Program for the Endorsement of Forest Certification	-
PHL	Sustainable Forest Management / <i>Pengelolaan Hutan Lestari</i>	-

Abbreviation	Terminology	Definition/Description
PKO	Palm Kernel Oil	-
PUSK	Financial Sector Business Actors / <i>Pelaku Usaha Sektor Keuangan</i>	Financial Institutions, financial market infrastructure business actors, payment system business actors, financial sector support institutions, and other financial sector business actors both carrying out business activities conventionally and based on sharia principles in accordance with the provisions of laws and regulations in the financial sector. <i>(Law of the Republic of Indonesia Number 4 of 2023 concerning Developing and Strengthening of the Financial Sector)</i>
PROPER	Company Performance Rating Assessment Program in Environmental Management / <i>Program Penilaian Peringkat Kinerja Perusahaan dalam Pengelolaan Lingkungan Hidup</i>	Evaluation of the performance of the person in charge of the business and/or activity in the field of environmental management. The assessment is carried out by the Ministry of Environment and Forestry of the Republic of Indonesia (currently the Ministry of Environment / Environmental Control Agency). <i>(Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 1 of 2023 concerning the Company Performance Rating Assessment Program in environmental)</i>
RMT	Remedial Measures to Transition	The part of the EC that deals with measures to ensure that any actual or potential damage or loss of a significant nature is eliminated or minimized so that its impact is insignificant.
RSPO	Roundtable of Sustainable Palm Oil	-
RUPTL	Electricity Supply Business Plan / <i>Rencana Usaha Penyediaan Tenaga Listrik</i>	Electricity procurement plan covers the field of generation, transmission, distribution, and/or sale of electricity to consumers in a business area. <i>(Decree of the Minister of Energy and Mineral Resources Number 188.K/HK.02/MEM.L/2021 Dated February 20, 2019 concerning Approval of the Business Plan Power Supply of PT Perusahaan Listrik Negara (Persero) from 2021 to 2030)</i>
S-PHL	Certificate of Sustainable Forest Management / <i>Sertifikat Pengelolaan Hutan Lestari</i>	A certificate provided to a Forest Utilization Business License (PBPH / Perizinan Berusaha Pemantauan Hutan) holder or Management Right holder (hak pengelolaan) explaining the success of sustainable forest management (SFM). <i>(Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 8 of 2021 concerning Forest Management and Preparation of Forest Management Plans, and Forest Utilization in Protected Forests and Production Forests)</i>
SA	Social Aspect	The part of EC that relates to the obligation of an Activity to avoid social harm.
SAF	Sustainable Aviation Fuels	Renewable or waste-derived aviation fuel that meets sustainability criteria. <i>(International Civil Aviation Organization)</i>
SDT	Sector-agnostic Decision Tree	The principle-based assessment approach is a decision tree developed based on specific criteria of an EO with guiding questions.

Abbreviation	Terminology	Definition/Description
SDGs	Sustainable Development Goals	The Sustainable Development Goals (SDGs) constitute a global development agenda aimed at ending poverty, improving prosperity, and protecting the planet by achieving 17 goals by 2030. <i>(Regulation of the President of the Republic of Indonesia Number 111 of 2022 concerning the Implementation of Sustainable Development Goals)</i>
SFM	Sustainable Forest Management	The management and utilization of forests and forest lands in a manner, and at a level, that maintains their biodiversity, productivity, regeneration capacity and potential to fulfill present and future interests, relevant ecological, economic and social functions at local, national and global levels, and that does not cause damage to other ecosystems. <i>(Definition by Forest Europe and adopted by the UN Food and Agriculture Organization/FAO)</i>
SKEM	Minimum Energy Performance Standard / <i>Standar Kinerja Energi Minimum</i>	A specification that contains a number of minimum energy performance requirements under certain conditions that are effectively intended to limit the maximum amount of energy consumption of a permitted energy-using product. <i>(Directorate General of New, Renewable Energy and Energy Conservation of the Ministry of Energy and Mineral Resources)</i>
SLF	Certificate of Fit for Purpose / <i>Sertifikat Laik Fungsi</i>	Certificate given by the Local Government to certify the feasibility of the Building function before it can be utilized. <i>(Regulation of the Minister of Public Works and Housing of the Republic of Indonesia Number 21 of 2021 concerning Green Building Performance Assessment)</i>
-	Social washing	Practices that seek to enhance corporate reputation through ineffective social responsibility initiatives or the pursuit of economic gain under the guise of social responsibility projects. This occurs when there is a disconnect between commitments to social issues and their realization. <i>(Williams, 2022).</i>
SPKLU	Public Electric Vehicle Charging Stations / <i>Stasiun Pengisian Kendaraan Listrik Umum</i>	-
SPPL	Letter of Undertaking for Environmental Management and Monitoring / <i>Surat Pernyataan Kesanggupan Pengelolaan dan Pemantauan Lingkungan Hidup</i>	A statement of commitment from the person in charge of the business and/or activity to carry out environmental management and monitoring of the environmental impacts of his/her business and/or activities outside the business and/or activities that are subject to AMDAL or UKL-UPL. <i>(Government Regulation of the Republic of Indonesia Number 22 of 2021 concerning the Implementation of Environmental Protection and Management)</i>

Abbreviation	Terminology	Definition/Description
SVLK	Timber Legality and Sustainability Verification System/ <i>Sistem Verifikasi Legalitas dan Kelestarian</i>	A system to ensure the credibility of Forest Product Legality Assurance, traceability of Forest products, and/or sustainability of Forest management. <i>(Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 8 of 2021 concerning Forest Management and Preparation of Forest Management Plans, as well as Forest Utilization in Protected Forests and Production Forests)</i>
THI	Indonesia Green Taxonomy	Classification of economic activities that support environmental protection and management as well as mitigation and adaptation to climate change. <i>(FSA, 2022)</i>
TSC	Technical Screening Criteria	A set of criteria used to assess an economic activity against its contribution and fulfillment of a substantial EO based on certain thresholds.
UKL-UPL	Environmental Management Efforts and Environmental Monitoring Efforts/ <i>Upaya Pengelolaan Lingkungan Hidup dan Upaya Pemantauan Lingkungan Hidup</i>	<i>A series of environmental management and monitoring processes outlined in the form of standards to be used as a prerequisite for decision making and included in Business Licensing or approval by the Central Government or Regional Government.</i> <i>(Government Regulation in Lieu of Law of the Republic of Indonesia Number 2 of 2022 on Job Creation)</i>
UMKM/ MSME	Micro, Small and Medium Enterprises/ <i>Usaha Mikro, Kecil dan Menengah</i>	• Micro Enterprises are productive enterprises owned by individuals and/or individual business entities that meet the criteria for Micro Enterprises. • Small Enterprises are independent, productive economic enterprises carried out by individuals or business entities that are not subsidiaries or branches of companies that are owned, controlled, or are part, either directly or indirectly, of Medium Enterprises or Large Enterprises that meet the criteria for Small Enterprises. • Medium Enterprises are independent, productive economic enterprises carried out by individuals or business entities that are not subsidiaries or branches of companies that are owned, controlled, or are part, either directly or indirectly, of Small Enterprises or Large Enterprises that meet the criteria of Medium Enterprises. <i>(Government Regulation of the Republic of Indonesia Number 7 of 2021 concerning Ease, Protection, and Empowerment of Cooperatives and Micro, Small, and Medium Enterprises)</i>
UNFCCC	United Nations Framework Convention on Climate Change	-

“

The Indonesia Taxonomy for Sustainable Finance classifies economic activities that support Indonesia's Sustainable Development Goals, encompassing the economy, environment, and social aspects. This taxonomy serves as a guide to promote capital allocation and sustainable financing to support Indonesia's ambitions of net zero emissions (NZE) targets.

”



EXECUTIVE SUMMARY

Amid the recent events of climate change and the challenges of global and geopolitical dynamics, sustainable economic development remains a major concern, requiring a balanced approach that harmonizes economic, environmental and social aspects. This process undoubtedly entails concrete actions that are implemented gradually and are tailored to the specific conditions and readiness of each jurisdiction, safeguarding the interests of future generations in the current economic development.

Indonesia, a major country with a strategic role as the lungs of the world and home to a diverse society, has adopted a variety of measures to address the demands of sustainable economic development. These policies include the Law of the Republic of Indonesia Number 16 of 2016 concerning Ratification of the Paris Agreement to the United Nations Framework Convention on Climate Change, the publication of commitments to reduce GHG emissions through Nationally Determined Contributions (NDC) and the establishment of a Net Zero Target by 2060 or earlier, as well as the Presidential Regulation of the Republic of Indonesia Number 111 of 2022 concerning the Implementation Measures of the Sustainable Development Goals.

The 1945 Constitution of the Republic of Indonesia has set the foundation of the fundamental principle of the country's sustainable development in Article 28H, Article 33 Paragraph 3, and Article 33 Paragraph 4. Moreover, it is substantiated by the Law of the Republic of Indonesia Number 4 of 2023 concerning Developing and Strengthening of the Financial Sector (P2SK Law), which includes a particular chapter on the implementation of sustainable finance. This legislation reinforces the critical role of the financial sector in the promotion of sustainable economic growth, which encompasses initiatives to mitigate climate change.

OJK, the financial services sector regulator, has been implementing a series of policies to promote sustainable finance in Indonesia in order to support the Government of the Republic of Indonesia's climate commitment. This includes collaborating

with a variety of stakeholders in developing the Indonesia Taxonomy for Sustainable Finance (TKBI), which is a transformation of the Indonesia Green Taxonomy Edition 1.0. The **Indonesia Taxonomy for Sustainable Finance (TKBI)** is a classification of economic activities that support Indonesia's Sustainable Development Goals, covering economic, environmental, and social aspects. The TKBI serves as a reference to promote the allocation of capital and sustainable financing to facilitate the achievement of Indonesia's Net Zero Emissions.

TKBI is designed with an emphasis on the principles of scientific and credible, interoperable and in favor of national interests, and inclusive for users of all scales. The ATSF and national policy serve as the primary references for the TKBI framework, elements, and criteria, in addition to the taxonomies of other relevant countries. The TKBI has adopted four environmental objectives (EO): EO1-Climate Change Mitigation, EO2-Climate Change Adaptation, EO3-Protection of Healthy Ecosystems and Biodiversity, and EO4-Resource Resilience and the Transition to a Circular Economy; and three Essential Criteria (EC), namely EC1-Do No Significant Harm (DNSH), EC2- Remedial Measures to Transition (RMT), and EC3- Social Aspect (SA). There are two approaches to assess an economic activity based on the scale of the entity, namely Technical Screening Criteria for the corporate/non-MSME segment and Sector-agnostic Decision Tree (SDT) for the MSME segment. Upon completion of the TKBI assessment process, the activity is classified as either "Green" or "Transition". The activity is evaluated as "Unqualified" if it fails to satisfy both classifications.

The Indonesia Taxonomy for Sustainable Finance (TKBI) was developed with the concept of a **"Rumah Tumbuh"** or living document, allowing for gradual expansion and refinement over time. Version 1 of TKBI, published in February 2024, introduced the main taxonomy framework with an initial focus on the Energy sector. The scope of TKBI covers sectors related to the Nationally Determined Contribution (NDC), including any modifications as well as enabling sectors. In

February 2025, Version 2 of TKBI was launched, expanding its coverage to include the Construction and Real Estate (C&RE) sector, the Transportation and Storage (T&S) sector, and some activities within the Agriculture, Forestry, and Other Land Uses (AFOLU) sector, specifically forestry and oil palm plantation. The development will continue with Version 3 in the following year, focusing on the remaining AFOLU subsectors, Manufacturing, and Water Supply, Sewerage & Waste Management.

In TKBI version 1, the Energy sector's economic activities are categorized into two primary groups: the procurement of electricity, gas, steam/hot water, and cold air (which includes the generation of electricity from new and renewable energy sources, the early retirement of coal-fired power plants, and the mining and quarrying of critical minerals that support clean energy technology), and the transition to NZE. In addition, there are enabling activities, including energy conservation/efficiency services, research, development, and innovation for CCS technology.

In TKBI version 2, the C&RE sector consists of the following activities: construction of new buildings, renovation of existing buildings, acquisition and ownership of buildings (real estate/residential areas) and civil buildings; land clearing and preparation; installation of renewable technologies; energy efficient equipment; energy performance measurement, regulation and control; and enabling activities that support the construction

of main buildings. Meanwhile, activities in the T&S sector consist of land, sea and air transportation along with supporting infrastructure and enabling activities that support its main transportation. Furthermore, activities in some AFOLU sectors consist of sustainable forest management, plantation forestry, non-timber forest products, conservation and restoration forestry land, the forestry supply chain, and palm oil plantations.

In line with government policy, TKBI version 2 also includes TSC for new building construction activities and residential areas for Low-Income Communities (*Masyarakat Berpenghasilan Rendah/MBR*); Sustainable Aviation Fuel (SAF) according to the National Roadmap published by the Ministry; and carbon capture and storage activities for production forests and protected forests. In addition, the TKBI approach is available for consumptive financing purposes, such as loans, financing, insurance, and other similar products for consumptive purposes. Additionally, working papers are available for Climate Risk and Vulnerability Assessment (CRVA).

TKBI will be periodically reviewed in the future to ensure that it remains relevant in accordance with scientific, technological, and sustainable financial policies at the national and global levels, as is the nature of a living document. Furthermore, the future implementation of TKBI will lead to a regulatory framework in line with the mandate of the P2SK Law.



01. | Introduction

Climate change has had a significant negative impact on the environmental ecosystem and various other aspects of life, including the health and economic sectors. With awareness of the global emergency that transcends national borders, an international agreement was reached at the UN Conference of the Parties (COP21) in Paris in 2015 also known as the Paris Agreement. This agreement regulates mitigation, adaptation and financing of greenhouse gas (GHG) emissions reduction. It also sets carbon emission reduction targets for all countries to hold the increase in the global average temperature to well below 2°C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels.

The importance of this matter is supported by the findings of the 2018 Intergovernmental Panel on Climate Change (IPCC) Report which confirms that limiting global temperature rise will significantly reduce negative impacts on ecosystems, human health, and welfare. The IPCC report also shows that climate change is occurring faster than expected, with global temperatures already increasing by around 1°C above preindustrial levels at the time the report was published, with broader and more serious impacts. The urgency of climate change has also driven the transition movement towards NZE, namely cutting GHG emissions as close to zero as possible. Based on this report, it is stated that to lower the increase in global temperature at 1.5°C, emissions reduction of 45% is needed by 2030, to achieve NZE in 2050.

Several global agreements have emphasized the financial sector's role in addressing climate change. Strengthening the sustainable financial system is critical in funding climate change efforts to meet the NZE and Paris Agreement targets. One of the primary pillars of strengthening the financial system to support climate finance is the creation of a sustainable finance taxonomy. Taxonomy is a system of classifying or identifying economic activities that help to achieve environmental goals and/or SDGs. This taxonomy provides clarity for businesses, investors, and markets, as well as encourages financial flows to sectors that support the transition to a low-carbon economy and/or meet climate targets and other specified sustainable financing objectives.

A. Legal Basis

The legal basis for the Indonesia Taxonomy for Sustainable Finance (hereinafter referred to as TKBI) can be found in various legal instruments in Indonesia.

According to the Law of the Republic of Indonesia Number 4 of 2023 on Development and Strengthening the Financial Sector, Sustainable Finance refers to an ecosystem of policies, regulations, norms, standards, products,



transactions, and financial services that aligns economic, environmental, and social interests in financing sustainable activities and transition financing towards sustainable economic growth. According to this definition, one of the primary goals of Sustainable Finance is to foster long-term economic growth that is consistent with economic, environmental, and social interests. This goal can be met with the ecosystem's full support for financing sustainable activities and the transition to sustainability.

Given the current situation and global best practices, Sustainable Finance policies (including TKBI) align with Indonesia's existing policies.

1. The 1945 Constitution of the Republic of Indonesia (UUD 1945)

The Indonesian Constitution of 1945 emphasizes the importance of harmonizing aspects of Sustainable Finance, as outlined in the following articles:

- a. Article 28H: Every person is entitled to live prosperous physically and spiritually, to have a place to reside, and to acquire a good and healthy living environment as well as be entitled to obtain health care.
- b. Article 33 Paragraph 3: The land and waters and the natural wealth contained in it shall be controlled by the state and utilized for the optimal welfare of the people.

- c. Article 33 Paragraph 4: The national economy shall be conducted by virtue of economic democracy under the principles of togetherness, efficiency with justice, sustainability, environment insight, autonomy, as well as by safeguarding the balance of progress and national economic unity.

2. The Paris Agreement and its Ratification in Indonesia

The Paris Agreement, adopted at COP21 in Paris in 2015, is a legally binding international treaty under the United Nations Framework Convention on Climate Change (UNFCCC). It establishes a framework for global efforts to mitigate and adapt to climate change by significantly reducing greenhouse gas (GHG) emissions. The agreement aims to limit global temperature rise to well below 2°C above pre-industrial levels by 2100, while striving to keep the increase within 1.5°C.

Over 195 countries, along with the European Union, have become signatories to this agreement, including Indonesia. Every five years, Parties of the Paris Agreement are required to submit updated national climate action plans, known as Nationally Determined Contributions (NDC).

Indonesia's strong commitment to the Paris Agreement is reflected in the ratification of the

agreement through the Law of the Republic of Indonesia Number 16 of 2016 dated 25 October 2016 concerning the Ratification of the Paris Agreement to the United Nations Framework Convention on Climate Change. In accordance with Indonesia's Enhanced NDC in 2022, the unconditional emission reduction target (achieved through domestic efforts alone) increased from 29% in the Updated NDC to 31.89% by 2030, while the conditional target (achieved with international assistance) emission reduction target increased from 41% to 43.20%.

3. Law of the Republic of Indonesia Number 4 of 2023 concerning Development and Strengthening of the Financial Sector (P2SK Law)

The Republic of Indonesia Law No. 4 of 2023 includes a specific chapter on the implementation of sustainable finance (Chapter XVII). The main highlights of this chapter are:

- a. Sustainable Finance implementation includes transition financing for projects that shift from high-carbon to environmentally friendly activities;
- b. Financial Sector Business Actors (*Pelaku Usaha Sektor Keuangan* or PUSK), issuers, and public companies are required to implement Sustainable Finance throughout their business;
- c. The Sustainable Finance Committee (SFC) will be established to promote the development of sustainable finance, and will be governed by Government Regulations. The SFC's members are Ministry of Finance, Otoritas Jasa Keuangan, and Bank Indonesia.
- d. To foster the development of Sustainable Finance, the Ministry of Finance, Otoritas Jasa Keuangan, and Bank Indonesia will conduct:
 - i. Coordination in developing and establishing Sustainable Finance-related strategies, policies and programs;
 - ii. Optimization of fiscal, micro-prudential, macro-prudential, monetary and payment system policies;

- iii. Development of a database and supporting infrastructure for Sustainable Finance implementation; and
 - iv. Coordination in developing a sustainable taxonomy.
- e. Further provisions regarding the sustainable taxonomy will be regulated by Government Regulation.

4. National Long-Term Development Plan (RPJPN)

The National Long-Term Development Plan (RPJPN) outlines the Government of Indonesia's vision, mission, and national development direction for the next two decades. The 2005-2025 RPJPN was established under Law No. 17 of 2007, while the latest version, the 2025-2045 RPJPN, was issued through Law No. 59 of 2024.

The 2025-2045 RPJPN aims to achieve the 2045 Golden Indonesia Vision, which envisions a united, sovereign, developed, and sustainable Indonesia. This vision is realized through eight development missions and a National Development Agenda, supported by three Indonesian transformations, two transformation foundations, and three transformation implementation frameworks. The agenda is further implemented through 17 Development Directions, measured by 45 key development indicators.

The RPJPN incorporates principles of sustainable development, aligning with the Sustainable Development Goals (SDGs). Sustainable development in the 2025-2045 plan focuses on economic welfare while ensuring environmental sustainability through three key criteria, namely: (1) Efficient use of natural resources (avoiding depletion of natural resources); (2) Minimizing pollution and environmental impact; and (3) Enhancing or replenishing resources.

Furthermore, the RPJPN serves as a guideline for developing the National Medium-Term Development Plan (RPJMN).

5. National Medium-Term Development Plan (RPJMN)

The RPJMN is a national development planning document that outlines Indonesia's development strategy over a five-year period. It serves as a detailed implementation of the President's vision, mission, and programs.

The Government of Indonesia enacted Presidential Regulation Number 18 of 2020, which governs the 2020-2024 National Medium-Term Development Plan (RPJMN). In this plan, the Sustainable Development Goals (SDGs) are a key priority within Indonesia's development agenda.

Currently, the government is in the process of formulating the 2025-2029 RPJMN as a continuation of the 2025-2045 National Long-Term Development Plan (RPJPN).

6. Presidential Regulation of the Republic of Indonesia Number 111 of 2022 concerning Implementation of the Achievement of Sustainable Development Goals

As a member of the UN that plays an active role in determining targets in the SDGs (as stated in the document "Transforming Our World: The 2030 Agenda for Sustainable Development"),

Indonesia has established its SDGs goals and targets, which are aligned with the goals and targets of the Global SDGs in 2030. This initiative is supported by the issuance of Presidential Regulation of the Republic of Indonesia Number 111 of 2022 concerning Implementation of the Achievement of Sustainable Development Goals to accelerate the achievement of targets set by all stakeholders at both the central and regional levels. Meanwhile, Indonesia's SDGs include:

- a. Maintaining a sustainable improvement in the economic welfare of the community;
- b. Maintaining the sustainability of community social life;
- c. Maintaining environmental quality and fostering inclusive development; and
- d. Implementing governance that upholds the improvement in the quality of life from one generation to the next.

The national SDGs targets, as determined through the presidential regulation, are then used as guidelines by various stakeholders for planning, implementing, monitoring, and evaluating the SDGs.

B. Taxonomy Update

In 2022, OJK, in collaboration with related Ministries/Institutions, published the Indonesia Green Taxonomy (THI) to support the financing of climate change initiatives. THI is a classification of economic activities that promote environmental protection and management, as well as mitigation and adaptation to climate change. The THI aims to improve capital allocation and sustainable financing to help Indonesia achieve its sustainable development goals.

Several national and global developments have occurred in the two years since the THI's publication (2022-2023), which have served as momentum for amending the taxonomy. These include alignment with national agenda and SDGs that integrate economic, environmental, and social aspect, policies development for climate change and transition financing, discussion on the role of critical minerals in driving the energy transition, expansion of the taxonomy users (more inclusive), and developments of global and regional taxonomy.

Several countries and regions have introduced taxonomies to promote sustainable financing, while others are in the process of developing their own. The Asian region has the highest number of national taxonomies that have either been published or are under development. Countries such as PRC, Mongolia, Republic of Korea, Indonesia, Malaysia, Singapore, Thailand, Kazakhstan, and Sri Lanka have made significant progress in launching taxonomy initiatives. Beyond ASEAN, countries like Australia are also developing their taxonomy.

National taxonomies must strike a balance between local contexts and national interests, while also adhering to best practices, science-based approaches, and global credibility in order to support Net Zero Emissions goals. This is reflected in how different countries define Environmental Objectives (EO), economic activities, and additional elements such as Do No Significant Harm (DNSH), social aspects, and technical criteria that are specific to their decarbonization pathway. In addition to national taxonomies, regional taxonomies are being developed to account for the diverse conditions of multiple countries within a region. These can be used directly or as a framework for national taxonomy development, ensuring interoperability—as demonstrated by the EU Taxonomy and the ASEAN Taxonomy for Sustainable Finance (ATSF).

Given that capital allocation and investment cross national borders, global investors pay close attention to how national taxonomies align with international standards, particularly in terms of sustainable investments. The ATSF aims to create a common language for defining economic activities and financial instruments in ASEAN,

thereby facilitating the transition to sustainability while taking into account the region's diverse economic, financial, and infrastructure landscape.

On November 10, 2021, the ASEAN Taxonomy Board (ATB) released ATSF Version 1, which introduced a multi-tier taxonomy structured around two main elements:

The Foundation Framework outlines fundamental principles for assessing the sustainability of economic activity; and The Plus Standard includes pre-defined Technical Screening Criteria (TSC) for evaluating and classifying activities based on their contribution to sustainability goals.

On March 27, 2023, the ATB published ATSF Version 2, which introduced several key enhancements. This version improved the Foundation Framework by incorporating decision trees and guiding questions for each environmental objective. It also included use cases and launched the Plus Standard, with the Technical Screening Criteria (TSC) for the energy sector as its first focus sector. Additionally, social aspects were integrated into the taxonomy as the third Essential Criterion (EC3)



Given these developments, Indonesia then to enhance the Indonesia Green Taxonomy (THI) to become TKBI, with ATSF as the primary reference. The key elements of ATSF incorporated into TKBI include:

- Four Environmental Objectives (EOs):
 1. Climate Change Mitigation (EO1)
 2. Climate Change Adaptation (EO2)
 3. Protection of Healthy Ecosystems and Biodiversity (EO3)
 4. Resource Resilience and Transition to a Circular Economy (EO4)
- Three Essential Criteria (ECs):
 1. Do No Significant Harm (DNSH - EC1)
 2. Remedial Measures to Transition (RMT - EC2)
 3. Social Aspects (SA - EC3)

Furthermore, the implementation of TKBI has been tailored to Indonesia's specific conditions, particularly by improving the principle-based assessment approach in the Foundation Framework for Micro, Small, and Medium Enterprises (MSMEs) and incorporating TSC in the Plus Standard for the corporate/non-MSME segment.



02.

Framework and Elements of Indonesia Taxonomy for Sustainable Finance

A. Principles, Objectives and Scope of Indonesia Taxonomy for Sustainable Finance

TKBI classifies economic activities that support Indonesia's Sustainable Development Goals, encompassing the economy, environment, and social aspects. TKBI serves as a guide to promote capital allocation and sustainable financing to support Indonesia's ambitions of NZE targets. With a scope covering five NDC sectors, starting with the Energy sector, TKBI not only emphasizes Indonesia's commitment to sustainability, but

also demonstrates the country's adaptability and collaboration in pursuing a just transition. This reflects a strategic journey that showcases Indonesia's commitment in aligning economic development with environmental and social accountability, in line with the evolving dynamics and challenges faced at both national and international levels.



Figure 1. THI update to become Indonesia Taxonomy for Sustainable Finance



1. Principles of Indonesia Taxonomy for Sustainable Finance

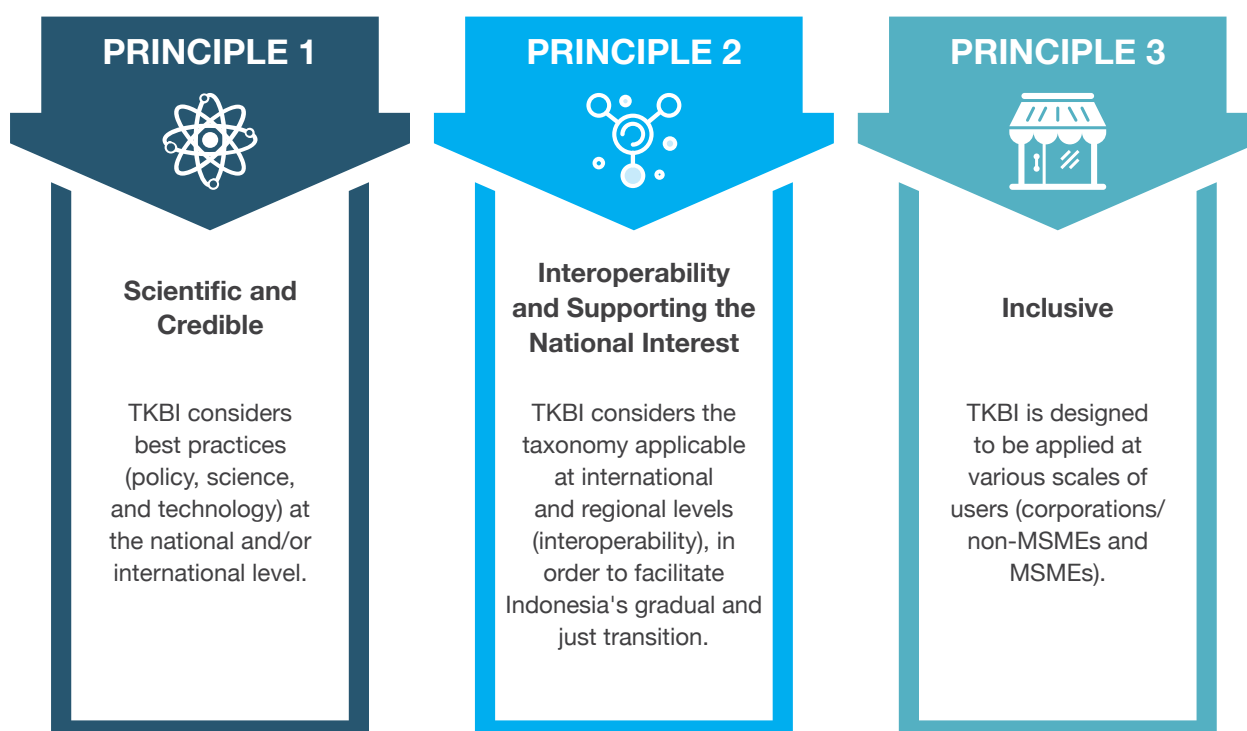


Figure 2. Principles of Indonesia Taxonomy for Sustainable Finance

2. Objectives of Indonesia Taxonomy for Sustainable Finance

TKBI was developed with the strategic objectives of as follows:

- Enhancing the standard definition of economic activities to align with the SDGs, which harmonize economic, environmental and social aspects.
- Minimizing multiple interpretations, greenwashing, social washing and impact washing through a science-based framework.
- Increasing capital allocation and sustainable financing to support the achievement of Indonesia's NZE target.
- Serving as the basis for the development of sustainability policies, including sustainability reporting, incentives and disincentives, and the development/innovation of Sustainable Finance products and/or services.

- Increasing access, literacy, and inclusion of sustainable products/services through the expansion of users that include MSMEs and non-MSMEs, thereby fostering economic growth.
- Strengthening cross-sector synergy with various stakeholders in supporting Sustainable Finance efforts in Indonesia, including fulfilling Indonesia's targets in various global commitments.

3. Scope of Indonesia Taxonomy for Sustainable Finance

The focus sectors of TKBI refer to NDC-related sectors, including any subsequent amendments. Based on Indonesia's Enhanced NDC, five key sectors have been identified to support climate change mitigation efforts, namely Energy, Waste, Industrial Processes and Product Use (IPPU), Agriculture and Forestry and Other Land Use (FOLU) (Figure 3).



Figure 3. Focus Sectors of TKBI

Table 1 illustrates NDC related sector emission reduction targets.

Table 1. Projections for Business as Usual (BAU) and emission reductions within the NDC sector

Sector	GHG Emission Level 2010 (MTon CO2-eq)	GHG Emission Level 2030			GHG Emission Reduction			
		(MTon CO2-eq)			(MTon CO2-eq)		% of Total BaU	
		BaU	CM1	CM2	CM1	CM2	CM1	CM2
Energy	453.2	1,669	1,311	1,223	358	446	12.5%	15.5%
Waste	88	296	296	253	40	43.5	1.4%	1.5%
IPPU	36	69.6	63	61	7	9	0.2%	0.3%
Agriculture	110.5	119.66	110	108	10	12	0.3%	0.4%
FOLU	647	714	214	-15	500	729	17.4%	25.4%
TOTAL	1,334	2,869	1,953	1,632	915	1,240	31.89%	43.20%

Source: Enhanced NDC Indonesia, 2022

TKBI is developed based on “*Rumah Tumbuh*” or a living document concept, meaning that each version builds upon the previous one. Version 1, which establishes the core framework with a focus on the Energy sector, was published in February 2024.

In February 2025, TKBI Version 2 will expand to cover the Construction and Real Estate (C&RE) and Transportation and Storage (T&S) sectors, as well as some activities in the Agriculture,

Forestry, and Other Land Uses (AFOLU) sector, specifically forestry and palm oil plantations.

The following year, TKBI Version 3 will be developed, incorporating the remaining AFOLU subsectors, as well as Manufacturing/Industrial Processes and Product Use (IPPU) and Water Supply, Sewerage & Waste Management.

Further details on the focus sectors of TKBI and their Technical Screening Criteria (TSC) can be found in Annex 3 of this document.



B. Environmental Objectives and Essential Criteria

1. Environmental Objectives (EO)

There are several definitions of "Environmental Objectives" among others:

- a. ISO 14001:2015 Environmental Management Systems

"Environmental objectives are goals, preferably quantified, that are set by an organization to assist in the achievement of continual improvement and prevention of pollution according to commitments made in the environmental policy."

- b. EU Regulation 2020/852

The definition of 'sustainable investment' in Regulation (EU) 2019/2088 includes

investments in economic activities that contribute to an environmental objective which, amongst others, should include investments into 'environmentally sustainable economic activities' within the meaning of this Regulation."

- c. ATSF Version 2

"Environmental objectives which the ASEAN Taxonomy is intended to facilitate."

TKBI defines EO as the priority environmental performance target to be achieved. TKBI will focus on four EOs as described in Table 2.

Table 2. TKBI Environmental Objectives

No	Environmental Objective/EO	Consideration
1.	Climate Change Mitigation	In line with:
2.	Climate Change Adaptation	1) Indonesia's Vision 2045. 2) Indonesia's Enhanced NDC. 3) EOs on ATSF. 4) Presidential Regulation of the Republic of Indonesia Number 98 of 2021 concerning the Implementation of Carbon Economic Value for Achieving Nationally Determined Contribution Targets and Controlling Greenhouse Gas Emissions in National Development. 5) Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.33/MENLHK/SETJEN/KUM.1/3/2016 concerning Guidelines for Preparing Climate Change Adaptation Actions.
3.	Protection of Healthy Ecosystems and Biodiversity	1) Based on data from the Indonesian Institute of Sciences (LIPI) in 2021, Indonesia is the country with the second highest terrestrial biodiversity in the world. When combined with marine biodiversity, Indonesia is the first. 2) Biodiversity has become a concern for the Indonesian Government, as stipulated in the Presidential Instruction No. 1 of 2023, concerning Mainstreaming Biodiversity Conservation in Sustainable Development.

No	Environmental Objective/EO	Consideration
		3) High biodiversity in a region is considered to have many benefits for the environment, social, and economic as well as natural resource. Biodiversity plays a pivotal role as a source of food, energy, water, preservation of cultural heritage, high quality environment, absorbing pollution, stabilizing ecosystems, contributing to both renewable and non-renewable natural resources, providing spiritual fulfillment, and enhancing mental and physical well-being. 4) In line with the EOs in ATSF. 5) Government Regulation of the Republic of Indonesia Number 22 of 2021 concerning the Implementation of Environmental Protection and Management which regulates, among others, Environmental Approval, AMDAL, UKL/UPL and SPPL.
4.	Resource Resilience and the Transition to a Circular Economy	1) The Indonesian Government is promoting a circular economy to achieve NDC. The transformation to a circular economy is important because it will bring many positive impacts, both for the environment and the growth of various development sectors in the future (Coordinating Ministry for Economic Affairs of the Republic of Indonesia, 2021). 2) The circular economy in Indonesia yields positive outcomes, including a targeted 50% reduction in waste by 2030 generated by industries like food and beverages, construction, electronics, textiles, and plastics. These five key sectors are projected to contribute IDR593 trillion or approximately USD41.6 billion, equivalent to 2.3% of Indonesia's GDP by 2030 (Bappenas, 2020). Bappenas has published supporting documents for implementing this circular economy through the Low Carbon & Climate Resilient Development Indonesia platform which are publicly accessible. These documents contain stakeholder mapping and recommendations to promote the implementation of circular economy for all stakeholders, including innovation diffusion in order to support the transition of circular economy in Indonesia. 3) Implementing the concept of a green/circular economy will potentially create an additional 4.4 million jobs by 2030, in which 75% of the jobs empower women by offering them better opportunities (Coordinating Ministry for Economic Affairs of the Republic Indonesia, 2021). 4) In line with the EO on ATSF. 5) Indonesia's Circular Economy Roadmap and National Action Plan 2025–2045 (Bappenas, 2024).

Principles of the four EO are described as follows:

a. EO1: Climate Change Mitigation

EO1 focuses on the decarbonization pathway, which refers to an Activity aligned with the commitment to limit the global temperature rise to well below 2°C and striving to limit the increase to 1.5°C, as outlined in the Paris Agreement. An activity is considered to fulfill EO1 if it contributes to one or more of the following:

- Avoids GHG emissions
- Reduces GHG emissions; or
- Enables others to avoid or reduce GHG emissions



General Principles for EO1 Criteria

1. Activities align with the commitment to keep the global temperature rise to well below 2°C and pursuing efforts to limit the increase to 1.5°C, as outlined in the Paris Agreement.
2. Activities which is not already low- or zero-emissions, need to demonstrate or ensure that there are efforts to prevent or reduce GHG emission in line with relevant best practices compared to the baseline scenario without mitigation/BaU actions.

Examples of EO1 Criteria

1. Ensuring that lifecycle GHG emissions from all power generation facilities are <100gCO2e/kWh.
2. Implementing management and monitoring procedures, and a contingency plan to address potential methane gas leaks.

b. EO2: Climate Change Adaptation

The objective of this EO is to reduce the negative effects caused by climate change and increase resilience to the adverse physical impacts of current and future climate change. Resilience is defined as the ability of an Activity to remain functional over time in the event of disruptions/disasters caused by climate change.



General Principles for EO2 Criteria

1. Activity shall positively contribute to a reduction in material physical climate risk and their changes from current and future climate change.
 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.
 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 impact on people, nature or assets.
- *) Physical risks refer to potential risks stemming from climate-related events such as floods, typhoons, heatwaves, fires, sea level rise, and others, leading to economic losses and financial impacts. These risks affect both physical and non-building assets and encompass changes in environmental conditions (OJK, 2022).

Examples of EO2 Criteria

1. Activities have implemented adaptation solutions, both physical and non-physical that can reduce material climate-related risks through Climate Risk Vulnerability Assessments (CRVAs);
 2. Having the ability (in terms of facilities or equipment or procedures) to support the Activity's operations in the event of a disaster (e.g. floods, storms, high temperature/temperature rise, etc.).
-

To support the preparation of climate change adaptation actions as stipulated in the Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.33/MENLHK/SETJEN/KUM.1/3/2016 on Guidelines for Preparing Climate Change Adaptation Actions, the Government of Indonesia through relevant ministries has developed a climate change adaptation information system, namely the Sistem Informasi Data Indeks Kerentanan (SIDIK) which refers to the IPCC to measure vulnerability and risk. SIDIK includes vulnerability maps (indicative), flood and drought risk maps, information on vulnerability determinants, and features for adding vulnerability indicators. In SIDIK, vulnerability is measured by two indicators: *Indikator Kapasitas Adaptasi* (IKA) and *Indikator Keterpaparan Sensitivitas* (IKS). The data presented in the SIDIK application can be used by businesses in conducting CRVA assessments.

c. EO3: Protection of Healthy Ecosystems and Biodiversity

EO3 focuses on the incorporation of conservation, restoration, and protection mechanisms of natural ecosystem and biodiversity. EO3 is location and context-specific, typically relevant for Activities related to the agriculture, forestry and fisheries, real estate, and manufacturing sectors. EO3 aims to promote positive impacts and minimize or eliminate negative impacts of an Activity on natural ecosystems and biodiversity.



General Principles for EO3 Criteria

An Activity intended to promote EO3 shall conform with the following principles while simultaneously minimizing or eliminating negative impacts on the natural ecosystem and biodiversity:

1. Enable ecosystem restoration and/or facilitate the protection of ecosystems.
 2. Implement necessary measures to protect ecosystems and biodiversity.
 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 contributes 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 contributes to achieving good environmental status of Water Body, 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.
-

Examples of EO3 Criteria

1. Obtain and implement Environmental Impact Assessment/Environmental and Social Impact Assessment (AMDAL/UKL-IPL/SPPL).
 2. Undertake the management of protected and/or rare, endangered, and endemic flora and fauna as documented in accordance with established provisions and/or scientific research/biodiversity studies.
-

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

EO4 focuses on the materiality of Activities, and their impacts to business operations, through adoption of the following principles of circularity:

- Minimising resource use.
- Optimising resource yield.
- Closing resource loops through effective waste management.



An Activity may be considered to fulfill this EO through either or both of the following:

- Adjusting business operations to conserve raw materials, energy, water, and other natural resources.
- Implementing circular economy principles through products, production, technology, and processes.

General Principles for EO4 Criteria

Strategy & Operations, Adjusting Business Models:

1. Using new and renewable energy, bio-based resources, or other recovered materials to reduce rate of resource extraction.
2. Using future-proof, sustainable considerations and specifications to design and produce products, assets or process technologies that enable circular economy strategies through:
 - a. Designed for longevity, resource efficiency, durability, functionality, modularity, upgradability, easy disassembly, and repair.
 - b. Using recyclable or biodegradable materials.
 - c. Substitutes substances in materials and products throughout their lifecycle by replacing such substances, where relevant, with safer alternatives and promoting traceability.
3. Optimizing waste management, including the management and reduction of waste from (i) the extraction of minerals, and (ii) the construction and demolition of buildings.
4. Optimizing 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.
 - c. Repurposing, refurbishing, remanufacturing, disassembling, upgrading and repairing, and sharing of products.
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 minimizing waste incineration and disposal to landfills.

Enablers: Facilitating the Transition

7. Develops and/or improves resource optimization/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.
8. 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.

Examples of EO4 Criteria

1. Implementing SNI 8424: 2017 standards for Recycled Resin (PET).
 2. Conducting in-house research and development to utilize secondary raw materials for business operations.
 3. Implementing SNI 7818:2014 guidelines for biodegradable plastic bags and SNI 7188.7:2016 for eco-label criteria, specifically for product categories involving biodegradable plastic and bio-plastic shopping bags.
 4. Conducting Life Cycle Assessments for products, materials, processes, or any related Activities.
-

2. Essential Criteria (EC)

Each Activity that will be classified within the taxonomy must meet EC requirements. These requirements are applicable to TKBI assessments using both TSC and SDT approaches. The ECs used in the TKBI is outlined as follows:

a. EC1: Do No Significant Harm (DNSH)

DNSH refers to the principle that an Activity contributing to one EO should not negatively affect, cause harm, or cause damage to other EOs. The assessment of DNSH against other EOs is part of determining an Activity's classification and is conducted after ascertaining the contribution of an activity to the specific objectives of a particular EO. DNSH is generally applicable to all sectors/types and categories of activities as long as they are relevant (for more details, see Annex 5).

b. Remedial Measures to Transition (RMT)

RMT are measures to ensure that any significant actual or potential damage or loss can be eliminated or minimized, so that the impact becomes insignificant. If, after a DNSH assessment, it is found that an Activity causes significant harm to other EOs, RMT must be undertaken. The implementation of RMT needs to be planned effectively to eliminate all significant harm within 5 years of the assessment date. A comprehensive and realistic RMT plan should be used as part of the assessment (details in Annex 6).

c. EC3: Social Aspects (SA)

SA relates to the condition where an Activity potentially causes harm or negative impact on the social conditions within an environment. An activity's contribution to a specific EO requires thorough consideration of social concerns that occur in the surrounding environment, including the protection of workers, local communities, and other stakeholders. This approach ensures a harmony between environmental and social aspects. Therefore, TKBI also covers the adherence of an activity to social aspects, as detailed in Table 3.

The essential part for the SA assessment is compliance with relevant social aspect regulations. Additionally, the assessment considers other relevant policies, such as Indonesia's SDGs, the International Labor Organization (ILO) Convention, the G20/OECD High-Level Principles on Financial Consumer Protection (FCP), and others. SA assessments are conducted at the company level, as social policies are usually made at the company level. The criteria for SA assessments are outlined in Annex 7.

Table 3. Social Aspects

Social Aspect	Description
Protection and Respect for Human Rights	Promote the fulfillment of the basic principles of human rights and fundamental freedoms as per ILO Conventions and/or laws and regulations.
Employment includes decent work, prevention of forced labor, protection of women and child labor, as well as development of human resources	Promote workers' rights and the prohibition of forced labor, including but not limited to exploitation, human trafficking, violence and abuse; protection of women and child workers; and have human resource development programs (training, skill enhancement, etc).
Impact on people living close to Investments covers aspects such as job creation, poverty alleviation, and fostering economic growth	• Management of investment-related impacts on people/communities living in at-risk areas by promoting inclusive and targeted measures to mitigate the impact of investments on vulnerable populations. • Strengthening institutional capacity to meet the needs of affected communities. • Promote poverty alleviation efforts through job creation and empowerment programs in the vicinity of investments. • Foster inclusive economic growth.

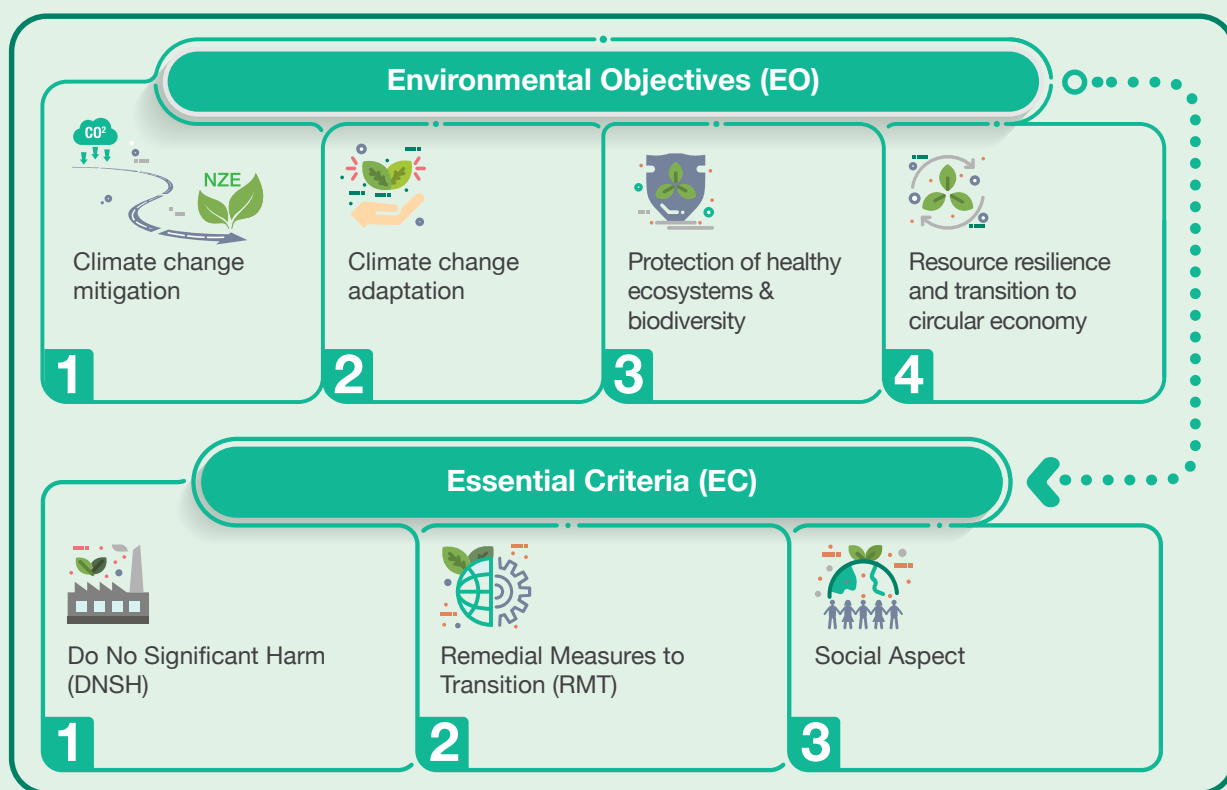


Figure 4. TKBI framework

C. Assessment Methodology for Indonesia Taxonomy for Sustainable Finance

TKBI is designed to assess an Activity using the Environmental Objectives (EO) and Essential Criteria (EC) approach.

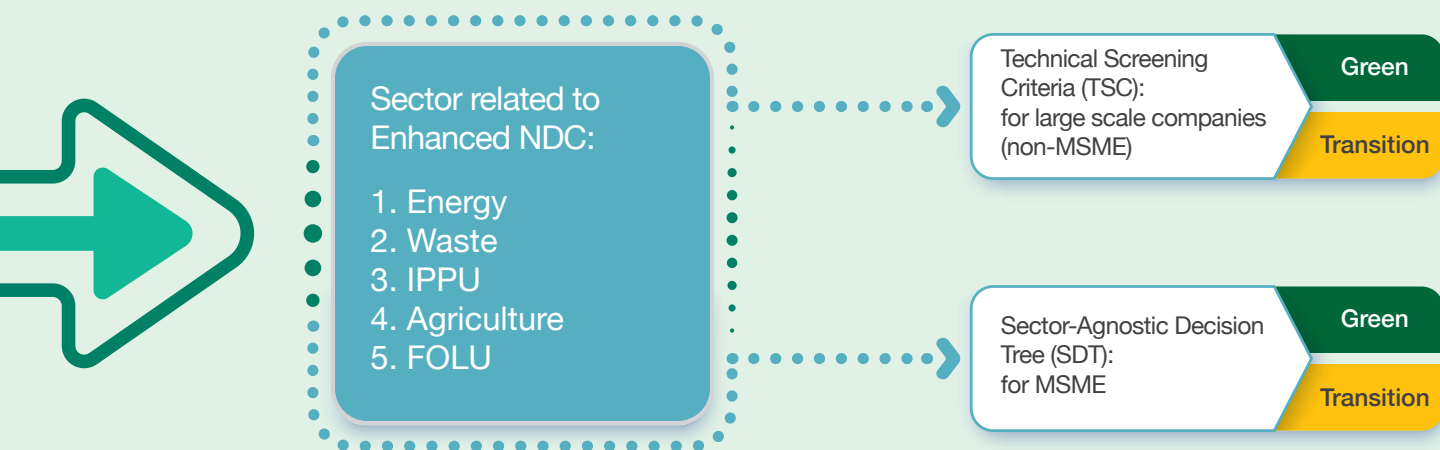
TKBI uses a specific methodology to assess an Activity's efforts to meet the principles of or make a substantial contribution to one of the EOs, avoid significant harm to other EOs, and remediate any harm caused (if loss/damage to other EOs occurs) and meet all social aspect criteria. There are two assessment approaches in TKBI, namely the TSC and SDT approaches.

1. Technical Screening Criteria (TSC) Approach

TSC is a set of criteria used to assess economic activities based on their contribution to and fulfillment of a substantial EO based on certain thresholds.

The use of TSC encompasses:

- Activities within the taxonomy associated with or pertinent to the five focus sectors outlined in the NDC on a non-MSME or corporate scale.
- Other Activities specifically defined in the TKBI.



An Activity is classified as **"Unqualified"** if it is listed in the TKBI but does not meet the "Green" and "Transition" classification criteria.

In practice, TSC may involve a combination of qualitative and/or quantitative criteria, or it may directly fulfill the EO (nature of the activity). There are three types of TSC as follows:

Table 4. Types of Technical Screening Criteria

No	Type of TSC	Description	Example
1.	Nature of the Activity	An activity that is automatically considered appropriate and meets the classification because the contribution of the activity is proven to support NZE.	Power generation activities with energy sourced from the sun, wind, and ocean currents.
2.	Quantitative	• Impact based/relative improvement: Minimum requirements for the impact (effect) on the environment of carrying out the Activity (e.g., GHG emissions reduction per unit of Activity). • Environmental Performance: Minimum threshold for the environmental performance of the Activity (e.g., the level of GHG emissions per unit of Activity aligned with the NZE target). • Best in class performance: The minimum threshold, considered “best in class” for the environmental performance of an activity—such as the level of GHG emissions per unit of activity—is attained solely by the top 10% of market players.	Power generation activities use quantitative TSC with lifecycle emission measures, such as lifecycle emission from all power generation facilities <100gCO ₂ e/kWh for "Green" classification.
3.	Qualitative	• Practice based: a set of practices (best practice) for the Activity. • Process based: a set of process-based steps.	Practice based: Compliance with a set of qualitative criteria, certification, PROPER-Ministry of Environment and Forestry (MOEF). Process based: Management and monitoring procedures in the event of methane gas leakage for Gas Power Plant (PLTG).

2. Sector-agnostic Decision Tree (SDT) Approach

SDT is a principle-based assessment approach in the form of a decision tree, developed based on specific criteria of an EO, and accompanied with guiding questions. A decision tree has been developed based on specific criteria for each EO and each decision box in the decision tree contains binary questions that must be answered by TKBI users. Users respond with "Yes" or "No" to the binary questions based on information related to the Activity being assessed.

SDT uses include:

- Activities in the taxonomy that are included in or related to the five focus sectors of the NDCs at the scale of MSMEs.
- Other activities specifically defined in the TKBI.

Based on the Government Regulation of the Republic of Indonesia Number 7 of 2021 concerning the Ease, Protection, and Empowerment of Cooperatives and Micro, Small, and Medium Enterprises, the criteria for MSMEs are distinguished as micro, small, and medium enterprises:

Table 5. MSME Criteria

Type	Definition	Criteria
Micro Enterprises	A productive enterprise owned by individuals and/or business entity/enterprise which fulfill the criteria of the micro enterprise.	• Must have business capital of up to a maximum of IDR 1 Billion excluding land and buildings designated for business premises; or • Achieve annual revenue of up to a maximum of IDR 2 Billion.
Small Enterprises	An independent productive enterprise, which is run by individuals or a company which is not a branch companies owned, controlled, or becoming direct or indirect part of the Medium or Large Enterprises fulfilling the criteria of the Small Enterprises.	• Must have business capital ranging from IDR 1 Billion to a maximum of IDR 5 Billion excluding land for buildings designated for business premises; or • Achieve annual revenue between IDR 2 Billion and IDR 15 Billion.
Medium Enterprises	An independent productive economic enterprise, which is run by individuals or a company which is not a branch companies owned, run, or becoming direct or indirect part of the Small or Large Enterprises that meet the criteria of Medium Enterprises.	• Must have business capital ranging from more than IDR 5 Billion up to a maximum of IDR 10 Billion excluding land for buildings designated for business premises; or • Achieve annual revenue between IDR 15 Billion and IDR 50 Billion.

After the assessment of EO based on the selection of either the TSC approach or the SDT approach, the assessment of EC consisting of DNSH, RMT, and SA is continued (**details in Chapter 3 Indonesia Taxonomy for Sustainable Finance Application Guidelines**).

D. Activity Classifications (Classification System)

TKBI divides Activities into two classifications namely "Green" and "Transition", with a description as follows:

Table 6. Classifications of TKBI

Classification	General Principle	Description
Green	In line with the commitment to keep global temperature rise below 1.5°C in line with the Paris Agreement including considering Indonesia's NZE in 2060 (or earlier) and fulfilling social aspects.	Activities that meet the "Green" criteria in one of the EOs and all ECs, namely: 1) Does not cause damage/loss (DNSH) to other EOs. If it causes damage/loss, it conducts remediation/repair (RMT) and has ensured that it does not cause damage/loss to other EOs; and 2) Fulfills all social aspects.
Transition	Activities that are not currently in line with commitments to keep global temperature rise in check are not yet on the NZE pathway, however: • Are moving towards a "Green" classification within a specified timeframe; • Facilitate significant emissions reductions in the short or medium term by a specific deadline; or • Encourage other activities to be sustainable. and fulfilling social aspects.	Activities that meet the "Transition" criteria in one of the EOs and partially fulfill the ECs, namely: 1) Still causing damage/loss (DNSH) to the other EO despite remediation/repair (RMT); 2) Has a future improvement plan; and 3) Complies with all social aspects.

Activities are considered "Unqualified" if they are listed in the TKBI but do not meet the "Green" and "Transition" classification requirements.



03.

Indonesia Taxonomy for Sustainable Finance Application Guidelines

A. Users and Uses of Indonesia Taxonomy for Sustainable Finance

The TKBI can be used, among others, as a reference for guidance on capital allocation and financing for sustainable activities to a range of parties, including but not limited to governments/regulators, financial institutions, rating agencies, investors (national and international investors who invest in Indonesia), and other stakeholders. For example, TKBI can be used as a reference for portfolio classification, setting requirements for sustainable financial instruments/products, disclosure of sustainable financial performance, due diligence processes, and more. When utilizing the TKBI, users must ensure the accuracy of the classification and its implementation according to the assessment mechanism and TKBI requirements to prevent greenwashing, social washing and impact washing. Illustrations of users and applications of TKBI are explained in Annex 1.

B. How to Use Indonesia Taxonomy for Sustainable Finance

The development of TKBI has placed greater emphasis on inclusive aspects to promote a broader adoption of taxonomy across various business scales and characteristics. In addition, several updates have been made (as detailed in **Chapter 2 of the Framework and Elements of the Indonesia Taxonomy for Sustainable Finance**), which have led to adjustments of the overall methods for taxonomy assessment.



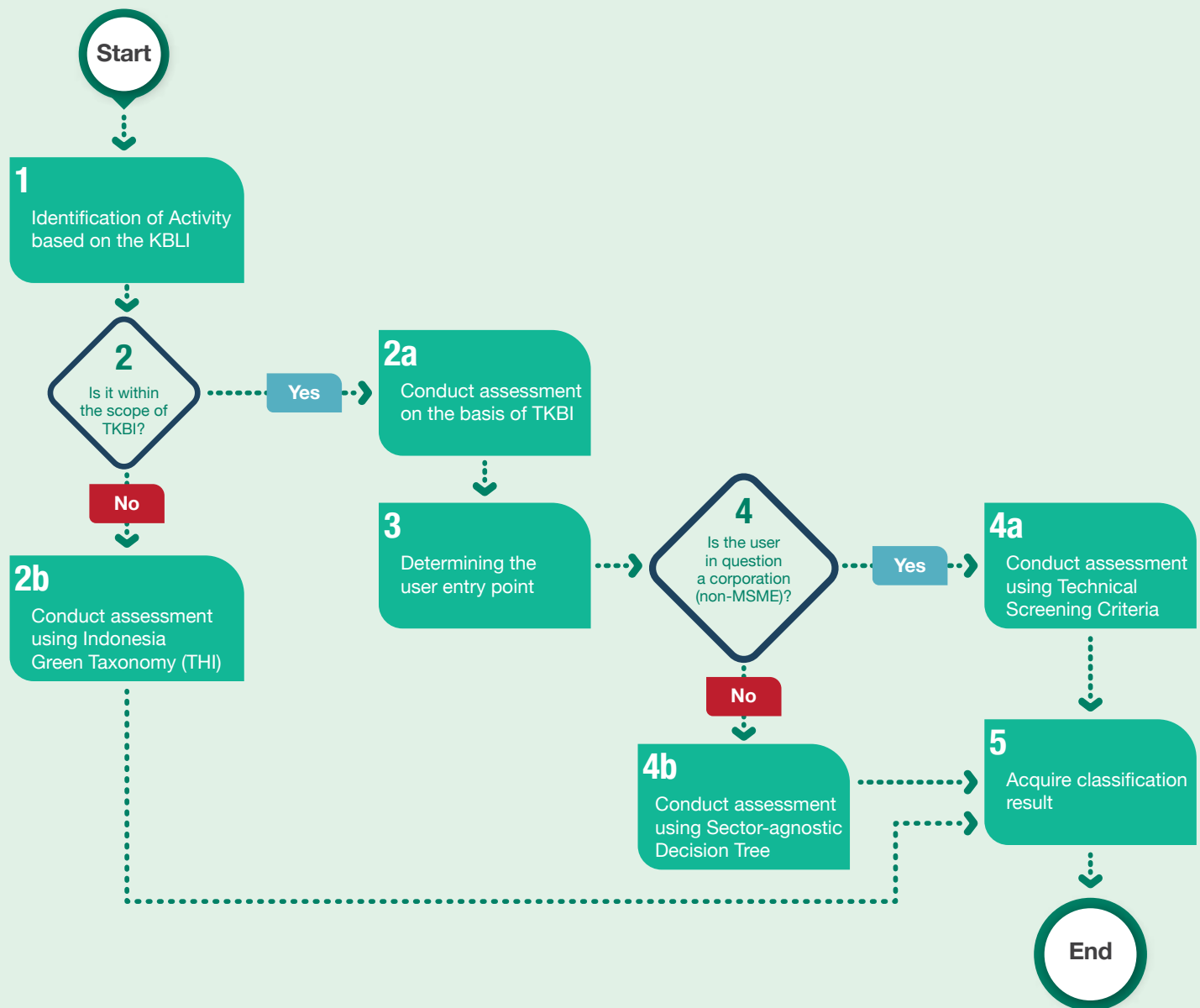


Figure 5. TKBI General Flow

1. Identifying Activity based on the KBLI code

When using the TKBI, users start by identifying economic activities that align with activities specified in the KBLI code. As an example, suppose a user's economic activity of a Solar Power Plant. In the KBLI, this economic activity falls within the Electric Power Generation category and is identified by the code 35101. Both the category and the code play a key role in identifying the corresponding economic activity within TKBI. It is worth noting that, considering reporting requirements in the financial services sector, the TKBI is based on the 2015 edition of the KBLI (Regulation of the Head of BPS - Statistics Indonesia No. 19 of 2017 amending Regulation of Head of BPS - Statistics Indonesia Number 95 of 2015 on Standard Classification of Indonesian Business Fields), also referred to as KBLI 2017. To assist users, Annex 3 of this book presents a mapping between KBLI 2017 and KBLI 2020.

2. Selecting an assessment option between TKBI or THI

TKBI is an update of THI. During the transition period, Activities that have not yet been included under TKBI will continue to use the THI criteria until the TSC framework is fully developed for all Activities. Following this, the identification of Activity involves determining if the Activity aligns with the scope of TKBI. If the activity searched for is not within TKBI, users can explore and utilize THI assessment mechanisms. This THI mechanism remains valid as long as it does not contradict the TKBI.



3. Determining the user entry point

One key distinction between THI and TKBI lies in the separation of taxonomy criteria based on EO. Another notable difference is the incorporation of several new EOs in addition to EO1-Climate Change Mitigation and EO2-Climate Change Adaptation, which were included in the THI. This method was employed to enhance interoperability between TKBI and regional taxonomies. This was also carried out to simplify the process of identifying EO that contributes primarily to economic activities. As a consequence of this adjustment, it became necessary to have a mechanism that allows taxonomy users to first determine the most relevant EO, or the one with the primary contributions to an economic activity. In practice, an economic activity may have more than one EO. Nevertheless, it remains crucial for the taxonomy users to identify which primary

EO is most relevant to their specific economic activities.

In determining the relevance to EO, taxonomy users can consider various viewpoints, approaches and general principles from each EO. The following are some examples of viewpoints that can be used to determine user entry points for TKBI (Table 7).

4. Assessing the scale of economic activity

Once the user has identified their desired EO, the next step involves determining the scale of their economic activities, whether they are for corporations/non-MSMEs or MSMEs. If the user falls under the corporate/non-MSMEs category, the evaluation will be conducted using a TSC approach. When the user is classified as an MSME, the evaluation should be conducted using an SDT approach.

Table 7. Determining the User Entry Point for TKBI

Option	1	2
Viewpoints	The relevance between the core business of the economic activity of the taxonomy user and the EO to be achieved.	The alignment with relevant government or regulatory guidelines.
Consideration	a. Which EO aligns best with the strategic focus and/or main actions of user's economic activities? b. Which EO is most relevant to the products created and/or services provided by user's economic activities? c. Which EO is most impacted by user's economic activities?	Has the government (or relevant regulators) issued policies/guidelines/roadmaps/provisions that regulate or provide directions that ensure that user's economic activities are relevant to specific EO (such as for documents involving NDC, Long-Term Strategy for Low Carbon Resilience and others)?

a. Assessment using the Technical Screening Criteria (TSC)

TSC assessment is carried out in stages to ensure that each specific criterion is met as outlined in the TKBI. As shown in Figure 6, TSC approach follows the stages below:

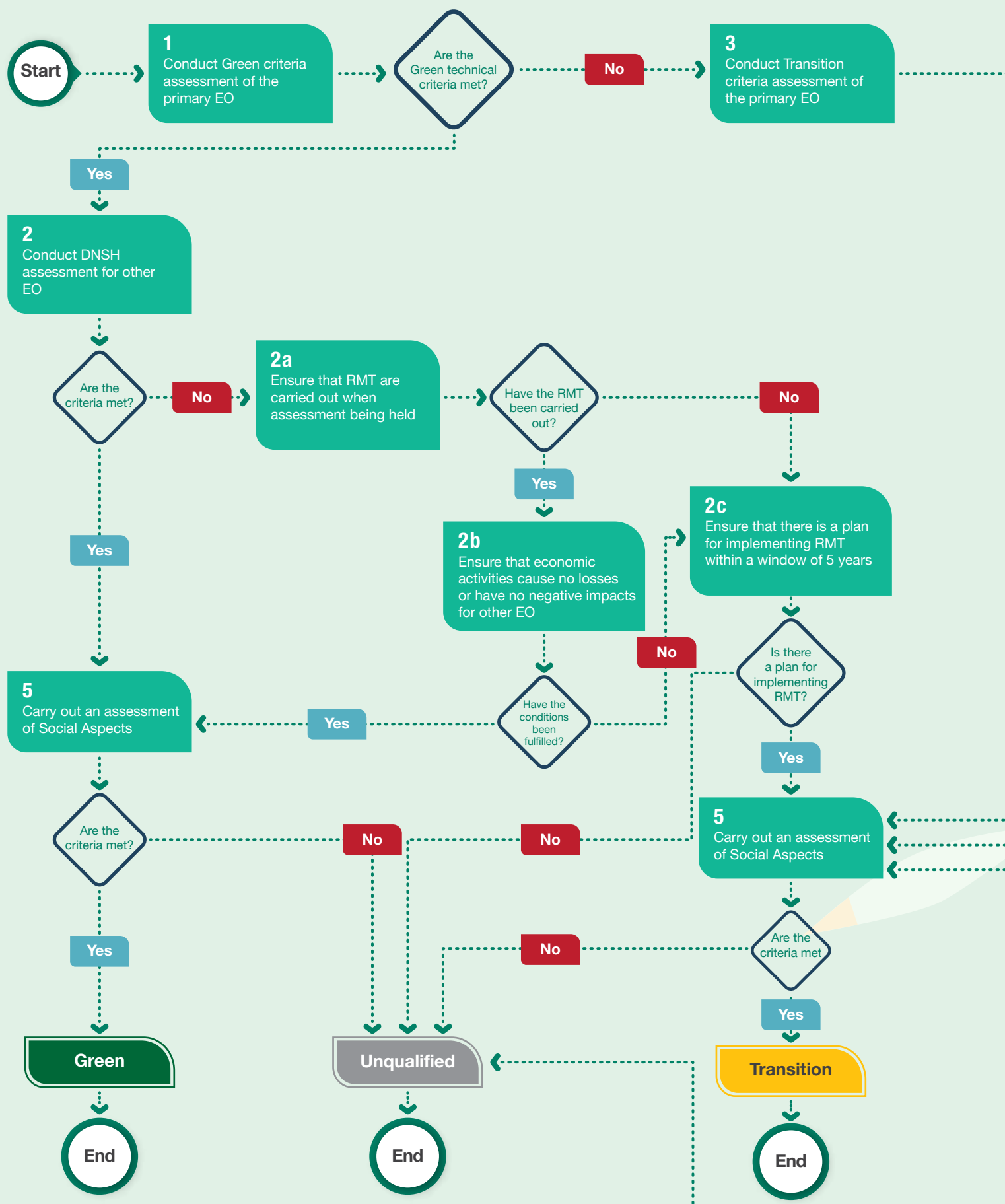
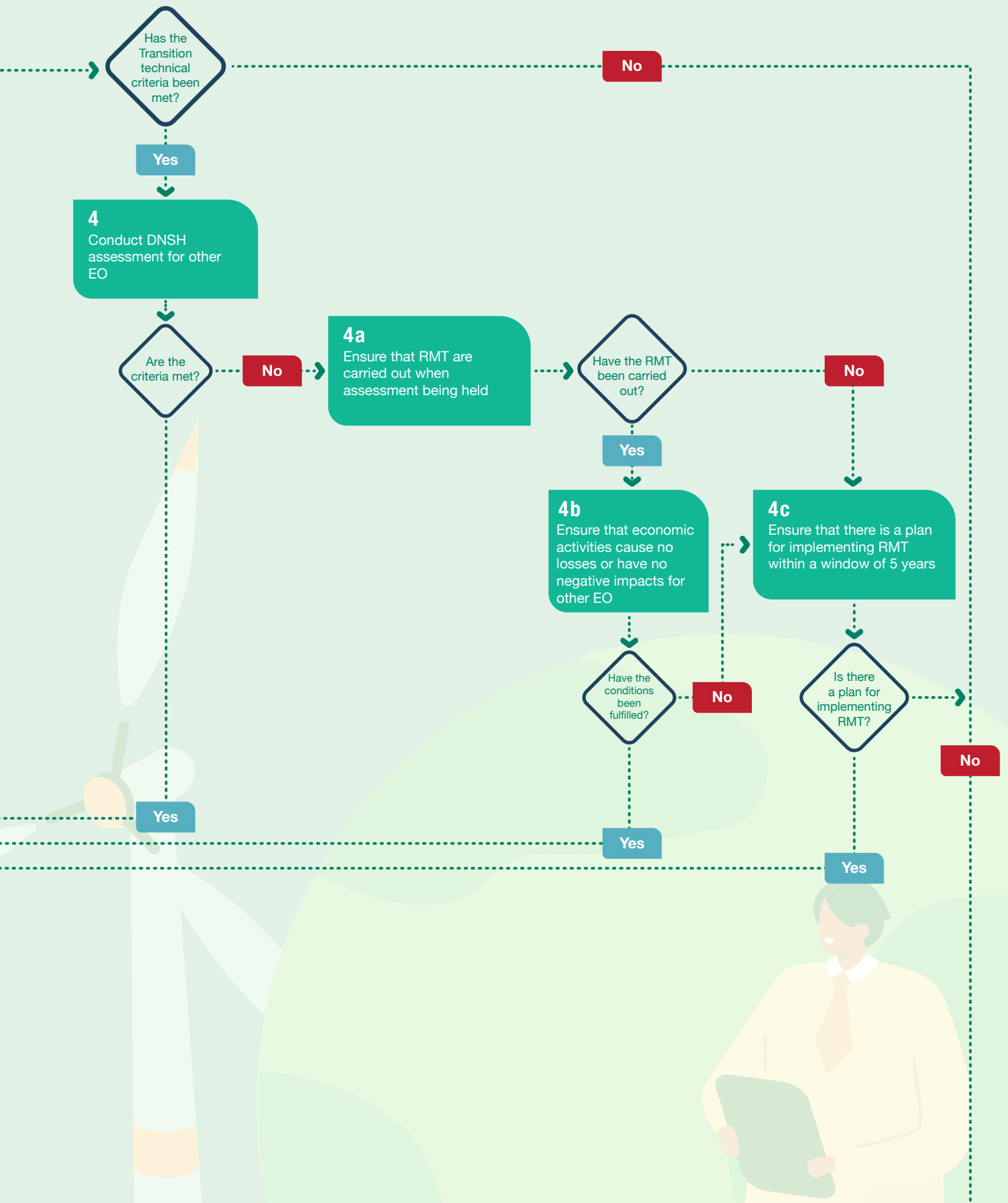


Figure 6. Technical Screening Criteria (TSC) Assessment Flow



1. Taxonomy users assess whether specific criteria are met by examining the threshold/ indicators/requirements outlined for their primary EO (see Annex 3). For example, if a user has determined that their economic activities are more relevant and provide substantial contributions to EO1, they only need to evaluate the criteria related to the

specific EO as listed in Table 8. Once the "Green" technical screening criteria in a chosen EO are met, the assessment proceeds to the second stage. However, if these conditions are not fulfilled, the assessment process continues to stage three, namely assessing the "Transition" criteria of EO1.

Table 8. Examples of Criteria for Environmental Objectives (EO)

Environmental Objectives (EO)		
Objective	Classification	Criteria
EO1-Climate Change Mitigation	Green	1. Criterion 1 2. Criterion 2 3. Criterion 3 4. And so on.
	Transition	1. Criterion 1 2. Criterion 2 3. Criterion 3 4. And so on.
EO2-Climate Change Adaptation	Green	Criterion 1
	Transition	Criterion 1
EO3-Protection of Healthy Ecosystems and Biodiversity	Green	N/A
	Transition	N/A
EO4-Resource Resilience and the Transition to a Circular Economy	Green	N/A
	Transition	N/A

2. After successfully meeting the Green criteria of their selected EO, the next step is for the user to verify compliance with DNSH criteria. Adherence with DNSH requirements is necessary for all EO other than the user's selected EO. For instance, if the user has chosen EO1, they should refer to the DNSH criteria that they need to meet listed in Table 9 for other EOs, such as EO2, EO3, and EO4. The DNSH criteria for EO1 will not be considered. Once these DNSH criteria are met, then the assessment can proceed to stage five. However, if the DNSH criteria are not met, then:

- TKBI users need to ensure that RMT have been implemented at the time of assessment process (details in Appendix 6).
- If RMT have been implemented during the assessment process, it is necessary to ensure that economic activity no longer harms other EOs. If these conditions have been met, the Activity is considered to have fulfilled the DNSH and the assessment can proceed to stage five.

c. In the event that there is no RMT or the economic activity still harms/has a negative impact on other EOs, the TKBI user needs to ensure that there is an RMT implementation plan that will be carried out within 5 years. If

there is an RMT implementation plan, then the assessment can proceed to stage five. However, if there is no RMT implementation plan, then the assessment stage is completed, and the Activity is assessed as "Unqualified".

Table 9. Examples of Do No Significant Harm (DNSH) Criteria

Do No Significant Harm	
EO1-Climate Change Mitigation	Criterion 1
EO2-Climate Change Adaptation	Criterion 1
EO3-Protection of Healthy Ecosystems and Biodiversity	N/A
EO4-Resource Resilience and the Transition to a Circular Economy	1. Criterion 1 2. Criterion 2

3. In the event that the "Green" criteria of the selected primary EO are not met, the TKBI user needs to conduct an assessment using the "Transition" technical criteria (details in Annex 3). If the "Transition" technical criteria of the primary EO are met, then the assessment stage proceeds to stage four. However, if the "Transition" technical criteria are not met, then the assessment stage is completed, and the Activity is assessed as "Unqualified".

4. If the "Transition" technical criteria of the selected primary EO have been met, the next step is to ensure the activity fulfills the DNSH criteria. The general principle of fulfilling the DNSH criteria and the RMT process are the same as those described in point 2).

5. In the last step, the TKBI user needs to ensure that all SA criteria specified in the TKBI are met (details in Annex 7). This step will determine whether the economic activity is categorized as "Green", "Transition" or "Unqualified".

b. Assessment using the Sector-agnostic Decision Tree (SDT)

The SDT assessment is used for MSMEs and conducted based on the fulfillment of the general principles of each EO by using the respective guiding questions as a tool to ensure that the general principles of EO have been met.

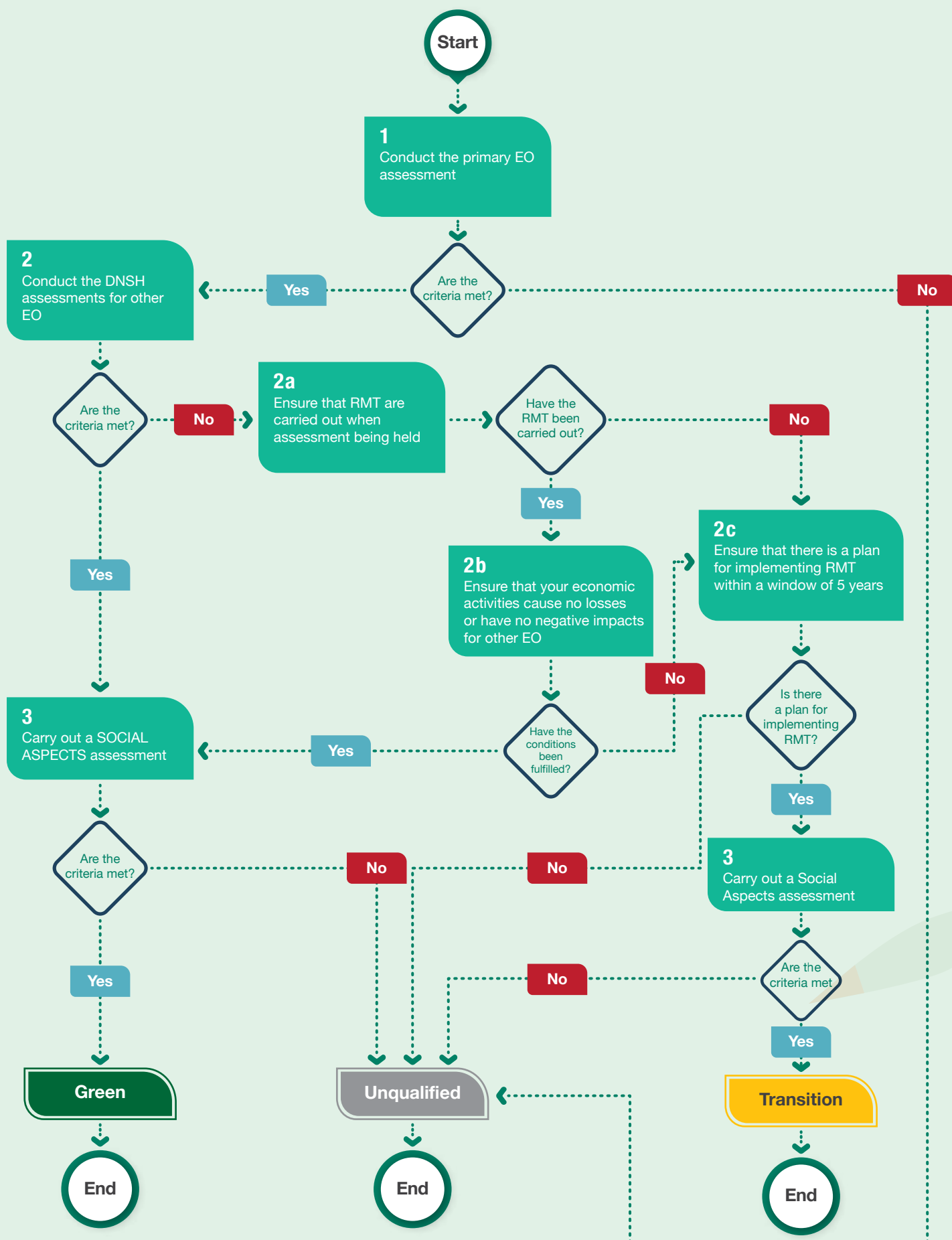


Figure 7. Sector-agnostic Decision Tree (SDT) Assessment Flow

The following is an explanation of the steps for TKBI users to conduct an assessment using the SDT approach as illustrated in Figure 7:

1. TKBI users conduct an assessment to determine the fulfillment of criteria by using guiding questions according to the primary EO that has been selected (details in Annex 4). For example, if previously the TKBI users have assessed that the economic activity is more relevant and contributes substantially to EO1, then only the relevant guiding question is used for that EO. If the guiding question is met, then the Activity is considered to have fulfilled EO1 and the assessment proceeds to stage two. However, if otherwise, then the assessment stage is completed, and the Activity is assessed as "Unqualified".
2. Once the selected primary EO is fulfilled, the next step is to ensure the fulfillment of the DNSH criteria (detailed in Annex 5, specifically the DNSH guidance for SDT). The DNSH criteria that need to be met are DNSH for all EOs other than the primary EO. For example, if TKBI user has previously selected EO1, then the user must do DNSH assessment of EO2, EO3, and EO4 using the guiding questions provided in Annex 5. If the DNSH are fulfilled, then the assessment can proceed to stage three. If DNSH criteria are not fulfilled, then:
 - a. TKBI users need to ensure that RMT have been implemented during the assessment process (details in Annex 6).
 - b. In the event that RMT have been implemented during the assessment process, it is necessary to ensure that the implementation of these efforts makes economic activities no longer harm or negatively affect other EOs. If these conditions have been met, the Activity is considered to have fulfilled the DNSH and the assessment proceeds to stage three.
 - c. In the event that there is no RMT or economic activity harms/has a negative impact on other EOs, then TKBI users need to ensure that there is an RMT implementation plan that will be carried out within 5 years. If there is an implementation plan, then the assessment can proceed to stage three. However, if there is no RMT implementation plan, then the assessment stage is completed, and the Activity is rated as "Unqualified".
3. The final step is for TKBI users need to ensure that the economic activity meets all the criteria in the social aspects that have been specified in the TKBI (details in Annex 7). This step will then determine whether the Activity is categorized as "Green", "Transition", or "Unqualified".

C. Transitioning from THI to TKBI

The approach to grouping economic activities in TKBI is basically the same as in THI, which adopts the 2017 KBLI. During the transition period, the assessment in THI is still used as long as it does not contradict TKBI, with the following provisions:

1. Economic activities fall within the scope of THI and TKBI.

In the event that economic activities fall within the scope of THI and TKBI, the assessment approach taken is the approach and assessment mechanism in TKBI. For example, Transmission of Electricity [35102] is listed in both THI and TKBI. Therefore, TKBI users must assess the activity using the TKBI assessment mechanism.

2. Economic activity is included in the scope of THI but not in TKBI

If the economic activity is included in the scope of THI but not contained in TKBI, then the assessment is carried out by using the mechanism and criteria in THI. For example, Corn Farming [01111], which is covered by THI and not yet included in TKBI, the assessment is still conducted using the mechanism and criteria of THI. Therefore, the "Green", "Yellow", "Red" classification in the THI is still used to assess the Activity which in the transition period can be equated with the classifications of "Green", "Transition", and "Unqualified".

3. Economic activity is not included in the scope of THI but is included in TKBI

In case the economic activity is not included within the scope of THI but contained in TKBI, then the assessment approach carried out is the TKBI assessment. Example: Acceleration of the end of the operational period of CFPP/early retirement of CFPP.





04. Closing

In accordance with the living document nature of TKBI, its development and updating are carried out in stages to align with various developments including national interest priorities, technology and policy, global and regional taxonomy (ATSF), and focus sectors in Indonesia's NDC.

A. Linkages to the Other Sustainable Finance Initiatives

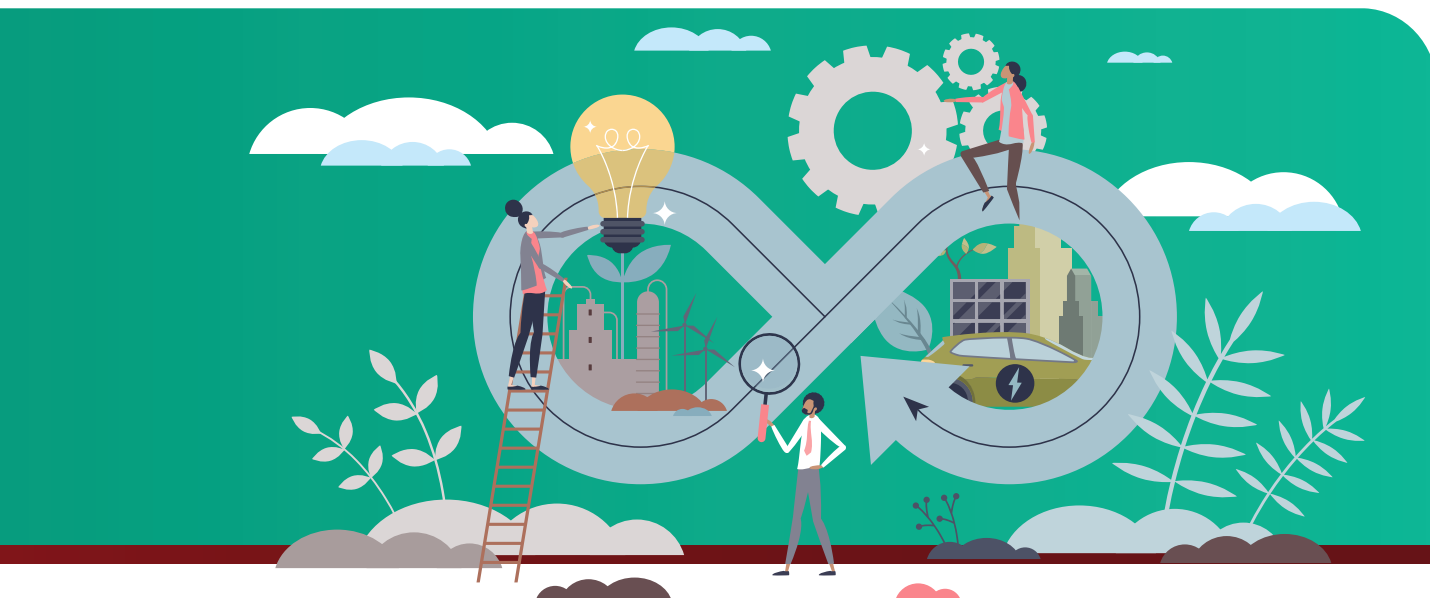
Sustainable finance policies and initiatives are interconnected, including the TKBI, which is designed to align with both existing and upcoming policies. For example, TKBI can be used as a green/sustainable performance indicator for climate-related disclosures, such as in Sustainability Report. TKBI is also relevant to consumer protection, as outlined in the OECD's 2023 document on Financial Consumer and Sustainable

Finance, which recommends that Sustainable Finance policies need to consider the adequacy of disclosure standards and quality of financial products, and support transparent sustainability reporting (in line with FCP principle 7: Disclosure and Transparency and FCP 8: Quality Financial Products) to reduce greenwashing, social washing and impact washing.

B. Grandfathering and Sunsetting

In the TSC approach, each Activity is assessed based on certain criteria. When the TSC of an Activity changes due to various developments in science, technology and the transition to low-carbon, the previous TSC can no longer be used for assessment and classification. Grandfathering is a term used in the taxonomy to refer to the basis of the classification of a financial instrument after the TSC has changed/ sunset. Sunsetting is the process by which a TSC for a given Activity is discontinued, meaning that classification for that Activity under the previous TSC will no longer be possible. For example, the TSC for a particular Activity in 2040 may no longer be applicable because based on the development of science, technology, and transition priorities, the activity has moved towards NZE or is moving towards 1.5°C.

The concept of grandfathering in the taxonomy is carried out with the aim of providing sufficient time for economic activities to transition to becoming more sustainable. During this transition period, some activities are still allowed to be included in the scope of the taxonomy until the time they reach their sunset period or as otherwise determined by the relevant regulator. Further development of the concepts of grandfathering and sunsetting will be carried out in future taxonomy updates.



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ANNEX

INDONESIA TAXONOMY FOR SUSTAINABLE FINANCE VERSION 2



ANNEX

Potential Uses and Users of Indonesia
Taxonomy for Sustainable Finance

TKBI can be used by any relevant party to assess whether an Activity has fulfilled sustainable aspects, such as companies, financial services institutions, regulators, investors, etc. Some examples of TKBI users and uses:

Purpose	Regulator	Companies (including Issuers and Public Companies)	Financial Services Institutions	Rating Agencies
Issuance of Sustainability-related Debt Securities/Sukuk	As one of the references for determining the requirements for Sustainability-related Debt Securities/Sukuk.	As a consideration and reference in the issuance process of Sustainability-related Debt Securities/Sukuk.	As a consideration and reference in the issuance process of Sustainability-related Debt Securities/Sukuk.	As a reference for determining the ESG rating of Sustainability-related Debt Securities/Sukuk including the issuer.
Identifying sustainable investees/debtors	As a reference for determining the requirements for sustainable investment funds.	As a reference for feasibility in receiving sustainable investment/credit/financing.	As a consideration for the investment decision making process/due diligence on loan distribution, financing, insurance, etc.	As a basis for providing ESG data to investment managers for managing sustainable investment funds and selecting investees.
Developing sustainable products	Determining requirements for sustainable product policies/regulations.	- As a reference for developing sustainable products/services. - As a reference for business models and strategies in transition towards a low-carbon and sustainable economy.	As a guide for designing sustainable financial products (such as green/sustainable loans, green/sustainable insurance, financing for low-emission vehicles, etc.).	As a basis for determining sustainable investment ratings.
Sustainability benchmarks/indices	Determining requirements for sustainability benchmarks/indices.	As a reference for assessing the feasibility of sustainability indices.	As a reference for defining indicators and portfolios of sustainability aspects.	Supporting the provision of sustainable performance data for the development of sustainability benchmarks/indices.
Sustainability reporting	- As one of the considerations in developing regulations on corporate sustainability disclosure and sustainable risk management. - As a means to ensure accurate reporting on green/sustainable performance in the Sustainability Report and compliance with relevant applicable regulations.	As a basis for classifying green/sustainable performance in the Sustainability Report and preventing greenwashing, social washing and impact washing.	As a basis for classifying green/sustainable performance in the Sustainability Report and preventing greenwashing, social washing and impact washing.	Supporting corporate sustainability disclosures for the development of sustainability benchmarks/indices.

ANNEX

Examples of User Entry Point



A. Use Case of User Entry Point 1 (with 2 Environmental Objectives/EO)

Example:

- There is a large-scale company called PT. XYZ engaged in electricity transmission, delivering power from generation plants to substations owned by the state electricity company.
- PT. XYZ is committed to operating optimally while minimizing all its operational activities, thereby contributing to energy safety by delivering electricity to areas in need.
- The company intends to expand its business and seeks funding by leveraging sustainable financial practices.

No.	Stages
1.	In the implementation of the taxonomy, based on available information, there are 2 EOs relevant to transmission of electricity activities: EO1-Climate Change Mitigation and EO2-Climate Change Adaptation. Taxonomy users must then determine which primary EO they aim to achieve.
2.	The company determines the user entry point for the taxonomy assessment by utilizing the available viewpoints (see Table 7). Based on the views and justifications of the taxonomy user (whether the company or funding provider), the taxonomy user has decided that the appropriate option is Point of View 1, namely the relevance of the core business of the taxonomy user's economic activity to achieve the environmental goals.
3.	The taxonomy user also uses the guidelines in Point of View 1 to determine its primary EO. a. Which EO aligns most with the strategic focus and/or core activities of the economic activity? → PT. XYZ has a main business strategy to maintain energy security by maintaining a continuous electricity supply from the generator to the substation. Moreover, PT. XYZ has conducted a CRVA assessment to assess regional vulnerability across its various business areas. b. Which EO is relevant to the products and/or services produced by the economic activity? → PT. XYZ provides electricity transmission products and/or services with a 99.99% uptime guarantee, along with disaster insurance coverage. c. Which EO is most affected by economic activities? → PT. XYZ's business activities support the government in ensuring climate change preparedness and adaptation.
4.	With regard to Point of View 1's assessment results, the user has successfully identified its primary EO, namely EO2-Climate Change Adaptation .

B. Use Case of User Entry Point 2 (with only One EO)

Example:

- There is a large-scale company called PT. LMN engaged in Power Generation activities, particularly in the Hydropower Plant, which sells its electricity production to state-owned electricity companies.
- Although the main generating activity has relatively low emissions, the overall operations still have the potential to emit emissions (e.g., from the use of company vehicles, generator sets for emergency backup, paper, and so on).
- The company has implemented a series of initiatives to reduce the amount of emissions produced.
- The company intends to expand its business and seeks funding by leveraging sustainable financial practices.

No.	Stages
1.	In the implementation of the taxonomy, there is only one EO relevant to Power Generation activities: EO1-Climate Change Mitigation.
2.	The taxonomy user can directly use EO1-Climate Change Mitigation as the primary EO.

ANNEX

Technical Criteria for Indonesia
Taxonomy for Sustainable Finance

3



This Annex contains details of the guiding principles and TSC for Activities in the Energy sector. An Activity can be classified under TKBI only if the TSC has been established for that EO. The term “N/A” in this Annex means that the Activity cannot yet be classified under that EO. For example, currently for electricity generation activities, in the EO2 column there is “N/A” in the “Transition” classification which means that there is no TSC for that classification. The considerations include that the “Transition” classification for the Activity is only feasible for EO1.

Energy Sector

A. Background Context

The energy sector is one of the government's priorities to reduce GHG emissions, which will be achieved through the energy transition. The transition to cleaner energy is an extensive process that must be carried out by countries around the world to reduce carbon emissions that contribute to climate change. The energy transition aims to achieve NZE in 2060 (or earlier) by increasing the use of clean energy.

During the transition to NZE and equitable energy transition, fossil fuels will continue to play an important role and will be used as a temporary energy source. TKBI acknowledges this and must therefore encourage certain activities that will play an important role during the transition period. In general, the TKBI's energy sector activities will fall into two categories:

- a. **Electricity, Gas, Steam/Hot and Cold Air Procurement Activity.** According to Indonesia Standard Industrial Classification (KBLI), this category encompasses economic/business activities for providing electric power, natural gas, steam, hot water and similar activities through permanent infrastructure networks of lines, mains, and pipes. The dimension of the network/infrastructure cannot be determined exactly, also included are the distribution of electricity, gas, steam, hot water and other similar activities in industrial parks or residential buildings. This section therefore includes the operation of electric and gas utilities, which generate, control and distribute electric power or gas, provide steam, cold air for various purposes (air conditioning systems and ice manufacture) for consumption and other needs. This category specifically excludes the operation of clean water facilities, waste/sewage disposal, and gas transportation via pipelines
- b. **Mining and Quarrying Activity.** According to the KBLI, this category includes the extraction of minerals occurring naturally as solid (coal and ores), liquid (petroleum) or gas (natural gas). Extraction can be done by different methods such as underground or surface mining, well operation, seabed mining, etc. This category also includes additional activities such as breaking, grinding, cleaning, drying, sorting ores, liquefaction of natural gas and solid fuel agglomeration.

In relation to the energy sector, the following highlights activities that have played an important role during the transition period in Indonesia:

1. Coal-Fired Power Plants (CFPP) activity and efforts to accelerate early retirement

CFPP is the primary source of electricity in ASEAN. According to ASEAN Center for Energy's report entitled “ASEAN Power Updates 2023”, active CFPP in ASEAN reached 106.3 GW by the end of 2022, marking an increase of 15.1 GW compared to the previous two years. The majority of these capacity expansions stem from the culmination of previously delayed CFPP projects, notably in Vietnam, Philippines and Indonesia. At the regional level, the ASEAN's CFPP is the youngest, with an average lifetime of 11.8 years.

In Indonesia, CFPP also still dominates the source of electricity with an installed capacity of 51.06 GW or 52% of the total installed electricity capacity in the second quarter of 2023 (ADB, 2023). These plants emit direct emissions ranging between 800 to 1,200 kgCO₂e/MWh (IESR, 2022). The peak emission is estimated to reach 706 million tons of CO₂e in 2039 (including CFPP), then decrease significantly after 2040 following the completion of fossil generation contracts until the NZE scenario in 2060 is met (Ministry of Energy and Mineral Resources of the Republic of Indonesia, 2022). CFPP continues to play an important role in the clean energy technology supply chain, including the clean energy technology supply chain of the manufacturing industry, such as electric vehicle batteries and solar panels, due to the certainty and stability of energy supply, more competitive prices, and limited supply of coal, prices that remain competitive, and a limited number of electricity transmission and distribution.

Presidential Regulation of the Republic of Indonesia Number 112 of 2022 concerning the Acceleration of Renewable Energy Development for Electricity Supply (Perpres 112/2022) was issued to encourage the energy transition of the electricity sector by limiting the development of new CFPP, with the following exceptions:

a) For CFPP that had been designated in the Electricity Supply Business Plan (RUPTL) prior to 2022;

b) For CFPP that satisfies the following criteria:

- 1) CFPP that are integrated with industries oriented towards increasing the added value of natural resources or included in National Strategic Projects that have a major contribution to job creation and/or national economic growth;
- 2) CFPP that are committed to reducing GHG emissions by at least 35% (thirty five percent) within 10 (ten) years of commencing operations compared to average CFPP emissions in Indonesia in 2021 through technology development, carbon offsets, and/or Renewable Energy mix; and
- 3) CFPP that operate no later than 2050.

Presidential Regulation No 112/2022 also provides a mandate for relevant sectoral ministries to prepare early retirement of CFPP roadmap with respect to energy transition in the electricity sector. The roadmap is designed to include at least: a) CFPP GHG emissions reduction; b) CFPP early retirement strategy; and c) alignment with other policies. Thus, there is a clear government policy to limit new CFPP in Indonesia in line with the commitment of NZE. Furthermore, there are various initiatives, work programs, and studies that are being developed to encourage early retirement of CFPP, among others:

a) Energy Transition Mechanism (ETM)

ETM is a collaborative initiative developed by ADB and works with developing countries to utilize market-based approaches to accelerate the transition from fossil fuels to clean energy. In Indonesia, ETM is a program for developing energy infrastructure and accelerating the energy transition towards NZE with just and affordable principles in 2060 or sooner. There are 2 ETM schemes: 1) Carbon Reduction Facility Scheme, which allows for early retirement of CFPPs in Indonesia; and 2) Clean Energy Facility Scheme, which aims to develop or finance the construction of green energy facilities. ETM will be funded through a blended finance mechanism originating from various sources such as government institutions, development banks, commercial banks, climate change funds, investors, insurance companies, as well as local and international philanthropies which will be managed by PT Sarana Multi Infrastruktur (PT SMI).

b) Just Energy Transition Partnership (JETP)

JETP is a funding cooperation mechanism that focuses on increasing renewable energy and transitioning from coal energy. The Indonesian government, in collaboration with the International Partners Group (IPG) led by the United States and Japan, and which consists of Canada, Denmark, the European Union, France, Germany, Italy, Norway and the United Kingdom, has entered into an international agreement which has been outlined in a joint statement. At the G20 Presidency in 2022, the implementation of JETP was conveyed with a funding value commitment of USD 20 billion (equivalent to approximately IDR 300 trillion) originating from public and private investment in the form of grants and low interest loans (Coordinating Ministry for Economic Affairs of the Republic of Indonesia, 2022).

c) Managed Phaseout Program

The Managed Phaseout Program is a program developed by the Glasgow Financial Alliance for Net Zero (GFANZ) involving stakeholders and in line with the NZE target for the early retirement of high-emitting assets (GFANZ, 2022). The program aims to involve Financial Services Institutions (FSIs) to support financing of early retirement efforts for high-emission assets such as CFPP.

d) Other Studies and Reports Related to Early Retirement of CFPP

In addition to initiatives developed by international stakeholders, several studies and reports have been prepared with reference to specific science-based targets for early retirement of CFPP. A joint report from the Rocky Mountain Institute (RMI), Carbon Tracker, and the Sierra Club provided an analysis of nearly 2,500 CFPP worldwide. The report mainly highlighted the early retirement of CFPP program which requires support from various stakeholders (RMI, 2020).

Climate Bonds Initiative (CBI), Climate Policy Initiative (CPI) and RMI have also published a joint paper on Guidelines for Financing Credible Coal Transition in November 2022. These guidelines present a framework for assessing the credibility of transactions aimed at early retirement of CFPP/coal transition mechanism. This guideline aims to provide information related to coal transition mechanisms that can contribute to reducing emissions, enabling the transition of CFPP to clean energy to support the 1.5°C climate goal, and mitigate the key risks for workers and the communities involved.

ATSF is a global leader in regional taxonomy that introduces coal phase-out activity/early retirement of CFPP and can be classified as "Green" or "Amber" based on the Plus Standard criteria. ATSF acknowledges how and where coal phase-out activities can play a role in global and regional decarbonisation efforts in support of the Paris Agreement goals and provides tools for transition.

With regards to global studies and in line with ATSF Version 2, TKBI has also included early retirement of CFPP activity, which can be classified as either "Green" or "Transition". To support a gradual and balanced energy transition process in Indonesia, the existing and new CFPP that have been determined in the Electricity Supply Business Plan (RUPTL), is included in the TKBI's list of activities. This CFPP should meet the TSC and operate within a defined time frame with reference to Presidential Regulation of the Republic of Indonesia Number 112 of 2022 and with a maximum permitted classification of "Transition".

2. Critical Mineral Activities in the Mining and Quarrying Sector

Mining and quarrying activities contribute significantly to Indonesia's economic growth, accounting for 12.22% of GDP in 2022 (BPS, 2022). However, these activities have a substantial impact on the environment. Therefore, a gradual process of transition in the mining and quarrying sector is required to achieve NZE. A global dynamic has emerged initiating discussions regarding the critical role of numerous activities that drive the energy transition, including critical minerals, in the pursuit of decarbonization targets and sustainable economic growth. As comprehensively explained by the IEA in 2021 in its report entitled *The Role of Critical Minerals in Clean Energy Transition*, the rapid implementation of clean energy technologies as part of the energy transition has significantly increased the demand for critical minerals. Furthermore, the Energy Transition Commission (ETC) in its report entitled *Material and Resource Requirements for the Energy Transition* in July 2023, also explained that the energy transition requires a considerable amount of clean energy technology. Certain mining and quarrying activities also have a significant and irreplaceable role in building clean energy technologies such as solar panels, electric vehicles, and others.

In line with the COP28 2023 in Dubai which resulted in an agreement, one of which is to triple renewable energy capacity globally and double energy efficiency on a global average by 2030. Such efforts encourage contributions from all parties as a global effort in a manner determined by national pathways. Without the presence of certain critical minerals that play a significant role as raw materials to support clean energy technologies and transition towards NZE, the targets are difficult to achieve.

However, there is no global taxonomy that includes mining and quarrying activities in the taxonomy and discussions on this are still ongoing. The Minister of Energy and Mineral Resources of the Republic of Indonesia (MEMR) issued Decree Number 296.K/MB.01/MEM.B/2023 concerning Determination of Commodity Types Classified as Critical Minerals. This decree regulates the definition of critical minerals as minerals that are important for the national economy and security and have the potential for supply disruptions with no feasible substitute. Furthermore, a study was conducted to identify a list of critical minerals that support clean energy technology and the transition towards NZE, namely "green metals/minerals", comprising Aluminium, Galena, Cobalt, Copper, Iron, Manganese, Nickel, Zinc, Silica, Lithium, Rare Earth Metals, Platinum, Cadmium, Gallium, and Tellurium.

B. General Principles for Setting TSC in the Energy Sector

This section outlines the factors that are taken into account when determining the TSC for each EO in the Energy sector. Part D of this Annex contains additional information about the TSC.

Table 1 – Principle in setting TSC for EO 1 : Climate Change Mitigation

Principle in Setting TSC EO1: Climate Change Mitigation	
Classification	Description
Green	In line with the commitment to keeping global temperature rise below 1.5°C, as outlined in the Paris Agreement, including consideration of Indonesia's NZE target for 2060 (or sooner).
Transition	Activity supports transition towards a green pathway within a defined time frame:

	1. Contribute to EO at least equal to the lowest carbon-emitting technology that is currently technically and economically feasible; or 2. Enables other activities to be sustainable or "Green."
	Principle in Setting TSC EO2: Climate Change Adaptation
Classification	Description
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 enables other Activities to increase resilience to climate change.
Transition	N/A
	Principle in Setting TSC EO3: Protection of Healthy Ecosystems and Biodiversity
Classification	Description
Green	N/A
Transition	N/A
	Principle in Setting TSC EO4: Resource Resilience and the Transition to a Circular Economy
Classification	Description
Green	N/A
Transition	N/A

C. Rationale for TSC Activities in the Energy Sector

The rationale for TSC activities in the energy sector:

1. Qualitative criteria will adhere to international best practices (including ATSF version 2) and applicable policies, laws and regulations in Indonesia.
2. Quantitative criteria will use lifecycle emissions measurements. However, in the initial stage, it is important to consider the current readiness of the industry in Indonesia for emissions measurement. A transition period is implemented for business actors that have yet to be able to meet the required lifecycle emission measurements. They will be allowed to use Scope 1 - direct emission measurements until 2028 (or earlier). Details for determining the quantitative TSC for the energy sector are as follows:

a. **Electricity, Gas, Steam/Hot Water, and Cold Air Procurement Activities**

- 1) The TSC for emission measurements follows the ATSF version 2 scenario:
 - a) The TSC for "Green" were set for consistency with other international taxonomies.
 - b) The TSC for "Transition" were set against future emissions projections for all power generation in Southeast Asia as derived from the IEA Sustainable Development Scenario (SDS).

- c) Other considerations: During the transition period, users can select two emission measurements based on their readiness. The quantitative criteria still refers to the same TSC number limit (100gCO₂e/kWh). This takes into account generation activities with energy sources from NRE in Scope 1 - direct emissions <100gCO₂e/kWh, which in terms of size corresponds with the "Green" classification using lifecycle emissions <100gCO₂e/kWh.



Figure 1 : Power Generation Scope 1 Emissions (Source: IPCC Fifth Assessment Report (AR5), 2014)

Therefore, the criteria to be used is as follows:

Table 2 – Transition Relief on Emissions Measurement

Classification	Lifecycle Emission*	Scope 1 - direct emission**
Green	<100gCO ₂ e/KWh	<100gCO ₂ e/KWh
Transition	<510gCO ₂ e/KWh	<510gCO ₂ e/KWh

*) TSC as classified in ATSF version 2.

**) Based on the condition in Indonesia

- 2) Electricity Generation from Hydropower undergo adjustments in the ATSF regarding quantitative power density criteria. A study conducted by the Ministry of Energy and Mineral Resources on the Methodology for Calculating Emission Reductions and/or Increases in GHG Absorption in Hydropower Plants (PLTA) with Reservoirs indicates the utilization of a power density greater than 4 W/m².
- 3) There are several activities that have not been classified in KBLI and will be temporarily placed in the most relevant KBLI as follows:

Table 3 – Activity Mapping on KBLI (temporary)

No	Activity	Temporary KBLI placement*	Basis for Determining TSC
1	Acceleration of the end of the operational period of Coal-Fired Power Plant (CFPP)/early retirement of CFPP (PLTU)	[35101] Electric Power Generation	ATSF version 2 and applicable policies/legislation in Indonesia.
2	Storage of Electricity	[35101] Electric Power Generation	ATSF version 2 and international best practices.
3	Energy Conservation/Efficiency Services	[35104] Electrical Support Activities	Relevant Ministry and applicable policies/legislation in Indonesia.
4	Carbon Capture and Storage (CCS)	[06100] Petroleum Mining, or [06201] Natural Gas Mining	ATSF version 2 and applicable policies/legislation in Indonesia.
5	Research, Development and Innovation for CCS related technologies	[09100] Petroleum and Natural Gas Mining Support Activities	International best practice

*) Based on discussion and agreement with the relevant Ministries.

Note: Activities outlined in No. 3, 4 and 5 of the above table constitute enabling activities that can increase performance in the sector and/or other activities that do not pose risk to the EO.

b. Mining and Quarrying Activities

Taking into account various facts and roles in Indonesia as described in Section A of this appendix, TKBI covers several mining and quarrying activities to be classified as "Transition" with reference to certain strict requirements.

1) Critical Mineral Mining and Quarrying Activities Supporting Clean Energy Technology and the Transition towards NZE

Based on the Decree of the Minister of Energy and Mineral Resources No. 296.K/MB.01/MEM.B/2023 regarding the Determination of Commodity Types Classified as Critical Minerals, there are forty-seven types of critical minerals in Indonesia. Out of this total, fifteen types of critical minerals supporting clean energy technology and transition towards NZE (green metals) have been identified by the relevant ministry. Currently, these fifteen activities are included in the TKBI with the highest criterion being "Transition," with the consideration:

- The absence of a global taxonomy encompassing mining and quarrying activities, especially those related to critical minerals supporting clean energy technology and the transition towards NZE;
- The nature of mining and quarrying activities; and
- Critical mineral activities supporting clean energy technology and towards NZE aligning with the "Transition" classification, thereby enabling other activities to become sustainable.

This classification also extends to "supporting activities"

Table 4 – Mapping of Critical Minerals Which Support Clean Energy Technology and the Transition towards NZE

No.	Critical Mineral/Mining Commodity	Reference				
		IEA	ETC	USA	EU	Australia
1.	Galena/Lead/Black Lead/Plumbum	Yes	-	-	-	-
2.	Aluminium/Bauxite	Yes	Yes	Yes	Yes	Yes
3.	Copper	Yes	Yes	Yes	Yes	Yes
4.	Nickel	Yes	Yes	Yes	Yes	Yes
5.	Zinc	Yes	-	-	-	Yes
6.	Lithium	Yes	Yes	Yes	Yes	Yes
7.	Silica/Quartz Sand	Yes	Yes	Yes	Yes	Yes
8.	Cobalt	Yes	Yes	Yes	Yes	Yes
9.	Iron	-	-	-	-	-
10.	Manganese	Yes	-	Yes	Yes	Yes
11.	Rare-earth Metals	Yes	-	Yes	Yes	Yes
12.	Platinum	Yes	Yes	Yes	Yes	Yes
13.	Cadmium	Yes	-	-	-	-
14.	Gallium	Yes	-	Yes	Yes	Yes

No.	Critical Mineral/Mining Commodity	Reference			
		IEA	ETC	USA	Australia
15.	Tellurium	Yes	-	Yes	Yes

Quantitative criteria for critical minerals supporting clean energy technology and the transition towards NZE use the energy sector emission reduction target approach outlined in Indonesia's Enhanced NDC document. This approach entails having a verified or validated emissions reduction roadmap and achieving a reduction in GHG emissions (lifecycle emissions) of at least 12.5% compared to Business as Usual levels by 2030, or as mandated by government regulations. Meanwhile, qualitative criteria are determined by examining applicable policies, laws, and regulations in Indonesia.

2) Mining and Quarrying Activities other than Critical Minerals that Support Clean Energy Technology and the Transition towards NZE

TKBI acknowledges the strategic role of mining and quarrying other than critical minerals that support clean energy technology and the transition towards NZE for the Indonesian economy. Considering the limitations of global references, those mining and quarrying activities have not been included in the TKBI. Nevertheless, it is also realized that there are various sustainable efforts that have been/are being carried out by the mining and quarrying activities in question that need to be considered, including the fulfillment of reclamation guarantees, post-mining guarantees, energy management efforts, application of PROPER, application of Good Mining Practices, and various other efforts. Therefore, in the future, it is possible for TKBI to include these activities in line with the development of discussions at the national and global levels. Mining and quarrying activities other than critical minerals that support clean energy technology and the transition towards NZE that fall within the scope of this TKBI cannot be assessed using THI.

The classification of KBLI Level 5 activity types, along with assessment criteria and maximum classifications for mining and quarrying activities within TKBI, will be subject to periodical review. This review will be based on advancements in technology, scientific understanding, and policy developments both globally and nationally.

Tabel 5 – List of Energy Sector Activities

KBLI 2015 (2017)		KBLI 2020		Remarks
KBLI Level 5	Activity	KBLI Level 5	Activity	
35101	Electric Power Generation	35111	Electric Power Generation	Referring to ATSF v2 TSC and national policies : 1. Electricity generation from solar power 2. Electricity generation from wind power 3. Electricity generation from tidal power

KBLI 2015 (2017)		KBLI 2020		Remarks
KBLI Level 5	Activity	KBLI Level 5	Activity	
				4. Electricity generation from hydropower 5. Electricity generation from geothermal power 6. Electricity generation from bioenergy power 7. Electricity generation from gas power 8. Coal-Fired Power Plant (CFPP), including early retirement of CFPP 9. Electricity generation from nuclear power 10. Electricity generation from hydrogen gas power 11. Storage of electricity
35102	Transmission of electricity	35112	Transmission of electricity	Referring to ATSF v2 TSC and national policies : Transmission and distribution (T&D) of electricity
35103	Distribution of electricity	35113	Distribution of electricity	Referring to ATSF v2 TSC and national policies : Transmission and distribution (T&D) of electricity
35104	Electrical power support	35114	Electricity power sales	Referring to national policies : 1. Electrical power support 2. Energy Conservation/Efficiency Services
		35115	Electricity power sales in one entity	
		35116	Electricity Power generation, transmission, and sales in one entity	
		35117	Electricity Power generation, distribution, and sales in one entity	
		35118	Electricity Power distribution and sales in one entity	
35202	Distribution of natural and synthetic gas	35202	Distribution of natural and synthetic gas	Referring to national policies

KBLI 2015 (2017)		KBLI 2020		Remarks
KBLI Level 5	Activity	KBLI Level 5	Activity	
35301	Production of heating/cooling	35301	Production of heating/cooling	Referring to ATSF v2 TSC: 1. Production of heating/cooling from solar energy 2. Production of heating/cooling from geothermal energy 3. Production of heating/cooling from renewable non-fossil gaseous and liquid fuels 4. Production of heating/cooling from fossil gas 5. Production of heating/cooling from waste heat 6. Production of heating/cooling using electric heat pump
07101	Mining of iron sand	07101	Mining of iron sand	Referring to national policies: Mining and quarrying of: - Iron - Galena/Lead/Black lead/Plumbum - Aluminium/Bauxite - Copper - Nickel - Manganese - Zinc - Lithium - Cobalt - Platinum - Kadmium - Galium - Tellurium
07102	Mining of iron ores	07102	Mining of iron ores	
07292	Mining of black lead ores	07292	Mining of black lead ores	
07293	Mining of bauxite/aluminium ores	07293	Mining of bauxite/aluminium ores	
07294	Mining of copper ores	07294	Mining of copper ores	
07295	Mining of nickel ores	07295	Mining of nickel ores	
07296	Mining of manganese ores	07296	Mining of manganese ores	
07299	Mining of other non-ferrous metal ores	07299	Mining of other non-ferrous metal ores	
08995	Quartz sand quarrying	08995	Quartz sand quarrying	
08999	Mining and other quarries that is not included in others	08999	Mining and other quarries that is not included in others	Referring to national policies: Mining and quarrying of Silica/Quartz Sand
				Referring to national policies: Mining and quarrying of Rare Earth Metals

KBLI 2015 (2017)		KBLI 2020		Remarks
KBLI Level 5	Activity	KBLI Level 5	Activity	
09900	Other mining and quarrying supporting activities	09900	Other mining and quarrying supporting activities	Referring to national policies
06100	Mining of petroleum	06100	Mining of petroleum	
06201	Mining of natural gas	06201	Mining of natural gas	Referring to ATSF v2 TSC and national policies: Carbon Capture and Storage (CCS)
09100	Supporting activities for mining of petroleum and natural gas	09100	Supporting activities for mining of petroleum and natural gas	
				Referring to national policies and international best practices: Research, Development and Innovation for CCS related technologies

D. Energy Sector TSC

This chapter describes TSC for the activities in the energy sector as follow:

1. TSC for Electric Power Generation

KBLI 2017	Description
D	Procurement of Electricity, Gas, Steam /Hot and Cold Air
35	Procurement of Electricity, Gas, Steam /Hot and Cold Air
351	Electricity
3510	Electricity
35101	Electric Power Generation This group encompasses electric power generation businesses and the operation of generating facilities that produce electrical energy. This energy is derived from various sources, including hydropower, coal, gas (gas turbines), fuel oil, diesel, and renewable energy such as solar power, wind, ocean currents, geothermal energy (thermal energy), nuclear power, and others.

Classification	Technical Screening Criteria (TSC)	Reference
Green	EO1 – Climate Change Mitigation All power plants are required to hold business permits in the electricity sector in the form of IUPTLU and/or IUPTLS. If electricity generation from solar power: The requirement of EO1 has been satisfied. If electricity generation from wind power: The requirement of EO1 has been satisfied. If electricity generation from ocean tidal power: The requirement of EO1 has been satisfied.	• ATSF version 2 • Presidential Regulation of Republic of Indonesia No 112 Year 2022 Concerning Acceleration of Renewable Energy Development for Electricity Supply (Perpres 112/2022)
	Electricity generation from hydropower: Power generation plant meets criteria (1) or (2) or (3): 1. The electricity generation facility is a run-off-river ; or 2. The electricity generation facility is using a reservoir with a power density >4 W/m2; or 3. Lifecycle GHG emissions from the generation of electricity by the entire facilities <100gcO2e/kWh	
	Electricity generation from geothermal power 1. Lifecycle GHG emissions from the generation of electricity by the entire facilities <100 gCO2e/kWh during the term of the Power Purchase Agreement (PPA).	
	Electricity generation from bioenergy power	

Classification	Technical Screening Criteria (TSC)	Reference
	- Lifecycle GHG emissions from the generation of electricity by the entire facilities <100 gCO₂e/kWh; and - Conduct bioenergy sustainability certification in accordance with the provisions of applicable laws and regulations; and - If the energy source comes from biogasses, have management and monitoring procedures as well as a contingency plan to minimise methane leakage; and - If the energy source comes from an energy plantation under control, carry out sustainable management of biomass fuel supply meet relevant laws and regulations. Electricity generation from gas power (including gas and steam): - Lifecycle GHG emissions from the generation of electricity by the entire facilities <100 gCO₂e/kWh; and - For facilities that are equipped with CCS, then it must meet the criteria for CCS activities as outlined in this TKBI. Coal-Fired Power Plant: A. Early retirement of CFPP: - Coal phase out by 2040; and - CFPP achieving financial close (FC) after 31 December 2022 will not qualify; and - Operation duration of the CFPP from FC is capped at 35 years; and - Qualified CFPP have been independently verified and/or recognized by national and/or international bodies or programs, for example: CFPP under the ADB, ETM, or JETP programs meet these criteria. B. New CFPP activities: N/A. C. Existing CFPP activities: N/A. Electricity generation from nuclear power: - Lifecycle GHG emissions from the generation of electricity by the entire facilities <100 gCO₂e/kWh; and - Having complied with specific nuclear energy safety, security, and environmental standards, particularly regarding environmental radioactivity control, radioactive waste management, nuclear preparedness, and nuclear liability; and - Using proven fuel and reactor design; and - Meeting requirements for radioactive releases into the environment resulting in a public dose <1 mSv/year; and - Providing a guarantee to fulfill nuclear power plant decommissioning obligations after operation completion and obtain a statement of release based on applicable regulations.	

Classification	Technical Screening Criteria (TSC)	Reference
	Electricity generation from hydrogen gas power: 1. Lifecycle GHG emissions from the generation of electricity by the entire facilities <100 gCO₂e/kWh. Storage of electricity (including pumped storage): If the construction and operation of electricity storage, including pumped storage, is connected to the grid, it encompasses storage in various forms such as mechanical energy, thermal energy, electrochemical energy, or pumped hydropower storage.	
Transition	Electricity generation from solar power: N/A. Electricity generation from wind power: N/A. Electricity generation from ocean power: N/A. Electricity generation from hydropower: Lifecycle GHG emissions from the generation of electricity by the entire facilities ≥100 gCO₂e/kWh <510 gCO₂e/kWh Electricity generation from geothermal power: 1. Lifecycle GHG emissions from the generation of electricity by the entire facilities ≥100 gCO₂e/kWh <510 gCO₂e/kWh during the term of the Power Purchase Agreement. Electricity generation from bioenergy: 1. Lifecycle GHG emissions from the generation of electricity by the entire facilities ≥100 gCO₂e/kWh <510 gCO₂e/kWh during the term of the Power Purchase Agreement; and 2. If the energy source comes from biogasses, have management and monitoring procedures as well as a contingency plan to minimise methane leakage. Electricity generation from gas power (including gas and steam): 1. Lifecycle GHG emissions from the generation of electricity by the entire facilities ≥100 gCO₂e/kWh <510 gCO₂e/kWh; and 2. For facilities that are equipped with CCUS, then it must meet the criteria for CCS activities in this TKBl. Coal-Fired Power Plant: A. Early retirement of CFPP: 1. Coal phase out by 2050; and	

Classification	Technical Screening Criteria (TSC)	Reference
	2. Coal plants achieving financial close (FC) after 31 December 2022 will not qualify; and 3. Operation duration of the coal plant from FC is capped at 35 years. B. New CFPP Activities For plants established through Electricity Supply Business Plan/RUPTL made prior to the enactment of this Presidential Regulation 112/2022: 1. Committed to GHG emission reduction of at least 35% within 10 years since the PLTU operates compared to the average PLTU emissions in Indonesia in 2021 through technology development and/or renewable energy mix and/or other carbon sequestration mechanisms; and mechanism and/or other carbon sequestration mechanisms; and 2. For facilities that are equipped with CCUS, then it must meet the criteria for CCS activities in this TKBI; and 3. Have a minimum Green PROPER or fulfill aspects of pollution control, environmental damage, management of B3 waste and management of non-hazardous waste/trash according to the requirements of the Green PROPER criteria; and 4. Operate until 2050 at the latest and have a transition plan. For CFPP is integrated with industry and built no later than 2030, and there are no other alternative energy sources in the vicinity of the industry that can supply industrial energy needs: 1. Committed to GHG emission reduction of at least 35% within 10 years since the PLTU operates compared to the average PLTU emissions in Indonesia in 2021 through technology development and/or renewable energy mix and/or other carbon sequestration mechanisms; and mechanism and/or other carbon sequestration mechanism; and 2. For facilities that are equipped with CCUS, then it must meet the criteria for CCS activities in this TKBI; and 3. Have a minimum Green PROPER or fulfill aspects of pollution control, environmental damage, management of B3 waste and management of non-hazardous waste/trash according to the requirements of the Green PROPER criteria; and 4. Operate until 2050 at the latest and have a transition plan. C. Existing PLTU Activities 1. Committed to GHG emission reduction of at least 35% within 10 years since the PLTU operates compared to the average PLTU emissions in Indonesia in 2021 through technology development and/or renewable energy mix and/or other carbon sequestration mechanisms; and mechanism and/or other carbon sequestration mechanisms; and 2. For facilities that are equipped with CCUS, then it must meet the criteria for CCS activities in this TKBI; and 3. Have a minimum Green PROPER or fulfill aspects of pollution control, environmental damage, management of B3 waste and management of non-hazardous waste/trash according to the requirements of the Green PROPER criteria; and	

Classification	Technical Screening Criteria (TSC)	Reference
	4. Operate until 2050 at the latest and have a transition plan. Electricity generation from nuclear power: N/A Electricity generation from hydrogen gas power: 1. Lifecycle GHG emissions from the generation of electricity by the entire facilities ≥ 100 gCO₂e/kWh < 510 gCO₂e/kWh. Storage of electricity: N/A	
	EO2 – Climate Change Adaptation	
Green	Storage of electricity: 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) or other steps used to assess climate risks and vulnerabilities, and utilize adaptation measures	
Transition	N/A	
	EO3: Protection of Healthy Ecosystems and Biodiversity	
Green	N/A	
Transition	N/A	
	EO4 – Resource Resilience and the Transition to a Circular Economy	
Green	N/A	
Transition	N/A	

2. Transmission and Distribution of Electricity Activity

KBLI 2017	Description
D	Procurement of Electricity, Gas, Steam/Hot and Cold Air
35	Procurement of Electricity, Gas, Steam/Hot and Cold Air
351	Electricity
3510	Electricity
35102	Power Transmission This category includes businesses that are engaged in the operation of transmission systems or the distribution of electrical energy from power plants to distribution networks through high-voltage power grids (ranging from 35 kilovolts to 245 kilovolts) and/or extra

KBLI 2017	Description
	high-voltage grids (greater than 245 kilovolts), including their substations, regardless of whether the energy is sourced from their own production or from third-party production.
35103	Distribution of Electric Power This category includes businesses that distribute electricity through medium to low voltage power networks (under 35 kilovolts) to consumers or customers or operate distribution systems. This encompasses power distribution from their own production facilities or from production by other parties and includes distribution substations.

Classification	Technical Screening Criteria (TSC)	Referensi
	EO1 – Climate Change Mitigation	
Green	If the activity Power Transmission: 1. Transmission is part of or supports an electricity generation system that has lifecycle emissions <100 gCO₂e/kWh, measured over a five-year rolling period; and one of the following criteria 2, 3, or 4: 2. The transmission infrastructure is on a decarbonization path, which means that at least 67% of the newly connected generation capacity in the system has a lifecycle emissions of <100 gCO₂e/kWh, measured over a rolling five-year period; or 3. The Transmission Operator prioritizes resources derived from renewable energy in accordance with applicable power system network/grid code provisions; or 4. Development of new transmission aimed at reducing losses. If the activity Distribution of Electric Power: 1. If transformers and distribution substations prioritize the use of smart meters on the consumer side; or 2. If transformers and distribution substations prioritize the use of EBT.	ATSF version 2
Transition	If the activity Power Transmission: 1. Transmission is part of or supports an electricity generation system that has lifecycle emissions ≥100 gCO₂e/kWh and <510 gCO₂e/kWh; and, 2. Transmission is part of or supports an electricity generation system that comes from renewable energy sources or fossil energy sources in transition. If the activity Distribution of Electric Power:	

Classification	Technical Screening Criteria (TSC)	Referensi
	If the transformers and distribution substations use renewable energy sources and fossil fuels	
EO2: Climate Change Adaptation		
Green	If the activity is Power Transmission and Distribution: 1. The activity has implemented adaptation solutions (physical or non-physical) that can reduce material climate risks, for example through CRVA or other steps in assessing climate risks and vulnerabilities and taking adaptation actions; and 2. Has the ability (facilities or equipment or procedures) to be able to support the operation of the Activity in the event of a disaster (for example, floods, storms, high temperatures, and others) in the context of supporting energy security.	ATSF version 2
Transition	N/A	
EO3: Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	
Transition	N/A	
Green	N/A	
Transition	N/A	

3. Electrical Support Services

KBLI 2017	Description
D	Procurement of Electricity, Gas, Steam /Hot and Cold Air
35	Procurement of Electricity, Gas, Steam /Hot and Cold Air
351	Electricity
3510	Electricity
35104	Electrical Support Services This group encompasses businesses and activities directly associated with the electricity sector. It includes meter recording services and billing, as well as electricity trading activities targeting consumers. Additionally, it involves electricity agent activities, which entail selling electricity through distribution systems operated by other parties. Furthermore, it encompasses operating activities related to exchanging transmission capacity and electricity, along with trading activities involving electricity pulses/tokens and other supporting electricity services.

Classification	Technical Screening Criteria (TSC)		Referensi	
	EO1 – Climate Change Mitigation			
Green	Electrical Support Services Conducting energy efficiency initiatives in alignment with Government Regulation of Republic Indonesia Number 33 of 2023 concerning Energy Conservation.	Conducting energy efficiency initiatives in alignment with Government Regulation of Republic Indonesia Number 33 of 2023 concerning Energy Conservation.	National Policies : Government Regulation of Republic Indonesia Number 33 of 2023 concerning Energy Conservation.	
	Energy Conservation/Efficiency Services: Offering energy-saving solutions in compliance with Government Regulation of Republic Indonesia Number 33 of 2023 concerning Energy Conservation, including: 1. Carrying out Investment Grade Energy Audits; or 2. Facilitating financing for energy efficiency projects; or 3. Executing installation and/or construction tasks, along with monitoring and supervision of energy efficiency projects; or 4. Operating, maintaining, and repairing energy installations; or 5. Conducting measurement and verification of energy performance.			
Transition	N/A			
	EO2: Climate Change Adaptation			
Green	N/A			
Transition	N/A			
	EO3: Protection of Healthy Ecosystems and Biodiversity			
Green	N/A			
Transition	N/A			
	EO4: Resource Resilience and the Transition to a Circular Economy			
Green	N/A			
Transition	N/A			

4. Natural and Artificial Gas Distribution

KBLI 2017	Description
D	Procurement of Electricity, Gas, Steaming and Cooling

KBLI 2017	Description
35	Procurement of Electricity, Gas, Steaming and Cooling
352	Procurement and Distribution of Natural Gas and Synthetic Fuel
3520	Procurement and Distribution of Natural Gas and Synthetic Fuel
35202	Gas Distribution Natural and Artificial This group encompasses gas distribution businesses operating through extra high-pressure networks (exceeding 10 bar), high-pressure networks (between 4 bar to 10 bar), and those utilizing medium to low pressure (below 4 bar), either sourced from their own production facilities or obtained from other suppliers and distributed to consumers or customers. The distribution of gas via pipelines on a contractual or fee basis is classified under group 49300. This includes the distribution, procurement, and trading of various types of gas fuels through pipeline systems, as well as the activities of gas agents involved in trading gas through externally operated gas distribution systems. In addition, it covers commodity exchange operations and the transportation capacity of gas fuels.

Classification	Technical Screening Criteria (TSC)	Referensi
	EO1 – Climate Change Mitigation	
Green	1. Have a verified/validated emission reduction roadmap and reduce GHG emissions (lifecycle emissions) by at least 12.5% from Business as Usual by 2030 or based on government stipulations/determinations (evidence of emission reductions can be met through the implementation of low carbon emission programs); and 2. Have evidence of the implementation of Energy Management in accordance with the regulation of the Government of the Republic of Indonesia Number 33 of 2023 concerning Energy Conservation or certified to ISO 50001: Energy Management System; and 3. Obtain a minimum PROPER rating of Green consistently for three consecutive years, or fulfill aspects of pollution control, environmental damage, hazardous waste management and non-B3 Waste/Waste management in accordance with the requirements. management and Non-B3 Waste/Waste management in accordance with the requirements of the “Green PROPER” criteria consistently for three consecutive years.	National Policies
Transition	1. Have a verified/validated emission reduction roadmap and reduce GHG emissions (lifecycle emissions) by at least 12.5% from Business as Usual by 2030 or based on government stipulations/determinations (evidence of emission reductions can be met through the implementation of low carbon emission programs); and 2. For oil and gas business activities that use energy in ≥6000 Ton of Oil Equivalent (TOE), implement energy management in accordance with the regulation of Government Regulation of the Republic of Indonesia Number 33 of 2023 concerning Energy Conservation; and	

Classification	Technical Screening Criteria (TSC)	Referensi
	3. Obtaining a minimum Green PROPER rating or fulfilling aspects of pollution control, environmental damage, hazardous waste management and non-hazardous waste management in accordance with the requirements of the criteria. Green PROPER.	
EO2: Climate Change Adaptation		
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) or similar assessments, aimed at evaluating climate risks and vulnerabilities and implementing appropriate adaptation strategies; and 2. Activities support the assurance of security of energy supply by considering possible risks due to future climate-related disruptions, provided that: a. Able to operate in flood, storm or catastrophic conditions due to higher temperatures; or b. Having a mechanism or infrastructure that can monitor operational activities in the event of floods, storms or disasters due to higher temperatures; or c. Have facilities or equipment to provide support, storage or training related to the operation, maintenance or repair of equipment in the event of a flood scenario, hurricane conditions or a disaster due to higher due to higher earth temperatures	
Transition	N/A	
EO3: Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	
Transition	N/A	
EO4: Resource Resilience and the Transition to a Circular Economy		
Green	N/A	
Transition	N/A	

5. Procurement Steam/Hot and Cold Air

KBLI 2017	Description
D	Procurement of Electricity, Steam / Hot and Cold Air
35	Procurement of Electricity, Steam / Hot and Cold Air
353	Procurement Steam / Hot and Cold Air and Ice
3530	Procurement Steam / Hot and Cold Air and Ice
35301	Procurement Steam / Hot and Cold Air

KBLI 2017	Description
	This group encompasses activities involved in the production and distribution of steam and hot water for various purposes, including heating, power generation, and other applications. It includes processes such as the production, collection, and distribution of steam and hot water for heating, energy production, and other uses, as well as activities related to the production and distribution of cold air.

Classification	Technical Screening Criteria (TSC)	Reference
	EO1 – Climate Change Mitigation	
Green	If procurement generated from solar energy: The requirement of EO1 has been satisfied. If procurement generated from geothermal energy: Lifecycle GHG emissions <28 gCO₂e/MJ per unit of heat and/or cooling produced. If procurement generated from renewable non-fossil gaseous and liquid fuels: 1. Lifecycle GHG emissions <28 gCO₂e/MJ per unit of heat and/or cooling produced; and 2. For facilities that are equipped with CCS, then it must meet the criteria for CCS activities in this TKBI; and 3. Anaerobic digestion of organic biowaste or sewage which is conducted at the site of fuel combustion must comply with the following: a. Implement monitoring and contingency plan to minimise methane leakage; and b. All waste utilized for anaerobic processing must be segregated from its source and collected separately; and 4. The Activity meets either of the following criteria: a. During construction, installation of measurement equipment for monitoring physical emissions (such as methane leaks) or implementation of leak detection and repair programs; or b. During operation, reporting of physical measurements of methane emissions with no incidents of leaks. If procurement generated from fossil gas: 1. Lifecycle GHG emissions <28 gCO₂e/MJ per unit of heat and/or cooling produced; and 2. For facilities that are equipped with CCS, then it must meet the criteria for CCS activities in this TKBI; and 3. The Activity meets either of the following criteria: a. During construction, installation of measurement equipment for monitoring physical emissions (such as methane leaks) or implementation of leak detection and repair programs; or b. During operation, reporting of physical measurements of methane emissions with no incidents of leaks.	ATSF V2

Classification	Technical Screening Criteria (TSC)	Reference
	If procurement generated from heat residual/waste: 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. If procurement generated using electric heat pump: Activity is operation of electric heat pumps complying with both of the following criteria: 1. Refrigerant threshold: Global Warming Potential does not exceed 675; and 2. Demonstrate a high standard of energy efficiency according to an internationally recognised certifications scheme.	
Transition	If procurement generated from solar energy: N/A If procurement generated from geothermal energy: Lifecycle GHG emissions should fall within the range of ≥ 28 gCO₂e/MJ and < 65 gCO₂e/MJ per unit of heat and/or cooling produced. If procurement generated from renewable non-fossil gaseous and liquid fuels: 1. Lifecycle GHG emissions should fall within the range of ≥ 28 gCO₂e/MJ and < 65 gCO₂e/MJ per unit of heat and/or cooling produced; and 2. For facilities that are equipped with CCS, then it must meet the criteria for CCS activities in this TKBI; and 3. Anaerobic digestion of organic biowaste or sewage which is conducted at the site of fuel combustion must comply with the following: a. Implement monitoring and contingency plan to minimise methane leakage; and b. All waste utilized for anaerobic processing must be segregated from its source and collected separately; and 4. The Activity meets either of the following criteria: a. During construction, installation of measurement equipment for monitoring physical emissions (such as methane leaks) or implementation of leak detection and repair programs; or b. During operation, reporting of physical measurements of methane emissions with no incidents of leaks. If procurement generated from fossil gas: 1. Lifecycle GHG emissions should fall within the range of ≥ 28 gCO₂e/MJ and < 65 gCO₂e/MJ per unit of heat and/or cooling produced; and 2. For facilities that are equipped with CCS, then it must meet the criteria for CCS activities in this TKBI; and	

Classification	Technical Screening Criteria (TSC)	Reference
	3. The Activity meets either of the following criteria: a. During construction, installation of measurement equipment for monitoring physical emissions (such as methane leaks) or implementation of leak detection and repair programs; or b. During operation, reporting of physical measurements of methane emissions with no incidents of leaks. If procurement generated from heat residual/waste: N/A Production of heating/cooling using electric heat pump: N/A	
EO2: Climate Change Adaptation		
Green	If procurement generated from solar energy, geothermal energy, renewable non-fossil gaseous and liquid fuels, bioenergy, fossil gas, heat residual/waste, and/or the use of an electric heat pump, the following requirements should be met: 1. Activity has implemented physical and non-physical adaptation 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) or similar assessments, aimed at evaluating climate risks and vulnerabilities and implementing appropriate adaptation strategies; and 2. Activities support the assurance of security of energy supply by considering possible risks due to future climate-related disruptions, provided that: a. Able to operate in flood, storm or catastrophic conditions due to higher temperatures; or b. Having a mechanism or infrastructure that can monitor operational activities in the event of floods, storms or disasters due to higher temperatures; or c. Have facilities or equipment to provide support, storage or training related to the operation, maintenance or repair of equipment in the event of a flood scenario, hurricane conditions or a disaster due to higher due to higher earth temperatures	ATSF v2
Transition	N/A	
EO3: Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	
Transition	N/A	
EO4: Resource Resilience and the Transition to a Circular Economy		

Classification	Technical Screening Criteria (TSC)	Reference
Green	N/A	
Transition	N/A	

6. Critical Mineral Mining and Quarrying Activities

KBLI 2017	Description	
B	Mining and Quarrying	
07	Metal Ore Mining	
071	Iron Sand and Iron Ores Mining	
0710	Iron Sand and Iron Ores Mining	
07101	Iron Sand Mining This group includes iron sand mining businesses. Including purification, sorting, separation and cleaning activities which cannot be administratively separated from the iron sand mining business.	
07102	Iron Ores Mining The group encompasses iron ore mining enterprises, which involve activities aimed at enhancing the quality and agglomeration of iron ore, as well as subsequent processing of iron ore into metal ore.	
072	Mining of Metal Ore that Does Not Contain Iron, excluding Precious Metal Ore	
0729	Mining of Other Metal Ores that Do Not Contain Iron, excluding Precious Metal Ores	
07292	Black Lead Ores Mining This group encompasses mining and processing enterprises involved in black lead ore. It includes activities such as cleaning, separation, and refining, which are integral parts of the black lead ore mining business and cannot be administratively separated from it.	
07293	Bauxite/Aluminum Ores Mining This group comprises enterprises engaged in the mining, storage, and processing of bauxite ore. It also includes refining activities that are integral to bauxite ore mining businesses and cannot be administratively separated from them.	
07294	Copper Ores Mining This category encompasses copper ore mining and processing enterprises, involving chalcocite and rocks in the form of a mixture of monticellite and skarnyakut. It also includes refining activities that are integral to copper ore mining businesses and cannot be administratively separated from them.	
07295	Nickel Ores Mining The group encompasses nickel ore mining and processing enterprises, as well as utilization businesses that are integral to nickel ore mining operations and cannot be administratively separated from them.	

KBLI 2017	Description
07296	Manganese Ores Mining This group comprises enterprises involved in mining, processing, and refining manganese ore. It also includes utilization businesses that are integral to manganese ore mining operations and cannot be administratively separated from them.
07299	Other Non-Ferrous Metal Ores Mining This group encompasses mining and processing enterprises involved in minerals other than iron ore, such as zinc, platinum, and silicon ore. It also includes cleaning and refining activities that are integral to other metal ore mining businesses and cannot be administratively separated from them.

Classification	Technical Screening Criteria (TSC)	Reference
EO1 – Climate Change Mitigation		
Green	N/A	
Transition	- Has a verified/validated emissions reduction roadmap and reduces GHG emissions (lifecycle emissions) by at least 12.5% of Business as Usual by 2030 or based on government regulations; and - The Activity meets all of the following criteria: - Reclamation guarantee; - Post-mining guarantee as determined; - Reclamation implementation; and - Reclamation implementation report; and - Obtain a minimum of Green PROPER rating or fulfill aspects of pollution control, environmental damage, hazardous (Limbah B3) waste management and non-hazardous (Limbah Non-B3) waste management in accordance with the requirements of the Green PROPER criteria; and - If the activity energy sources and/or energy consumption of ≥4000 Tons of Oil Equivalent (TOE) per year, it must have evidence of the implementation of energy management in accordance with the regulation of Government Regulation of the Republic of Indonesia No. 33 of 2023 concerning Energy Conservation; and - Receive an award for Achievement in the Implementation of Good Mining Practices or have evidence of Good Mining Practices implementation.	- Government Regulation of the Republic of Indonesia Number 33 of 2023 concerning Energy Conservation. - Decree of the Minister of Energy and Mineral Resources Number 296.K / MB.01 / MEM.B / 2023 concerning Determination of Commodity Types that are in Critical Mineral Classification - Study from the Ministry of Energy and Resources Republic of Indonesia, Critical Minerals Supporting Clean Energy Technology and Transition Towards NZE (Green Metals)

Classification	Technical Screening Criteria (TSC)		Reference
	EO2: Climate Change Adaptation		
Green	N/A		
Transition	N/A		
	EO3: Protection of Healthy Ecosystems and Biodiversity		
Green	N/A		
Transition	N/A		
	EO4: Resource Resilience and the Transition to a Circular Economy		
Green	N/A		
Transition	N/A		

7. Quartz/Quartz Sand Mining and Quarrying Activities

KBLI 2017	Description
B	Mining and Quarrying
08	Mining and Other Quarryings
089	Mining and Other Quarryings that is not Included in Others
0899	Mining and Other Quarryings that is not Included in Others
08995	Quartz Sand Quarrying This group comprises enterprises engaged in quartz/quartz sand/silica sand mining. It also includes breaking, crushing, screening, grinding activities, as well as transportation and sales, which are integral to the business of extracting quartz/quartz sand/silica sand and cannot be administratively separated from it.

Classification	Technical Screening Criteria (TSC)		Reference
	EO1 – Climate Change Mitigation		
Green	N/A		

Classification	Technical Screening Criteria (TSC)	Reference
Transition	- Has a verified/validated emissions reduction roadmap and reduces GHG emissions (lifecycle emissions) by at least 12.5% of Business as Usual by 2030 or based on government regulations; and - The Activity meets either of the following criteria: - Reclamation guarantee; and - Reclamation implementation report; and - Obtain a minimum Green PROPER rating or fulfill aspects of pollution control, environmental damage, hazardous (Limbah B3) waste management and non-hazardous (Limbah Non-B3) waste management in accordance with the requirements of the Green PROPER criteria; and - If the activity uses energy sources and/or energy ≥ 4000 Tons of Oil Equivalent (TOE) per year, it must have evidence of the implementation of energy management in accordance with the regulation of Government Regulation of the Republic of Indonesia No. 33 of 2023 concerning Energy Conservation; and - Receive an award for Achievement in the Implementation of Good Mining Practices or have evidence of Good Mining Practices implementation.	- Government Regulation of the Republic of Indonesia Number 33 of 2023 concerning Energy Conservation. - Decree of the Minister of Energy and Resources Republic of Indonesia Number 296.K / MB.01 / MEM.B / 2023 concerning Determination of Commodity Types that are in Critical Mineral Classification - Study from the Ministry of Energy and Resources Republic of Indonesia, Critical Minerals Supporting Clean Energy Technology and Transition Towards NZE (Green Metals)
EO2: Climate Change Adaptation		
Green	N/A	
Transition	N/A	
EO3: Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	
Transition	N/A	
EO4: Resource Resilience and the Transition to a Circular Economy		
Green	N/A	
Transition	N/A	

8. Mining and Quarries of Other Minerals That Is Not Included in Others

KBLI 2017	Description
B	Mining and Quarrying
08	Mining and Quarries of Other Minerals
089	Mining and Quarries of Other Minerals That Is Not Classified in Any Specific Group
0899	Mining and Quarries of Other Minerals That Is Not Classified in Any Specific Group
08999	Mining and Quarries of Other Minerals That Is Not Classified in Any Specific Group This group encompasses mining and quarrying of various minerals enterprises not classified under any specific group. It includes activities such as refining, separating/sorting, cleaning, and other processing methods applied to mining/excavated materials that cannot be administratively separated from other mining and quarrying enterprises. The minerals covered may include mica, leucite, yacocite, zeolite, abrasive stone, natural graphite, steatite (talc), siliceous fossil flour, ochre, toseki, and others.

Classification	Technical Screening Criteria (TSC)	Reference
	EO1 – Climate Change Mitigation	
Green Transition	N/A Includes mining of Rare Earth Metals: - Has a verified/validated emissions reduction roadmap and reduces GHG emissions (lifecycle emissions) by at least 12.5% of Business as Usual by 2030 or based on government regulations; and - The Activity meets either of the following criteria: - Reclamation guarantee; and - Post-mining guarantee as determined; and - Reclamation implementation; and - Reclamation implementation report; and - Obtain a minimum Green PROPER rating or fulfill aspects of pollution control, environmental damage, hazardous (Limbah B3) waste management and non-hazardous (Limbah Non-B3) waste management in accordance with the requirements of the Green PROPER criteria; and - If the Activity uses energy sources and/or energy ≥4000 Tons of Oil Equivalent (TOE) per year, it must have evidence of the implementation of energy management in accordance with the regulation of Government Regulation of the Republic of Indonesia No. 33 of 2023 concerning Energy Conservation; and	- Government Regulation of the Republic of Indonesia Number 33 of 2023 concerning Energy Conservation. - Decree of the Minister of Energy and Mineral Resources Number 296.K/MB.01 / MEM.B / 2023 concerning Determination of Commodity Types that are in Critical Mineral Classification - Study from the Ministry of Energy and Resources Republic of Indonesia, Critical Minerals Supporting Clean Energy Technology and Transition Towards NZE (Green Metals)

Classification	Technical Screening Criteria (TSC)		Reference
	5.	Receive an award for Achievement in the Implementation of Good Mining Practices or have evidence of Good Mining Practices implementation.	
	EO2: Climate Change Adaptation		
Green	N/A		
Transition	N/A		
	EO3: Protection of Healthy Ecosystems and Biodiversity		
Green	N/A		
Transition	N/A		
	EO4: Resource Resilience and the Transition to a Circular Economy		
Green	N/A		
Transition	N/A		

9. Other Mining and Quarrying Supporting Activities

KBLI 2017	Description
B	Mining and Quarrying
09	Activities of Mining Support Services
099	Other Mining and Quarrying Supporting Activities
0990	Other Mining and Quarrying Supporting Activities
09900	Other Mining and Quarrying Supporting Activities* This group encompasses supporting services provided on a fee or contract basis, necessary for mining activities in the main categories 05, 07, and 08. These services include exploration services, such as traditional methods like ore sample collection and geological observations, pumping services, distribution of mining products, and experimental quarrying and drilling of fields or mining wells.

Classification	Technical Screening Criteria (TSC)		Reference
	EO1 – Climate Change Mitigation		
Green	N/A		
Transition	1. Provide support for mining and/or quarrying activities classified under the Transition category according to this taxonomy; and 2. Has a verified/validated emissions reduction roadmap and reduces GHG emissions (lifecycle emissions) by at least 12.5% of Business as Usual by 2030 or based on government regulations; and		- Government Regulation of the Republic of Indonesia Number 33 of 2023 concerning Energy Conservation. - Decree of the Minister of Energy and Mineral Resources Number 296.K / MB.01 / MEM.B / 2023 concerning Determination of Commodity Types

Classification	Technical Screening Criteria (TSC)	Reference
	3. Establish and implement 3R (Reduce, Reuse, Recycle) waste programs; and 4. Establish an Environmental Management System document based on ISO 14001 standards; and 5. If the activity uses energy sources and/or energy ≥4000 Tons of Oil Equivalent (TOE) per year, it must have evidence of the implementation of energy management in accordance with the regulation of Government Regulation of the Republic of Indonesia Number 33 of 2023 concerning Energy Conservation; and 6. Receive an award for the Implementation of Good Mining Practices or have evidence of Good Mining Practices implementation.	that are in Critical Mineral Classification Study from the Ministry of Energy and Resources Republic of Indonesia, Critical Minerals Supporting Clean Energy Technology and Transition Towards NZE (Green Metals)
EO2: Climate Change Adaptation		
Green	N/A	
Transition	N/A	
EO3: Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	
Transition	N/A	
EO4: Resource Resilience and the Transition to a Circular Economy		
Green	N/A	
Transition	N/A	

10. Carbon Capture and Storage

KBLI 2017	Description
B	Mining and Quarrying
06	Mining of Oil and Natural Gas and Geothermal
061	Oil Mining
0610	Oil Mining
06100	Oil Mining This group comprises crude oil mining businesses or activities, encompassing the exploration for petroleum content, drilling, mining, separation, and storage. It also includes the production of crude oil condensate, as well as processing to produce crude oil through storage, filtering, drying, stabilization, and similar methods. The results of petroleum mining include crude oil, bituminous oil shale, and asphalt sand. Mining activities encompass quarrying, drilling, crushing, washing, screening, mixing, and storage. Additionally, crude oil production activities from oil shale and bituminous sand are included if related to mining. Further processing of petroleum products is categorized under category 19211.

KBLI 2017		Description
062	Mining of Natural Gas and Geothermal Energy Business	
0620	Mining of Natural Gas and Geothermal Energy Business	
06201	Natural Gas Mining* This group encompasses activities related to the search for natural gas content, drilling, mining, separation, and storage. The primary outcome of natural gas mining is natural gas. Additionally, liquefying natural gas into LNG until shipping is considered part of the mining activity. This group also includes Coalbed Methane (CBM) activities.	
*) Temporary placement in the most relevant KBLI, based on discussion and agreement with the Ministry. It will be updated once CCS activity is established in KBLI.		
Classification	Technical Screening Criteria (TSC)	Reference
EO1 – Climate Change Mitigation		
Green	Transport of CO2 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; and 3. Appropriate leak detection systems are applied, and a Monitoring and Measurement, Reporting, and Verification (MRV) plan is in place, that includes steps developed according to the relevant standards and good engineering practices. Underground permanent geological storage of CO2: 1. Conduct an assessment of the potential of the storage complex and its surroundings, or exploration is carried out to determine whether the geological formation is suitable for use as a CO2 storage site; and 2. For the 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 and storage facilities and surrounding environment is in place, with the regular reports monitored by the competent national authority; and 4. Exploration and operation of storage sites complies with applicable standard N/A	ATSF version 2
Transition		
EO2: Climate Change Adaptation		
Green	N/A	
Transition	N/A	

Classification	Technical Screening Criteria (TSC)		Reference
	EO3: Protection of Healthy Ecosystems and Biodiversity		
Green	N/A		
Transition	N/A		
	EO4: Resource Resilience and the Transition to a Circular Economy		
Green	N/A		
Transition	N/A		

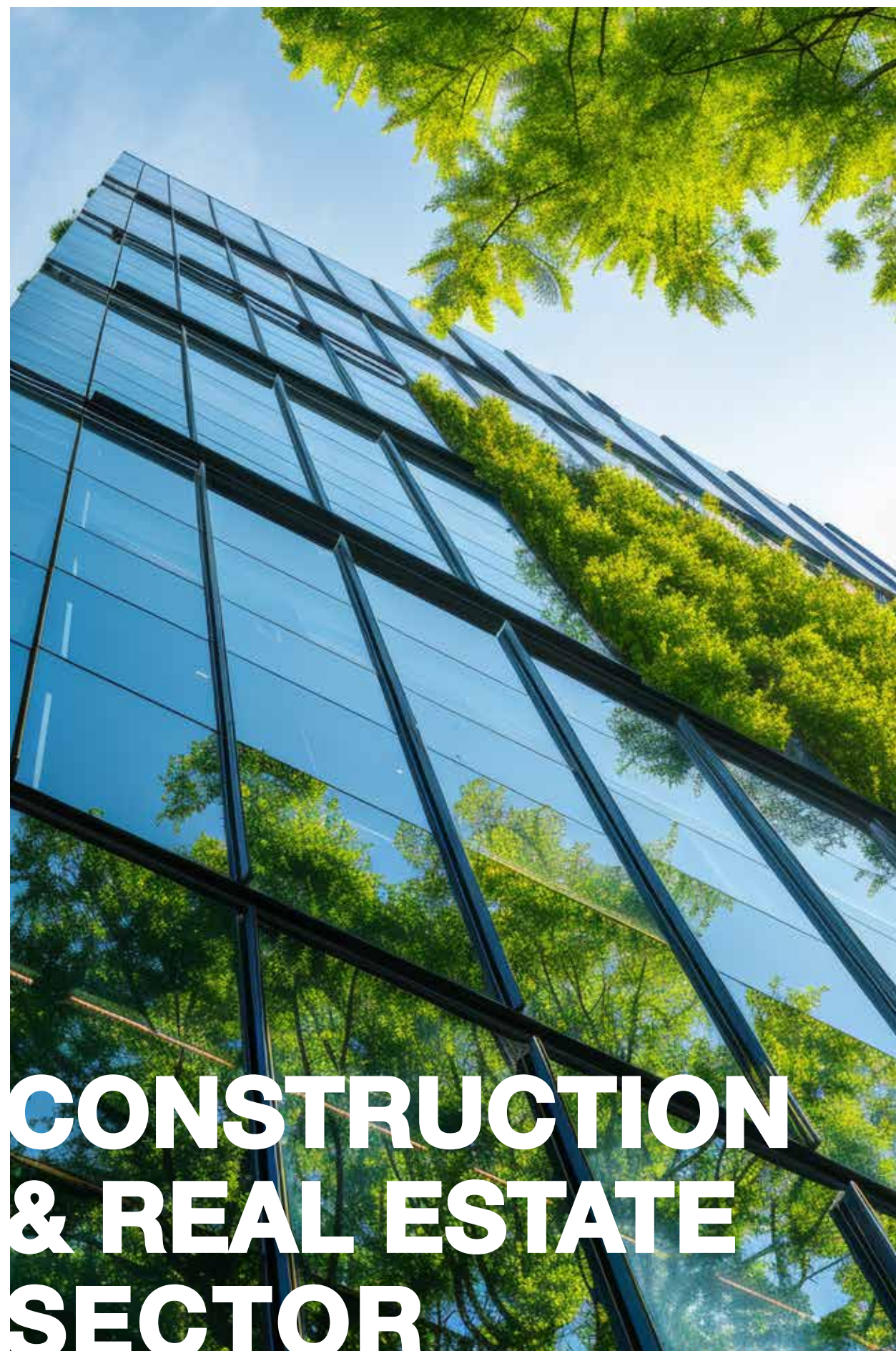
11. Research, Development, and Innovation for Carbon Capture and Storage Related Technologies:

KBLI 2017	Description
B	Mining and Quarrying
09	Mining Support Services Activity
091	Oil and Natural Gas Mining Supporting Activities
0910	Oil and Natural Gas Mining Supporting Activities
09100	Oil and Natural Gas Mining Supporting Activities * This group encompasses service activities related to oil and gas mining, conducted on a fee or contract basis. These services include exploration services for extracting oil or gas using traditional methods, such as making geological observations, installing drilling equipment, repairing, and dismantling cementing oil wells and gas wells. Additionally, activities involve constructing well channels, pumping production wells, plugging and closing production wells, conducting production testing, dismantling, liquefying, and regasifying natural gas for transportation needs at mining sites. Furthermore, services may include trial drilling for refining petroleum and natural gas, as well as providing field firefighting services for petroleum and natural gas.

*) Temporary placement in the most relevant KBLI, based on discussion and agreement with the Ministry. It will be updated once the activity is established in KBLI.

Classification	Technical Screening Criteria (TSC)		Reference
	EO1 – Climate Change Mitigation		
Green	Research, Development, and Innovation for CCS Related Technologies Activities meets criteria (1) and (3), or (2) and (3): - Engage in research, development, or innovation activities for technologies, products, or other solutions dedicated specifically to CCS; - Implement technologies, products, or other solutions being researched for CCS, with the potential to reduce overall GHG emissions upon commercialization; - If the technology, product, or other solution is being researched, developed, or innovated:		National Policies or international best practice

Classification	Technical Screening Criteria (TSC)		Reference
	a. Rated at Technology Readiness Levels (TRL) 1 to 7, then lifecycle GHG emissions are calculated by the party conducting the research; or b. Rated at TRL 8 or higher, then lifecycle GHG emissions are verified by an independent third party.		
Transition	N/A		
EO2: Climate Change Adaptation			
Green	N/A		
Transition	N/A		
EO3: Protection of Healthy Ecosystems and Biodiversity			
Green	N/A		
Transition	N/A		
EO4: Resource Resilience and the Transition to a Circular Economy			
Green	N/A		
Transition	N/A		



CONSTRUCTION & REAL ESTATE SECTOR

Construction and Real Estate Sector

A. Background context

The C&RE sector is one of the most significant contributors to global energy consumption and greenhouse gas (GHG) emissions. According to the International Energy Agency (IEA)¹, the sector accounted for approximately 30% of global energy consumption and contributed to 26% of total energy-related CO₂ emissions in 2021. The IEA also notes that two-thirds of the global building stock needed by 2050 has yet to be built, highlighting the critical importance of energy-efficient measures both for new construction and the retrofitting of existing buildings. The significant energy usage associated with buildings consists of the construction phase, which involves extracting, producing, and transporting building materials, as well as the operational phase, which includes heating, cooling, lighting, and other electrical equipment (collectively known as embodied energy). According to the Intergovernmental Panel on Climate Change (IPCC), this large use of energy has a major impact on CO₂ emissions produced by buildings, both on-site and off-site where 57% of building emissions are electricity generation, then as much as 24% of emissions from on-site, and 18% of emissions from the production of building materials².

The impact of climate change such as rising average temperatures will affect energy consumption in the building sector. According to the IEA, in some countries, every 1°C increase in average daily temperature will increase electricity use by 4%. This highlights the importance of increasing energy efficiency efforts in order to reduce the carbon emission impact of final energy consumption. According to the IEA analysis, doubling efficiency progress could cut energy bills by a third and result in a 50% reduction in CO₂ by 2030.

According to the World Green Building Council (WGBC)³, improving the operational energy efficiency of buildings could reduce global CO₂ emissions by around 11% of total global energy-related emissions. Building materials like concrete, steel, and aluminum are particularly energy-intensive to produce, and their widespread use in construction leads to significant emissions. Meanwhile, accelerated urbanization, especially in developing countries, is driving a substantial increase in energy demand within the construction and building sector. The Global Alliance for Building and Construction⁴ projects that without sustainable interventions, energy consumption in the building and construction sector could more than double by 2050, driven primarily by population growth and urban expansion in regions such as Asia and Africa.

¹ International Energy Agency (IEA), *Tracking buildings* (2023), <https://www.iea.org/energy-system/buildings>

² Intergovernmental Panel on Climate Change (IPCC), *Climate change 2022* (2022), https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_Chapter09.pdf

³ World Green Building Council (WGBC), *Bringing embodied carbon upfront* (2019), <https://worldgbc.org/advancing-net-zero/embodied-carbon/#~:text=Buildings%20currently%20responsible%20for,11%25%20from%20materials%20and%20construction.>

⁴ Global Alliance for Building and Construction, *GlobalABC Roadmap for Buildings and Construction* (2020), https://iea.blob.core.windows.net/assets/6cca78af-2327-4e97-868c-294d48cb66b3/GlobalABC_Roadmap_for_Buildings_and_Construction_2020-2050.pdf

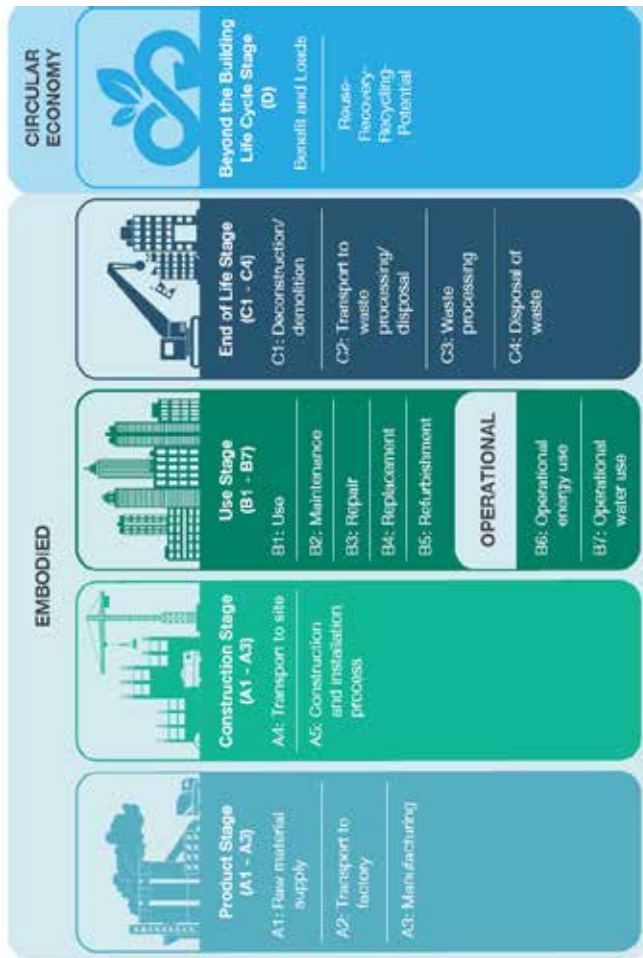


Figure 1: Span of the emission cycle in the construction and building sector from the extraction of building materials to the end of the building's life (ASHRAE, 2021)



Figure 2: Mapping of the sources of carbon emissions in the construction and building sector (WBGC, 2019)

Decarbonization efforts in the construction sector will play a crucial role in achieving Indonesia's net-zero emission goals. In Indonesia, buildings are the largest contributor to GHG emissions across all energy sectors, accounting for an average of 33% between 2011 and 2021. Around 90% of these emissions stem from electricity use in buildings. Therefore, improving energy efficiency in buildings will significantly reduce GHG emissions from the energy sector, aligning with the Indonesian government's ambitions as outlined in the Enhanced Nationally Determined Contribution (NDC) report⁵. This report emphasizes that 'energy efficiency' includes measures across all energy-consuming sectors (industry, commercial, transportation, and housing) to improve device efficiency and optimize energy systems, including the implementation of electric vehicles and their supporting ecosystems.

⁵ Enhanced Nationally Determined Contribution Republic of Indonesia (2022), https://unfccc.int/sites/default/files/NDC/2022-09/23.09.2022_Enhanced%20NDC%20Indonesia.pdf

According to the International Finance Corporation (IFC)⁶, the global market for green buildings is expected to exceed USD 24.7 trillion by 2030, particularly in emerging markets. Decarbonizing the building sector offers numerous benefits, including job creation, improved health, and increased energy affordability. Furthermore, it provided the followings benefits:

- **Job creation:** the potential for job creation is estimated at 9-30% for every USD 1 million spent on energy efficiency measures in buildings (IEA, 2020). The European Commission projects that up to 160,000 additional green jobs will be created in the construction sector by 2030 (OECD, 2022)⁷.
- **Well-being (health, air pollution etc.):** in the European Union, it is estimated that improving indoor air quality through energy efficiency measures and upgraded electrical equipment will save up to USD 259 billion annually in public health spending (OECD, 2022).
- **Energy affordability:** enhancing energy efficiency in housing will also improve energy affordability, particularly for low-income households, although it may increase upfront housing costs (OECD, 2022)

Meanwhile, according to the World Economic Forum (WEF)⁸, civil building infrastructure is accountable for around 2-3 GtCO₂, or between 13% - 20% of global carbon emissions each year. Most of these emissions are produced before the infrastructure is used, namely through the production of building materials (estimated at around 50-60%, although this can vary widely by projects and geography) and construction activities. The remaining emissions are produced during the use of civil buildings through the stages of construction, use, repair, maintenance, and at the end of their use, from demolition and waste.

To reduce emissions from civil building construction, emissions from concrete in a project can be reduced by up to 40% by 2030 by utilising existing or future technologies in the manufacturing process. This can be achieved by decarbonizing the cement production process, which is estimated to reduce emissions by 16%. Furthermore, the usage of low-carbon concrete products can reduce emissions by 6%, and optimizing the volume of materials used in a project through concrete design choices, such as the spacing and width of slabs and columns, and the use of voids can further reduce the emission. In addition, other techniques related to construction, use, and end-of-life can further reduce a structure's carbon footprint over its life cycle. Additional efforts to reduce emissions from civil engineering activities include improving thermal efficiency, structural durability and durability, and Design for Disassembly (DfD) or building design that considers ease of disassembly or uses modular building techniques to allow for reuse of materials after the building is deconstructed. The DfD planning process creates a plan for the reuse and return of materials early in the design phase to maximize the reuse of elements and avoid waste at end-of-life.

⁶ IFC (2019), <https://documents1.worldbank.org/curated/fr/586841576523330833/pdf/Green-Buildings-A-Finance-and-Policy-Blueprint-for-Emerging-Markets.pdf>

⁷ OECD (2022), <https://www.oecd-ilibrary.org/docserver/ea48ce566-en.pdf?expires=1726039618&id=id&accname=quest&checksum=6A1BA5350E0594C8EFCF6B7192446737>

⁸ World Economic Forum (2023), https://www3.weforum.org/docs/WEF_Scaling_Low_Carbon_Design_and_Construction_with_Concrete_2023.pdf

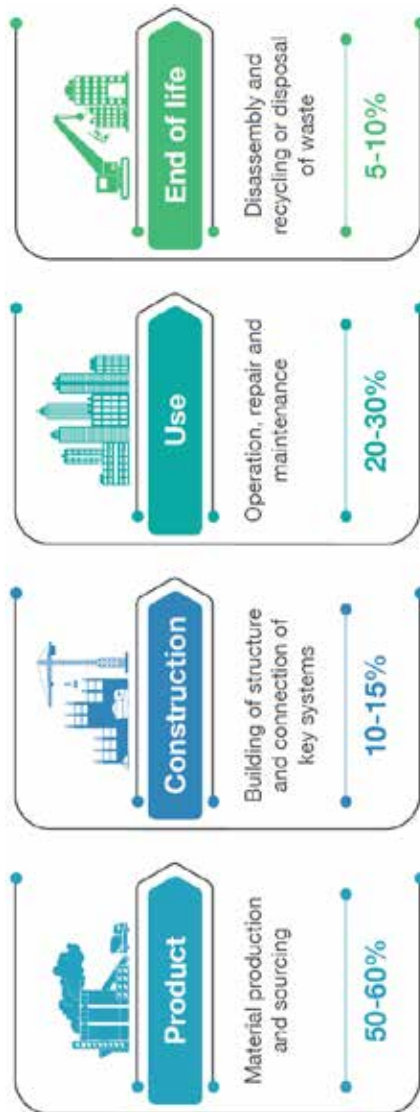


Figure 3: Emission cycle of civil building construction processes (WEF, 2023)

The construction and building sector contributes significantly to Indonesia's economic growth. Based on data from the Central Bureau of Statistics (BPS)⁹, the construction sector's contribution to Indonesia's gross domestic product (GDP) was 9.92% in 2023. The construction sector is the 5th largest sector after the manufacturing industry (18.67%), trade (12.94%), agriculture (12.53%), and mining (10.52%), while the property and real estate sector is recorded to contribute to 2.4% to GDP.

Furthermore, the Indonesian government through Law No. 59/2004 concerning the National Long-Term Development Plan 2025–2045 (RPJPN), makes sustainable development a key focus of national development planning. This approach is oriented toward economic welfare and is measured by three environmentally friendly criteria: 1) no depletion of natural resources; 2) no pollution or other environmental impacts; and 3) activities that increase usable or replaceable resources. The vision for building inclusive and sustainable cities, including the new Indonesian Capital City (IKN), is as follows:

- a. A livable, inclusive, and cultured city will be realized through the development of livable housing, access to potable drinking water, multi-modal transportation, waste and sewage management, education, and health services supported by digital learning platforms and integrated online health services. It will also include the provision of energy based on new and renewable sources, and the promotion of a disciplined and healthy urban culture.
- b. A green and resilient city will be realized through the increased efficiency and utilization of new and renewable energy, the application of low-carbon principles in residential, office, business, and commercial areas, and the provision of safe and inclusive public green spaces. This approach will be

⁹ BPS (2024), <https://www.bps.go.id/id/pressrelease/2024/02/05/2379/ekonomi-indonesia-triwulan-iv-2023-tumbuh-5-04-persen--y-on-y-.html>

integrated with water resource management, flood control measures, and a real-time warning system for air and water quality, as well as disaster events.

- c. An advanced and prosperous city will be realized through implementing compact city concepts for urban services, integrating activities and intermodal transportation or transit-oriented development (TOD), developing green and smart infrastructure, creating walkable cities, increasing high-leverage (productive) activities, and preparing multi-skilled talents for information communication technology (ICT) development, research and innovation (R&D), and future industrial clusters.

B. General principles for determining Technical Screening Criteria (TSC) in the Construction and Real Estate (C&RE) sector

This section outlines the basis for determining the TSC for C&RE for each Environmental Objective (EO). Please refer to Section 3 of the Appendix for further details.

Table 1-General Principles for Determining TSC in the C&RE Sector

Principles for determining TSC EO1: Climate Change Mitigation	
Classification	Description
Green	- TSC aims to achieve an advanced level of certification in the Green Building Certification (GBC) program for buildings, and Sustainable Construction for civil buildings and special use buildings, which are credible and recognized at the national or international level; or - TSC targets a specific proxy relevant to emissions intensity in energy consumption, such as the Energy Usage Intensity (EUI) metric
Transition	Activities supporting the transition to the “Green” path within a certain period; and - Contribute to an Environmental Objective (EO) that, at minimum, aligns with the lowest carbon-emitting technology currently deemed technically and economically feasible, and widely adopted either nationally or within ASEAN; or - Achieve the greatest possible reduction in EUI through the building’s construction plan and implementation.
Principles for determining TSC EO2 – Climate Change Adaptation	
Classification	Description
Green	- Activities that have implemented measures to ensure resilience to climate change and contribute to both local and national resilience; or - Activities that enable other activities to enhance resilience to climate change.
Transition	N/A
Principles for determining TSC EO3 – Protection of Healthy Ecosystems and Biodiversity	
Classification	Description

Green	N/A
Transition	N/A
Principles for determining EO4 – Resource Resilience and the Transition to a Circular Economy	
Classification	Description
Green	Activities that optimize waste management, including the management and reduction of construction and demolition waste. These activities are evaluated to meet the basic minimum criteria for retaining existing structural materials, as outlined by a credible national or international GBC scheme.
Transition	Activities supporting the transition to the “Green” path within a certain period; and 1. Contribute to an Environmental Objective (EO) that, at minimum, aligns with the lowest carbon-emitting technology currently deemed technically and economically feasible, and widely adopted either nationally or within ASEAN; or 2. Achieve the greatest possible reduction in EUI through the building’s construction plan and implementation.

C. Definitions on terms used in TSC:

- **The term ‘credible and acknowledged GBC Program’** in building construction refers to a credible and acknowledged GBC program such as those listed in the table below (non-exhaustive list):

Table 2 – Credible and acknowledged GBC Programs (non-exhaustive list)¹⁰

GBC Certification	
• Green Building (BGH)	• GREENSHIP
• Leadership in Energy and Environmental Design (LEED)	• Excellence in Design for Greater Efficiencies (EDGE)
• Green Mark	• Other GBC programs that are globally acknowledged ¹¹ and applicable in Indonesia

- **An ‘advanced level of certification’** refers to a higher tier within a GBC program for buildings and Sustainable Construction Predicate for civil buildings and buildings for special purposes. For schemes with a tiered rating system including higher levels of certification, although not necessarily the “highest level” as long as the building can demonstrate improvement on generally accepted practices.

¹⁰ Some GBC schemes, namely LEED and Green Mark also cover aspects related to climate change adaptation, including flood resilience, heat stress mitigation and water security. This can also be used to support the assessment of specific elements of a building’s potential to meet EO2 requirements.

¹¹ The Green Business Certification Inc. (GBCI) provides guidance for globally recognised standards (<https://www.gbci.org/>).

- **The 'Energy Category'** in the GBC refers to criteria that assess energy efficiency, conservation, and the use of renewable energy. These criteria evaluate how buildings reduce energy consumption and emissions while improving overall performance. Key areas include efficient systems (e.g., Heating, Ventilation, and Air Conditioning (HVAC) and lighting), the use of renewable energy (either onsite or offsite), energy monitoring, and technological innovation within the building.

D. Rationale for TSC and Activities in the C&RE sector

The TSC essentially follows the ASEAN Taxonomy for Sustainable Finance (ATSF) version 3, along with the policies, laws, and regulations that apply in Indonesia.

- TSC for the 'Green' classification** are designed to be consistent with widely recognized international taxonomies (interoperable), including references to credible international or national GBC acknowledged both nationally and internationally with the advanced level of certification (including in the energy category).
- TSC for the "Transition" classification** are developed with reference to relevant GBC programs and recognized, both nationally and internationally. In addition, the energy usage intensity (EUI) measure is applied, based on a comparative review of available technologies that are technically and economically feasible.

TSC for EO3 were considered by the ASEAN Taxonomy Board (ATB) but have yet to be included, because there are currently no clear examples of activities in the C&RE sector, which show substantial benefits or directly contribute to this EO. However, this EO is considered in the Do No Significant Harm assessment.

Below are the key regulations and sustainable policies used to determine TSC for the C&RE sector in Indonesia:

- Government Regulation No. 16 of 2021 concerning the Implementing Regulation of Law No. 28 of 2002 regarding Green Buildings and the Regulation of the Ministry of Public Works and Housing No. 21 of 2021 concerning the Assessment of Green Building Performance**

Green Building Certification

a. Building Construction

For building construction, under the Regulation of the Minister of Public Works and Housing No. 21 of 2021 on Green Building Performance Assessment, the implementation of green buildings is mandated for certain categories of buildings, both new and existing. Specifically, for state-owned buildings exceeding 5,000 m² in area, green building standards are compulsory. State-owned buildings are defined as those funded and constructed by the government (central or local government), including public housing, markets, museums, libraries, and other public building structures. Beyond the mandatory categories, additional recommended categories for green buildings apply to other building classes not covered by the mandatory regulations. For instance, a mixed-use apartment with over four floors and a total floor area exceeding 50,000 m² must obtain

green building certification. If it has fewer than four floors, or over four floors but less than 50,000 m² of total area, green building certification remains recommended.

Green Building Certification can be pursued for both new building projects and renovated buildings, with requirements applicable at each relevant stage:

- a. **The Programming Stage** is the initial planning phase for green building, where objectives, strategies, action steps, schedules, and resource requirements—particularly funding and stakeholder involvement—are determined to ensure the desired green building performance is met; and **The Technical Planning Stage** involves creating a detailed technical plan for the green building and its systems. This includes pre-planning, plan development, and the preparation of working drawings, budget plans, calculations, and technical specifications.
- b. **Construction Implementation Stage** is the stage that encompasses a series of implementation activities to realize the physical structure of a green building, as defined during the technical planning stage.
- c. **Utilization Stage** is the stage that involves the utilization of a green building according to its designated function and classification, including maintenance, upkeep, and periodic inspections in line with green building requirements.
- d. **Demolition Stage** is the stage that involves dismantling or demolishing all or part of a building, including its components, building materials, and/or related infrastructure and facilities.

b. Real Estate/Residential Area

The standard for assessing real estate construction/residential areas uses green building performance assessments in accordance with the Regulation of the Minister of Public Works and Housing No. 21 of 2021 concerning Green Building Performance Assessment. The definition of an area based on this regulation is the scope of an area in one area of at least 1 hectare (10,000 m²) and consists of at least 2 (two) buildings and is owned by one manager. Although the assessment uses the same regulations as green building, the aspects of green area assessment are different from green building.

Table 3. Green Building Certification

Certification and Issuer	Rating	Assessed Aspects			
		Building Construction		Real Estate/Residential Area	
		New Building	Existing/Renovated Building	New Construction	Existing/Renovation
Green Building (BGH)	• Utama (Advanced) –	1. Site Management 2. Energy Efficiency	1. Organization and Governance of BGH	1. Improved Welfare of Local Residents	1. Organization and Governance of Green Areas

Certification and Issuer	Rating	Assessed Aspects			
		Building Construction		Real Estate/Residential Area	
		New Building	Existing/Renovated Building	New Construction	Existing/Renovation
Ministry of Public Works	• <i>Madya</i> (Intermediate) • <i>Pratama</i> (Basic)	3. Water Use Efficiency 4. Indoor Air Quality 5. Use of Environmentally Friendly Materials 6. Waste Management 7. Wastewater Management	2. Customization of the Construction Process 3. Maintenance of BGH Performance during the Utilization Period 4. Role of BGH Occupants/Users	2. Enhanced Functionality of Infrastructure and Facilities Services in the Area 3. Microclimate Control and Ecosystem Preservation in the Area 4. Reduction of Thermal Impact on Surrounding Areas during the Dry Season 5. Reduced Burden on Infrastructure and Facilities 6. Use of Environmentally Friendly Materials	2. Construction Process for Green Area Conformity Modifications 3. Maintenance of Green Area Performance during the Utilization Period

Energy Savings in Green Buildings

The Ministry of Public Works and Housing (currently separated into the Ministry of Public Works and the Ministry of Housing and Residential Areas), in collaboration with the Ministry of Energy and Mineral Resources and the Ministry of Home Affairs, has released the Roadmap for the Implementation and Development of Green Buildings.¹² This roadmap details the potential energy savings achievable through Ministerial Regulation No. 21/2021.

¹² Roadmap for the Implementation and Development of Green Buildings (https://ciptakarya.pu.go.id/admin/assets/upload/file/laporan/2024/10/10/205512_PETA%20JALAN%20PENYELENGGARAAN%20PEMBINAAN%20BGH_OKT%202024.pdf).

Energy savings were calculated using modelling based on baseline data of building energy consumption gathered from 11 cities across Indonesia, ensuring a data-driven, evidence-based approach. In total, over 200 energy consumption data points were assessed, examining specific design, construction, and operational characteristics across both residential and non-residential buildings.

According to modeling results based on the Minister of Public Works and Housing Regulation No. 21/2021, new buildings can achieve an average of 40% energy savings. Among these, office buildings (both private and government) demonstrate the highest energy-saving potential across all building categories.



Figure 3: Energy Saving Potential in New Buildings based on energy efficiency action recommended by the Minister of Public Works and Housing Regulation No. 21/2021

Green Building Certification for Residential Buildings Targeted at Low-Income Communities (MBR)

TKBI takes into account the government's policy of promoting inclusive and sustainable urban development, exemplified by the Indonesia Green-Affordable Housing Program (IGAHP). This initiative provides affordable, resilient, and environmentally friendly housing for Low-Income Communities by applying technical standards and Green Building (BGH) principles to meet SDG and Enhanced NDC targets. IGAHP also represents a transition in current housing financing for Low-Income Communities, shifting toward green subsidies, green incentives, and green expenditure.

IGAHP Outcome Targets: 1) Improve the quality and reliability of Low-Income Communities housing construction against disaster threat, 2) Reduce carbon emissions in line with the NDC targets for the energy sector, 3) Enhance energy efficiency through the application of BGH technical standards and the use of renewable materials. Initially, the program aimed to deliver around 1 million liveable, affordable, sustainable, and disaster- and climate-resilient Low-Income Communities housing units by 2030. However, according to the latest government plan, this target could potentially increase to 3 million Low-Income Communities housing units.¹³

There are TSC classifications for 'Green' and 'Transition' specifically intended for New Building Construction and Real Estate Or Residential Area activities aimed at landed houses for MBR (low-income communities). Based on coordination with the relevant ministry, several GBC schemes for such landed houses can meet these criteria, as demonstrated through pilot projects and direct implementation in Indonesia. These schemes include, but are not limited to: 1) GBC Certification (in line with Circular Letter of the Director General of Human Settlements (*Direktur Jenderal Cipta Kerja*) Number 03/SE/DC/2023 on Technical Guidelines for BGH Performance Assessment for Building Class 1a); 2) GreenShip, and 3) EDGE.

2. **Government Regulation No. 14 of 2021 concerning Construction Services, Regulation of the Minister of Public Works and Housing No. 9 of 2021 concerning Guidelines for the Implementation of Sustainable Construction, and Circular Letter of the Director General of Highways of the Ministry of Public Works and Housing No. 29/SE/Db of 2023 on Guidelines for Technical Requirements for Sustainable Construction in the Road.**

The application of Sustainable Construction principles spans the entire life cycle of civil buildings. This includes the stages of general planning, programming, construction consultations, and/or the implementation of construction work, which encompasses construction, operation, and maintenance with details:

- a. **General Planning Stage** is a regional-based planning process that takes into account natural conditions, spatial planning, social and economic conditions, as well as the carrying capacity of a region.
- b. **Programming Stage** is the initial planning to determine goals, strategies, steps to be taken, schedules, and resource requirements, especially funding, to realize a building and/or civil building.
- c. **Construction Consultancy/Design/Technical Planning Stage** is activities involving calculations and preparation of designs based on selected standards and design methods, using design data, and carried out professionally by construction design service providers.
- d. **Construction Stage** is physical implementation activities that are planned and carried out according to time, quality, and cost conformity to realize the building.
- e. **Operation and Maintenance Stage** is activities related to the use and management of the building according to design standards and standard operating procedures, including efforts to maintain the reliability of the building and its facilities through maintenance, repairs, and inspections to ensure its continued functionality.
- f. **Demolition Stage** is activities to dismantle or demolish all or part of a building, components, building materials, and/or infrastructure and facilities.

¹³ Joint Decree of the Three Ministers (Minister of Housing and Residential Areas, Minister of Public Works, and Minister of Home Affairs) on Support for the Acceleration of the Three Million Homes Development Program

Buildings and/or civil buildings that have implemented sustainable construction technical requirements at each stage can be awarded the Sustainable Construction predicate. The explanation of the technical requirements for Sustainable Construction at each stage is provided in Table 4 below.

Table 4 - Assessed Aspects of the Implementation of Sustainable Construction Principles for Civil Buildings

Certification and Issuer	Rating	Sub-Sector of KBLI	Assessed Stage	Assessed Aspects
Sustainable Construction Predicate – The Ministry of Public Works	• <i>Utama</i> (Advanced) • <i>Madya</i> (Intermediate) • <i>Pratama</i> (Basic)	1. Building Construction 2. Highway Construction 3. Bridge and Overpass Construction 4. Railway and Railway Bridge Construction 5. Tunnel Construction 6. Irrigation Network Construction 7. Telecommunication Construction for Marine Navigation Aids and River Signs	General Planning	a. supporting the development of integrated regions and areas; b. proper land use; c. resilient and disaster risk reduction; d. utilization of natural resources and the environment; e. incorporating gender, disability, and marginalized groups; f. contributing to regional economic potential and supporting national economic growth; and g. referring to the technical requirements of buildings and civil structures.
		8. Telecommunication Construction for Air Navigation 9. Railway Signal and Telecommunication	Programming	a. development of program priorities to maximize public benefits, providing a leverage effect on the community's economy; b. readiness criteria; c. feasibility of sustainable buildings and/or civil buildings;

Certification and Issuer	Rating	Sub-Sector of KBLI	Assessed Stage	Assessed Aspects
		Construction 10. Water Resources Infrastructure Construction 11. Non-Fishery Port Building Construction 12. Fishery Port Building Construction 13. Other Civil Construction Not Elsewhere Classified		d. community participation; e. inclusion of gender, disability, and marginalized groups; f. resource efficiency; and g. requirements and technical criteria for buildings and/or civil structures.
			Construction Consultancy/ Design/ Technical Planning	a. implementation of Security, Health, And Sustainability Standards (SMKK); b. appropriate land use; c. energy conservation; d. water conservation; e. material sources and cycles; f. comfort and health; g. safety; h. project's environmental management; i. community participation; j. gender, disability, and marginalized group inclusion; k. supporting community interaction; and l. cultural preservation or local wisdom;
			Construction Work	a. implementation of Security, Safety, Health, and

Certification and Issuer	Rating	Sub-Sector of KBLI	Assessed Stage	Assessed Aspects
			Stage: Operation and Maintenance	Sustainability Standards (SMKK); b. user safety; c. appropriate land use; d. energy conservation; e. water conservation; f. material sources and cycles; g. comfort and health; h. project's environmental management; i. user complaint service; j. efficiency; and k. infrastructure functionality feasibility.
			Construction Work Stage: Demolition	a. Security, Safety, Health, and Sustainability Standards (SMKK); b. environmental site recovery efforts; c. noise level; d. dust level; e. recovery of reusable construction materials or waste; f. community participation; g. gender, disability, and marginalized group inclusion;

Certification and Issuer	Rating	Sub-Sector of KBLI	Assessed Stage	Assessed Aspects
				h. optimization of reused materials; i. building type; and j. demolition procedures.

For Civil Building Construction in TKBI, the activity is not intended for the extraction, storage, production, or transportation of fossil fuels and does not pose a risk of carbon lock-in.

3. Government Regulation No. 33 of 2023 concerning Energy Conservation

For existing buildings or renovated buildings with energy consumption equal to or exceeding 500 Tons of Oil Equivalent (TOE) per year are required to implement energy conservation measures through energy management. Additionally, there are Energy Usage Intensity (EUI) provisions based on the building type and floor area.

In addition to using the green building performance assessment standards based on national policies, TKBI also considers **other green building certification programs** with credible and globally recognized performance assessments (rating tools) that are relevant and suitable for conditions in Indonesia, including:

Table 5 – Other GBC: Assessed Aspects of the Implementation of Sustainable Principles for Buildings

Certification Title	Issuer	Ratings	Assessed Aspects		
			New Building Construction	Existing Building/Renovated Building	Real Estate/Residential Area
Greenhip	Green Building Council Indonesia (GBCI)	• Platinum • Gold • Silver • Bronze	1. Land Use Efficiency 2. Energy Efficiency and Conservation 3. Water Conservation	1. Appropriate Site Development (ASD) 2. Energy Efficiency and Conservation (EEC) 3. Water Conservation (WAC)	1. Land Ecological Enhancement 2. Movement and Connectivity 3. Water Management and Conservation

Certification Title	Issuer	Ratings	Assessed Aspects		
			New Building Construction	Existing Building/Renovated Building	Real Estate/Residential Area
			4. Material Sourcing and Lifecycle 5. Indoor Health and Comfort 6. Building Environment Management	4. Material Resources and Cycle (MRC) 5. Indoor Health and Comfort (IHC) 6. Building and Environmental Management (BEM)	4. Solid Waste and Material 5. Community Wellbeing Strategy 6. Building and Energy 7. Innovation and Future Development
LEED	U.S. Green Building Council (USGBC)	• Platinum • Gold • Silver • Certified	1. Integrative Process 2. Location and Transportation 3. Sustainable Sites 4. Water efficiency 5. Material and Resources 6. Indoor Environmental Quality 7. Innovation 8. Regional Priority 9. Energy and Atmosphere	1. Location and Transportation 2. Sustainable Sites 3. Water Efficiency 4. Energy and Atmosphere 5. Material and Resources 6. Indoor Environmental Quality 7. Innovation	1. Smart Location and Linkage 2. Neighborhood Pattern and Design 3. Green Infrastructure and Buildings 4. Innovation 5. Regional Priority
EDGE	International Finance Corporation (IFC)	• Zero Carbon building • Advance • Standard	Energy and water savings, embodied energy reduction in materials, and the use of renewable energy	Energy and water savings, embodied energy reduction in materials, and the use of renewable energy	N/A

Certification Title	Issuer	Ratings	Assessed Aspects		
			New Building Construction	Existing Building/Renovated Building	Real Estate/Residential Area
Green Mark	Building Construction Authority (BCA) of Singapore	• Platinum • GoldPlus • Gold • Certified	1. Climate-Responsive Design 2. Building Energy Performance 3. Resource Management 4. Healthy and Smart Buildings 5. Environmentally Friendly Initiatives	1. Sustainable Management 2. Building Energy Performance 3. Resource Stewardship 4. Smart and Healthy Building 5. Advance Green Effort	1. Energy Efficiency 2. Water Management 3. Material and Waste Management 4. Environmental Planning 5. Green Buildings and Green Transport 6. Community and Innovation

For civil road building construction, several international certifications can also be considered, such as The Greenroads USA Certification, INVEST, GreenLites, and I-LAST.

Table 6 – Other Sustainable Construction Certifications: Assessment Aspects for the Application of Sustainability Principles in Road Construction

Certificate	Issuer	Rating	Assessed Aspects
The Greenroads USA	Greenroads Foundation	1. Evergreen 2. Gold 3. Silver 4. Bronze	1. Environment & water 2. Materials & design 3. Construction activities 4. Access & livability 5. Utilities & control
INVEST (Infrastructure Voluntary	The Federal Highway	There are no specific ranking levels like traditional certifications; instead, these certifications provide a score based on	1. System Planning: Focuses on system-level and highway planning and programming.

Certificate	Issuer	Rating	Assessed Aspects
Evaluation Sustainability Tool)	Administration (FHWA)	how well the project or program meets sustainability criteria.	2. Project Development: Covers project-specific planning, design, and construction. 3. Operations and Maintenance: Evaluates internal administrative policies and maintenance practices.
GreenLites	New York State Department of Transportation	1. Evergreen 2. Gold 3. Silver 4. Certified	1. Sustainable sites, 2. water quality, 3. materials and resources, 4. energy and atmosphere, and 5. additional innovations
I-LAST	Illinois Department of Transportation (IDOT)	Currently, I-LAST is used voluntarily without scoring for assessment, but the certification aims to raise awareness and encourage the adoption of sustainable practices in transportation projects.	1. Planning, 2. Design, 3. Environmental, 4. Water, 5. Transportation, 6. Lighting, 7. Materials, and 8. Innovation

The following is the KBLI Activity Level 5 of the Construction and Real Estate Sector:

Table 7-List of Activities in the C&RE sector

KBLI 2017		KBLI 2020		Description*
KBLI Level 5	Activity	KBLI Level 5	Activity	
41011	Construction of Residential Building	41011	Construction of residential building	Using TSC of ATSF version 3 and national policies : 1. Construction of new buildings activity EO1: Green and Transition EO2: Green EO3 and EO4: N/A
41012	Construction of Office Building	41012	Construction of office building	
41013	Construction of Industrial Building	41013	Construction of industrial building	
41014	Construction of Shopping Center	41013	Construction of shopping center	
41015	Construction of Healthcare Center	41015	Construction of healthcare center	
41016	Construction of Educational Building	41016	Construction of educational building	
41017	Construction of Accommodation Building	41017	Construction of accommodation building	
41018	Construction of Entertainment and Sports Center Building	41018	Construction of entertainment and sports center building	
41019	Construction of Other Buildings	41019	Construction of other buildings	2. Renovation/retrofitting of existing buildings activity or Construction of existing building/renovation EO1: Green and Transition EO2: Green EO3: N/A EO4: Green and Transition
42111	Highway Construction	42101	Civil road building construction	
42112	Bridge and Overpass Construction	42102	Civil building construction of bridges, overpasses, fly over, and underpasses	
42114	Railway and Rail Bridge Construction	42103	Railway construction	
42115	Tunnel Construction	42104	Tunnel construction	
42211	Irrigation System Construction	42201	Irrigation and drainage system construction	
42214	Telecommunications Structures, Navigation Aids and River Signage Construction	42205	Telecommunication civil building construction for transport infrastructure	

KBLI 2017		KBLI 2020		Description*
KBLI Level 5	Activity	KBLI Level 5	Activity	
42215	Air Navigation Telecommunications Construction	42205	Telecommunication Civil Building Construction for Transport Infrastructure	
42216	Railway Signal Telecommunications Construction	42205	Telecommunication Civil Building Construction for Transport Infrastructure	
42911	Water Resources Infrastructure Building Construction	42911	Water Resources Infrastructure Building Construction	
		42921	Hydropower Reservoir Construction	
42912	Non-fishery Harbor Building Construction	42912	Non-Fishery Harbor Building Construction	
		42922	Coastal Protection Construction Services	
42913	Fishery Harbor Building Construction	42913	Fishery Harbor Building Construction	
		42922	Coastal Protection Construction Services	
42919	Other Civil Building Construction Not Otherwise Classified (YTDL)	42918	Civil Building Construction Of Sports Facilities	
		42919	Other Civil Building Construction Not Otherwise Classified (YTDL)	
		42923	Civil Building Construction of Chemical, Petrochemical, Pharmaceutical and Other Industrial Product Processing Facilities	
		42924	Civil Building Construction of Military Facilities And Satellite Launching	
		42929	Other Specialized Civil Construction Not Otherwise Classified (YTDL)	
43110	Demolition	43110	Demolition	Using TSC for ATSF version 3 and national policies: Demolition and site preparation activity EO1, EO2 and EO3: N/A EO4: Green
43120	Site Preparation	43120	Site Preparation	
43211	Electrical Installation	43211	Electrical Installation	Using TSC for ATSF version 3 and national policies:

KBLI 2017		KBLI 2020		Description*
KBLI Level 5	Activity	KBLI Level 5	Activity	
				1. Renewable technologies activity or Installation, maintenance and repair for renewable energy; and 2. Electric vehicle charging stations activity EO1 and EO2: Green EO3 and EO4: N/A
68110	Owned or Leased Real Estate	68111	Owned or Leased Real Estate	Using TSC of ATSF version 3 and national policies: Acquisition and ownership of buildings activity or Real estate/residential area EO1: Green and Transition EO2: Green EO3 and EO 4: N/A
		68112	Venue Rental for MICE Activities and Special Events	
43301	Glass and Aluminium Installation Work	43301	Glass and Aluminium Installation Work	Using TSC of ATSF version 3 and national policies: Energy Efficient Equipment or Installation, Maintenance, Repair for Energy Efficiency Equipment EO1: Green EO2: Green EO3 and EO 4: N/A
43302	Floor, Wall, Sanitary Ware and Ceiling Work	43302	Floor, Wall, Sanitary Ware and Ceiling Work	
43304	Interior Decoration	43304	Interior Decoration	
43305	Exterior Decoration	43305	Exterior Decoration	
43221	Water Pipe Installation (Plumbing)	43221	Water Pipe Installation (Plumbing)	
43224	Air Conditioning and Ventilation Installation	43224	Air Conditioning and Ventilation Installation	
43291	Mechanical Installation	43291	Mechanical Installation	
43217	Electronic Installation	43213	Electronic Installation	
				Using TSC of ATSF version 3 and national policies: Activities of Energy Performance Measurement,

KBLI 2017		KBLI 2020		Description*
KBLI Level 5	Activity	KBLI Level 5	Activity	
				Regulation, and Control and Installation, Maintenance, Energy Performance Improvement, Measurement, Regulation, and Control EO1: Green EO2: Green EO3 and EO 4: N/A

*) Grouping based on similarity of activity type and TSC can be combined.

Table 8-List of Enabling Activities in the C&RE Sector

Enabling activities¹⁴ are activities that enhance the performance of sectors or other activities without posing a risk to the Environmental Objectives. These activities can either be an integral part, or a supporting element of the main building construction activities.

KBLI 2017		KBLI 2020		Description*
KBLI Level 5	Activities	KBLI Level 5	Activities	
41020	Prefabricated Building Installation for Buildings	41020	Prefabrication Construction Services for Buildings	Activities can be part of, or use the TSC for New Building Construction or Renovated Building with the TSC based on national policy . EO1: Green EO2: Green EO3 and EO 4: N/A
42120	Installation of Prefabricated Buildings for Roadway and Railway Construction	42930	Civil Building Prefabrication Construction Services	

¹⁴ Indonesia Taxonomy for Sustainable Finance (2024), <http://gapura.olk.go.id/tkbi2024>

KBLI 2017		KBLI 2020		Description*
KBLI Level 5	Activities	KBLI Level 5	Activities	
42220	Installation of Prefabricated Buildings for Irrigation, Communication, and Waste System Construction			Activities can be part of, or use the TSC For Civil Building Construction, with the TSC based on national policy . EO1: Green EO2: Green EO3 and EO 4: N/A
42915	Dredging	42914	Dredging	Activities can be part of or use TSC for Civil Construction, with the TSC based on national policy . EO1: Green EO2: Green EO3 and EO 4: N/A
43212	Telecommunication Installation	43212	Telecommunication Installation	1. Activities are part of new building construction and using national policies ; and 2. For Early Warning Systems, use TSC EO2 of the ATSF version 3 . EO1: Green EO2: Green EO3 and EO 4: N/A
43213	Marine and River Navigation Installations	43214	Marine, River and Air Navigation Construction Installation Services	
43214	Air Navigation Installation	43214	Marine, River and Air Navigation Construction Installation Services	
43215	Railway Signal and Telecommunication Installations	43215	Railway Signal and Telecommunication Installations	

*) Grouping based on similarity of activity type and TSC can be combined.

E. TSC for C&RE sector

1. Construction of new building

KBLI 2017	Description
F	Construction
41	Building construction
410	Building construction
4101	Building construction
41011	Construction of residential building

KBLI 2017	Description
	This group includes the construction of buildings used for residential purposes, such as houses, apartments, and condominiums. It also includes the construction of residential buildings by real estate developers for the purpose of selling them, as well as activities related to the renovation and modification of residential buildings. Buildings functions: residential, economic, socio-cultural, religious, and special purposes.
41012	Construction of office building This group includes the construction of buildings used for offices, such as office buildings and office houses (<i>rukan</i>). It also includes the construction of office buildings by real estate companies for the purpose of selling them, as well as activities related to the renovation and modification of office buildings. Building function: business
41013	Construction of industrial building This group includes the construction of buildings used for industrial purposes, such as factories and workshops. It also covers activities related to the renovation and modification of industrial buildings. Building function: business
41014	Construction of shopping center This group includes the construction of buildings used for retail purposes, such as malls, department stores, shops, shophouses (<i>ruko</i>), and stalls. It also includes the construction of shophouses by real estate companies for the purpose of selling them, as well as activities related to the renovation and modification of retail buildings. Building function: business
41015	Construction of healthcare center This group includes the construction of buildings used for health facilities, such as hospitals, polyclinics, health centers, and treatment centers. It also includes activities related to the renovation and modification of health facility buildings. Building function: business
41016	Construction of educational building This group includes the construction of buildings used for educational facilities, such as schools, course centers, laboratories, and other educational support buildings. It also includes activities related to the renovation and modification of educational buildings. Building function: socio-cultural
41017	Construction of accommodation building This group includes the construction of buildings used for accommodation, such as hotels, hostels, and inns. It also includes activities related to the renovation and modification of accommodation buildings. Building function: socio-cultural
41018	Construction of entertainment center building This group includes the construction of buildings used for entertainment venues, such as cinemas, art centers, and sports arenas. It also includes the construction of entertainment venue buildings by real estate companies for the purpose of selling them, as well as activities related to the renovation and modification of entertainment and sports buildings.

KBLI 2017	Description
41019	Building function: socio-cultural Construction of other buildings This group includes the construction of buildings used for purposes other than those listed in groups 41011 to 41018, such as places of worship, terminals/stations, monumental buildings, airport buildings, warehouses, and others. It also includes activities related to the modification and renovation of these other types of buildings. - place of worship: religious function - terminal/station, airport: business function - monumental building: business function - data center building - warehouse and others: business purpose.

Classification	Technical Screening Criteria (TSC)	References
	EO1 – Climate Change Mitigation	
Green	The activity of new buildings construction must meet/have: 1. Building Plan Approval (<i>Persetujuan Bangunan Gedung</i>/PBG); and 2. Function-worthy Certificate (<i>Sertifikat Laik Fungsi</i>/SLF); and 3. The building must have the following certification: a. Green Building (BGH) certificate with “<i>Utama</i>” (Advanced) predicate, or b. International certification that achieves “advanced level of certification” for climate change mitigation purposes including the energy category. If the building construction is for housing low-income communities (MBR), then: The activity of new buildings construction must meet/have: 1. Building Plan Approval (<i>Persetujuan Bangunan Gedung</i>/PBG); and 2. Function-worthy certificate (<i>Sertifikat Laik Fungsi</i>/SLF); and 3. The building must have the following certification: a. Green building (BGH) certificate with “<i>Madya</i>” (Intermediate) predicate, or b. International certification with a minimum rating or recognition of EDGE standard or GreenShip “Silver”.	• ATSF version 3 • Government Regulation Number 16 of 2021 on the Implementation of Law No. 28/2002 on Buildings • Regulation of the Minister of Public Works and Housing No. 21/2021 on Green Building Performance Assessment. • Circular Letter of the Director General of Human
Transition	The Activity of New Building Construction must meet/have: 1. Building Plan Approval (<i>Persetujuan Bangunan Gedung</i>/PBG); and 2. Function-worthy certificate (<i>Sertifikat Laik Fungsi</i>/SLF); and 3. The building has been certified through a credible and nationally or internationally recognized GBC program as shown in Table 5.	

Classification	Technical Screening Criteria (TSC)	References
	If the building construction is for housing low-income communities (MBR), then: Construction of new buildings activity must fulfil/meet the following criteria: 1. Building Plan Approval (<i>Peretujuan Bangunan Gedung/PBG</i>); and 2. Function-worthy certificate (<i>Sertifikat Laik Fungsi/SLF</i>); and 3. The building must have the following certification: a. Green building (BGH) certificate; or b. GreenShip Certificate.	Settlements Number 03/SE/DC/2023 concerning Technical Instructions for Green Building Performance Assessment for Building Class 1a.
Notes: Green building certification requirements are adjusted based on the conditions of the activity. Certification can be applied during the programming/technical planning stage, construction implementation stage, utilization stage, or demolition stage. Some of the following terms as per Section C: Definitions Related to Terminology Used in TSC: • "A credible and acknowledged GBC program" • "Advanced level of certification" • "Energy Category"		
EO2 – Climate Change Adaptation		
Green	1. Building Plan Approval (<i>Peretujuan Bangunan Gedung/PBG</i>); and 2. Function-worthy certificate (<i>Sertifikat Laik Fungsi/SLF</i>); and 3. The activities must meet one or more of the following criteria: a. The economic activity has implemented physical and non-physical solutions ("adaptation solutions") that substantially reduce material physical climate risks material to the activity as evidenced by participation in a credible and recognized GBC program that has attained an 'advanced level of certification' for climate change adaptation purposes*; or b. The physical climate risks material to the activity have been identified through a Climate Risk and Vulnerability Assessment (CRVA); or c. Climate projections and impact assessments are based on best practices and available guidance, considering the latest science for vulnerability and risk analysis. These methodologies should align with the Intergovernmental Panel on Climate Change (IPCC) reports on climate change, peer-reviewed scientific publications, and studies conducted using peer-reviewed, open-source, or paying models;	

Classification	Technical Screening Criteria (TSC)	References
	and 4. The adaptation solutions applied must: - not negatively affect adaptation efforts or reduce resilience to physical climate risks for humans, nature, cultural heritage, assets, or other economic activities; - either prioritize nature-based solutions, or rely on sustainable infrastructure; - be consistent with climate change adaptation plans and strategies at the local, sectoral, regional, or national levels; - be monitored and measured against pre-determined indicators, with corrective actions considered if the indicators are not met; or (when physical and consisting of activities for which TSC have been established) meet the TSC and not pose significant hazards to those activities.	
Transition	N/A	
Some of the following terms as per Section C: Definitions Related to Terminology Used in TSC: “A credible and recognized GBC program” “Advanced level of certification *) Certain credible and recognized GBC programs address aspects of climate change adaptation, including flood resilience, heat stress mitigation, and water security. These programs can also support the assessment of specific elements of a building's potential to meet EO2 requirements.		
Green	N/A	
Transition	N/A	
EO3 – Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	
Transition	N/A	
EO4 – Resource Resilience and the Transition to a Circular Economy		
Green	N/A	
Transition	N/A	

2. Construction or renovation of existing building

KBLI 2017	Description
F	Construction
41	Building construction
410	Building construction
4101	Building construction
41011	Construction of residential building

KBLI 2017	Description
	This group includes the construction of buildings used for residential purposes, such as houses, apartments, and condominiums. It also includes the construction of residential buildings by real estate developers for the purpose of selling them, as well as activities related to the renovation and modification of residential buildings. Buildings functions: residential, economic, socio-cultural, religious, and special purposes.
41012	Construction of office building This group includes the construction of buildings used for offices, such as office buildings and office houses (<i>rukan</i>). It also includes the construction of office buildings by real estate companies for the purpose of selling them, as well as activities related to the renovation and modification of office buildings. Building function: business
41013	Construction of industrial building This group includes the construction of buildings used for industrial purposes, such as factories and workshops. It also covers activities related to the renovation and modification of industrial buildings. Building function: business
41014	Construction of shopping center This group includes the construction of buildings used for retail purposes, such as malls, department stores, shops, shophouses (<i>ruko</i>), and stalls. It also includes the construction of shophouses by real estate companies for the purpose of selling them, as well as activities related to the renovation and modification of retail buildings. Building function: business
41015	Construction of healthcare center This group includes the construction of buildings used for health facilities, such as hospitals, polyclinics, health centers, and treatment centers. It also includes activities related to the renovation and modification of health facility buildings. Building function: business
41016	Construction of educational building This group includes the construction of buildings used for educational facilities, such as schools, courses, laboratories, and other educational support buildings. It also includes activities related to the renovation and modification of educational buildings. Building function: socio-cultural
41017	Construction of accommodation building This group includes the construction of buildings used for accommodation, such as hotels, hostels, and inns. It also includes activities related to the renovation and modification of accommodation buildings. Building function: socio-cultural
41018	Construction of entertainment center building This group includes the construction of buildings used for entertainment venues, such as cinemas, art centers, and sports arenas. It also includes the construction of entertainment venue buildings by real estate companies for the purpose of selling them, as well as activities related to the renovation and modification of entertainment and sports buildings.

KBLI 2017	Description
41019	Building function: socio-cultural Construction of other buildings This group includes the construction of buildings used for purposes other than those listed in groups 41011 to 41018, such as places of worship, terminals/stations, monumental buildings, airport buildings, warehouses, and others. It also includes activities related to the alteration and renovation of these other types of buildings. - place of worship: religious function - terminal/station, airport: business function - monument building: business function - data center building - warehouse and others: business function.

Classification	Technical Screening Criteria (TSC)	References
Green	EO1 – Climate Change Mitigation For construction or renovation of existing building: 1. Building Plan Approval (<i>Persetujuan Bangunan Gedung</i>/PBG) has been adjusted to post-renovation conditions in accordance with applicable legal provisions; and 2. Function-worthy certificate (<i>Sertifikat Laik Fungsi</i>/SLF) has been adjusted to post-renovation conditions in accordance with applicable legal provisions; and 3. The activity fulfills the following criteria: a. Activities aim to reduce energy usage intensity (EUI) by at least 30%, with the initial EUI and estimated reductions are based on energy audits conducted by certified energy auditors and/or other methods, including measurement and verification of energy performance by certified verifiers, or: 1) For residential buildings, industrial buildings, healthcare center buildings, educational buildings, entertainment buildings, and other buildings: the 30% reduction in EUI must result from actual energy use reductions (excluding reductions from renewable energy sources) and can be achieved through a series of actions within a maximum of three years; or 2) For office buildings: The building activity has met an EUI of less than 98 kWh/m² per year for buildings with an area of 1,000–5,000 m², or an EUI of less than 129 kWh/m² per year for buildings with an area of more than 5,000 m²; or	• ATSF version 3 • Government Regulation No. 16/2021 on the Implementation of Law No. 28/2022 concerning Building Structures • Minister of Public Works and Housing Regulation No. 21/2021 on the Performance Assessment of Green Buildings • Government Regulation of the Republic of Indonesia

Classification	Technical Screening Criteria (TSC)	References
	3) For shopping center buildings: The building activity has met an EUI of less than 213 kWh/m² per year; or 4) For accommodation buildings: Building construction activities have met EUI requirements according to their classification: i. Budget hotel: less than 97 kWh/m² per year. ii. Three-star hotel: less than 145 kWh/m² per year. iii. Four-star hotel: less than 152 kWh/m² per year. iv. Five-star hotel: less than 168 kWh/m² per year. or b. The building has been recertified: 1) Green Building Certification (GBC) certificate with “<i>Utama</i>” (Advanced) predicate; or 2) International certification that achieves “advanced level of certification” for climate change mitigation purposes including the energy category. and 4. If the activity uses energy sources and/or consumes energy equal to or greater than 500 tons of oil equivalent (TOE) per year, there must be evidence of energy management implementation in accordance with Government Regulation of the Republic of Indonesia No. 33/2023 on Energy Conservation.	No. 33/2023 on Energy Conservation
Transition	For construction or renovation of existing building: 1. Building Plan Approval (<i>Persetujuan Bangunan Gedung/PBG</i>) has been adjusted to post-renovation conditions in accordance with applicable legal provisions; and 2. Function-worthy certificate (<i>Sertifikat Laik Fungsi/SLF</i>) has been adjusted to post-renovation conditions in accordance with applicable legal provisions; and 3. The activity fulfills the following criteria: a. Activities aim to reduce energy usage intensity (EUI) by at least 15%, with the initial EUI and estimated reductions are based on energy audits conducted by certified energy auditors and/or other methods, including measurement and verification of energy performance by certified verifiers; or 1) For residential buildings, industrial buildings, healthcare center buildings, educational buildings, entertainment buildings, and other buildings: the 15% reduction in EUI must result from actual energy use reductions (excluding reductions from renewable energy sources) and can be achieved through a series of actions within a maximum of three years; or	

Classification	Technical Screening Criteria (TSC)	References								
	2) For office buildings: The building activity has met an EUI of less than 98–156 kWh/m² per year for buildings with an area of 1,000–5,000 m², or an EUI of less than 129–153 kWh/m² per year for buildings with an area of more than 5,000 m²; or 3) For shopping centre buildings: The building activity has met an EUI of less than 213–301 kWh/m² per year; or 4) For accommodation buildings: Building construction activities have met EUI requirements according to their classification: i. Budget hotel: less than 97–145 kWh/m² per year ii. Three-star hotel: less than 145–179 kWh/m² per year iii. Four-star hotel: less than 152–187 kWh/m² per year iv. Five-star hotel: less than 168–192 kWh/m² per year or b. The building has been certified through a credible and nationally or internationally recognized GBC program as shown in Table 5. and 4. If the activity uses energy sources and/or consumes energy equal to or greater than 500 tons of oil equivalent (TOE) per year, there must be evidence of energy management implementation in accordance with Government Regulation of the Republic of Indonesia No. 33/2023 on Energy Conservation. <tr><td></td><td> Notes: *) Green building certification requirements are adjusted based on the conditions of the activity. Certification can be applied during the programming/technical planning stage, construction implementation stage, utilization stage, or demolition stage. Some of the following terms as per Section C: Definitions Related to Terminology Used in TSC: • “A credible and recognized GBC program” • “Advanced level of certification” • “Energy Category” </td><td></td></tr> <tr><td></td><td colspan="2">EO2 – Climate Change Adaptation</td></tr> <tr><td>Green</td><td> The activity meets one or more of the following criteria: 1. The economic activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the physical climate risks material to the activity, as evidenced by </td><td>ATSF version 3</td></tr>		Notes: *) Green building certification requirements are adjusted based on the conditions of the activity. Certification can be applied during the programming/technical planning stage, construction implementation stage, utilization stage, or demolition stage. Some of the following terms as per Section C: Definitions Related to Terminology Used in TSC: • “A credible and recognized GBC program” • “Advanced level of certification” • “Energy Category”			EO2 – Climate Change Adaptation		Green	The activity meets one or more of the following criteria: 1. The economic activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the physical climate risks material to the activity, as evidenced by	ATSF version 3
	Notes: *) Green building certification requirements are adjusted based on the conditions of the activity. Certification can be applied during the programming/technical planning stage, construction implementation stage, utilization stage, or demolition stage. Some of the following terms as per Section C: Definitions Related to Terminology Used in TSC: • “A credible and recognized GBC program” • “Advanced level of certification” • “Energy Category”									
	EO2 – Climate Change Adaptation									
Green	The activity meets one or more of the following criteria: 1. The economic activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the physical climate risks material to the activity, as evidenced by	ATSF version 3								

Classification	Technical Screening Criteria (TSC)	References
	participation in a credible and recognized GBC program that has attained an 'advanced level of certification' for climate change adaptation purposes*; or 2. The physical climate risks material to the activity have been identified through a Climate Risk and Vulnerability Assessment (CRVA); or 3. Climate projections and impact assessments are based on best practices and available guidance, considering the latest science for vulnerability and risk analysis. These methodologies should align with the Intergovernmental Panel on Climate Change (IPCC) reports on climate change, peer-reviewed scientific publications, and studies conducted using peer-reviewed, open-source, or paying models; and 4. The adaptation solutions must: - not negatively affect adaptation efforts or reduce resilience to physical climate risks for humans, nature, cultural heritage, assets, or other economic activities; or - either prioritize nature-based solutions, or rely on sustainable infrastructure; or - be consistent with climate change adaptation plans and strategies at the local, sectoral, regional, or national levels; or - be monitored and measured against pre-determined indicators, with corrective actions considered if the indicators are not met; or (when physical and consisting of activities for which TSC have been established) meet the TSC and not pose significant hazards to those activities.	
Transition	N/A	
Some of the following terms as per Section C: Definitions Related to Terminology Used in TSC: "A credible and recognized GBC program" "Advanced level of certification" *) Certain credible and recognized GBC programs address aspects of climate change adaptation, including flood resilience, heat stress mitigation, and water security. These programs can also support the assessment of specific elements of a building's potential to meet EO2 requirements		
Green	N/A	
Transition	N/A	
EO3 – Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	
EO4 – Resource Resilience and the Transition to a Circular Economy		
Green	1. Retain 75% of the existing building structure (including floors and roof deck) and envelope (exterior skin and framing, excluding window assemblies and non-structural roofing materials). Any portion of the building deemed structurally unsound or hazardous must be excluded from the calculation; and	

Classification	Technical Screening Criteria (TSC)	References
	- Utilize existing interior non-structural elements (e.g., interior walls, doors, floor coverings, and ceiling systems) for at least 30% of the completed building, including additions; and - Conduct a Life Cycle Assessment (LCA) of the project structure and envelope that demonstrates a minimum 10% reduction, compared to the baseline building, in at least three of the six impact categories listed in the LEED v4.1 Building Lifecycle Reduction Criteria. One of these categories must include global warming potential or another credible and recognized GBC program.	
Transition	- Retain 45% of the existing building structure (including floors and roof deck) and envelope (exterior skin and framing, excluding window assemblies and non-structural roofing materials). Any portion of the building deemed structurally unsound or hazardous must be excluded from the calculation; and - Utilize existing interior non-structural elements (e.g., interior walls, doors, floor coverings, and ceiling systems) for at least 30% of the completed building, including additions; and - Conduct a Life Cycle Assessment (LCA) of the project structure and envelope that demonstrates a minimum 5% reduction, compared to the baseline building, in at least three of the six impact categories listed in the LEED v4.1 Building Lifecycle Reduction Criteria. One of these categories must include global warming potential or another credible and recognized GBC program	

3. Building Acquisition and Ownership

	Description
KBLI 2017	
L	Real estate
6	Real estate
681	Owned or leased real estate and tourism area
6811	Owned or leased real estate
68110	Owned or leased real estate
	KBLI 2020: 68111 – Owned or leased real estate This group includes the business of buying, selling, renting, and operating real estate, whether owned or leased, such as apartment buildings, residential buildings, and non-residential buildings (e.g. exhibition halls, self-storage facilities, malls, shopping centers, and others). It also includes the provision of houses and flats or apartments, with or without furniture, for permanent use on a monthly or annual basis. Additionally, it covers activities such as selling land, developing buildings for self-operation (renting out spaces within the building), dividing real estate into plots of land without further development, and operating residential areas for movable houses.
	68112 – Venue rental for MICE activities and special events

	This group includes renting out venues and facilities for organizing meetings, incentive travel, conventions, and exhibitions (MICE) or for hosting special events. Rentals are provided for a specified period, covering the preparation, event organization, and dismantling phases. The venues include convention centers, exhibition centers, and special or multi-purpose venues.		
Classification	Technical Screening Criteria (TSC)		References
	EO1 – Climate Change Mitigation		
Green	The real estate/residential area activity must meet/have: 1. Building Plan Approval (<i>Persetujuan Bangunan Gedung</i>/PBG); and 2. Function-worthy certificate (<i>Sertifikat Laik Fungsi</i>/SLF); and 3. The building has been certified under: a. Green Building (BGH) certificate with “<i>Utama</i>” (Advanced) predicate; or b. International certification that achieves “advanced level of certification” for climate change mitigation purposes including the energy category. If the Real Estate or a Residential Area activity includes houses for Low-Income Communities (MBR), then: 1. Building Plan Approval (<i>Persetujuan Bangunan Gedung</i>/PBG); and 2. Function-worthy certificate (<i>Sertifikat Laik Fungsi</i>/SLF); and 3. It has been certified as: a. Green Building (BGH) with a minimum rating or recognized as “<i>Madya</i>” (intermediate) level; or b. Have a certification with a minimum rating or recognition of EDGE “standard” or GreenShip “Silver”.		• ATSF version 3 • Government Regulation No. 16/2021 on the Implementation of Law No. 28/2022 concerning Building Structures • Regulation of the Minister of Public Works and Housing No. 21/2021 on the Assessment of Green Building Performance • Government Regulation of the Republic of Indonesia No. 33/2023 on Energy Conservation. • Circular Letter of the Director General of Human Settlements Number 03/SE/DC/2023 concerning Technical
Transition	The real estate/residential area activity must meet/have: 1. Building Plan Approval (<i>Persetujuan Bangunan Gedung</i>/PBG); and 2. Function-worthy certificate (<i>Sertifikat Laik Fungsi</i>/SLF); and 3. The building has been certified through a credible GBC program that is nationally or internationally recognized as outlined in Table 5: and 4. An energy efficiency improvement plan for the building, with the provision that its implementation will result in a reduction in the current energy usage intensity (EUI). If the Real Estate or a Residential Area activity includes houses for Low-Income Communities (MBR), then: 1. Building Plan Approval (<i>Persetujuan Bangunan Gedung</i>/PBG); and 2. Function-worthy certificate (<i>Sertifikat Laik Fungsi</i>/SLF); and		

Classification	Technical Screening Criteria (TSC)	References
	3. The building has been certified - Green Building (BGH); or - Greenhip certificate.	Instructions for Green Building Performance Assessment for Building Class 1a
	*) Green building certification requirements are adjusted based on the conditions of the activity. Certification can be applied during the programming/technical planning stage, construction implementation stage, utilization stage, or demolition stage. Some of the following terms as per Section C: Definitions Related to Terminology Used in TSC: • "A credible and recognized GBC program" • "Advanced level of certification" • "Energy Category"	
	EO2 – Climate Change Adaptation	
Green	The activity meets one or more of the following criteria: - The economic activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the physical climate risks material to the activity as evidenced by participation in a credible and recognized GBC program that has attained an 'advanced level of certification' for climate change adaptation purposes*; or - The physical climate risks material to the activity have been identified through a Climate Risk and Vulnerability Assessment (CRVA); or - Climate projections and impact assessments are based on best practices and available guidance, considering the latest science for vulnerability and risk analysis. These methodologies should align with the Intergovernmental Panel on Climate Change (IPCC) reports on climate change, peer-reviewed scientific publications, and studies conducted using peer-reviewed, open-source, or paying models. and - The adaptation solutions must: - not negatively affect adaptation efforts or reduce resilience to physical climate risks for humans, nature, cultural heritage, assets, or other economic activities; or - either prioritize nature-based solutions, or rely on sustainable infrastructure; or - be consistent with climate change adaptation plans and strategies at the local, sectoral, regional, or national levels; or - be monitored and measured against pre-determined indicators, with corrective actions considered if the indicators are not met; or	ATSF version 3

Classification	Technical Screening Criteria (TSC)		References
	e. (when physical and consisting of activities for which TSC have been established) meet the TSC and not pose significant hazards to those activities.		
Transition	N/A		
Some of the following terms as per Section C: Definitions Related to Terminology Used in TSC:			
	• “A credible and recognized GBC program” • “Advanced level of certification		
*) Certain credible and recognized GBC programs address aspects of climate change adaptation, including flood resilience, heat stress mitigation, and water security. These programs can also support the assessment of specific elements of a building's potential to meet EO2 requirements			
EO3 – Protection of Healthy Ecosystems and Biodiversity			
Green	N/A		
Transition	N/A		
EO4 – Resource Resilience and the Transition to a Circular Economy			
Green	N/A		
Transition	N/A		

4. Construction of civil building

KBLI 2017	Description
F	Construction
42	Construction of civil building
421	Railway and roadway construction
4211	Railway and roadway construction
42111	Highway construction This group includes construction, improvement, maintenance, and repair of roads, highways, and toll roads. It also covers activities related to the construction, improvement, and maintenance of supporting and complementary road infrastructure, such as fences/retaining walls, road drainage, road markings, and signage.
42112	Bridge and overpass construction This group includes the construction, improvement, maintenance, and repair of bridges and overpasses. It also encompasses the construction, improvement, and maintenance of supporting and complementary infrastructure for bridges and flyovers, such as fences/retaining walls, road drainage, road markings, and signage.
42114	Railway and rail bridge construction This group includes the construction, maintenance, and repair of railways and railway bridges, such as those used for trains.

42115	Tunnel construction This group includes the construction, maintenance, and repair of tunnel structures built underwater, through hills or mountains, and below the ground surface.	
Classification	Technical Screening Criteria (TSC)	References
Green	EO1 – Climate Change Mitigation Activity for highway construction The activity must fulfil the following criteria: - Roadworthiness requirements in accordance with Law No. 2/2022 concerning the Second Amendment of Law No. 38/2004 concerning Roads (and its amendments). - The construction has been certified with: - Sustainable Construction Certificate with the “Utama” (Advanced) rating, in accordance with Government Regulation No. 14/2021 concerning the Amendment of Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services, and the Regulation of the Minister of Public Works and Housing No. 9/2021 on Guidelines for the Implementation of Sustainable Construction. It must also adhere to the technical requirements outlined in the Circular of the Director General of Highways (<i>Direktur Jenderal Bina Marga</i>) of the Ministry of Public Works and Housing No. 29/SE/Db of 2023 concerning Guidelines for Technical Requirements for Sustainable Construction in the Road Sector (and its amendments); - or - Certified under one of the Green Road USA, INVEST, GreenLites, I-Last programs for highways, or similar certification programs for other types of construction that demonstrate requirements consistent with those mentioned in point 2 with an advanced level of certification. - Construction activities are not dedicated for the extraction, storage, production, or transportation of fossil fuels. Construction of bridges and flyovers, railways and railway bridges, or tunnels The activity must fulfill the following criteria: - Passes the Functional Feasibility Test in accordance with the Regulation of the Minister of Public Works and Housing No. 10/2022 on the Implementation of Bridge and Road Tunnel Safety (and its amendments); and	- Law No. 2 of 2022 concerning the second amendment to Law No. 38 of 2004 concerning Roads (and its amendments) - Government Regulation No. 14/2021 amending Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services - Regulation of the Minister of Public Works and Housing No. 10 of 2022 concerning the Implementation of Bridge and Road Tunnel Safety - Regulation of the Minister of Public Works and Housing No. 9/2021 on Guidelines for the Implementation of Sustainable Construction - Circular Letter of the Director General of Highways PUPR No.

Classification	Technical Screening Criteria (TSC)	References
	2. The construction meets or has achieved the “Utama” (Advanced) predicate of Sustainable Construction Certificate rating based on Government Regulation No. 14/2021 concerning the Amendment of Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services, and the Regulation of the Minister of Public Works and Housing No. 9/2021 on Guidelines for the Implementation of Sustainable Construction (and its amendments); and 3. Construction activities are not dedicated for the extraction, storage, production, or transportation of fossil fuels.	29/SE/Db of 2023 on Guidelines for Technical Requirements for Sustainable Construction in the Road Sector
Transition	Activity for highway construction The activity must fulfil the following criteria: 1. Roadworthiness requirements in accordance with Law No. 2/2022 concerning the second amendment of Law No. 38/2004 concerning Roads (and its amendments); and 2. The construction has been certified: a. A Sustainable Construction Certificate in accordance with Government Regulation No. 14/2022 concerning the Amendment of Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services, and the Regulation of the Minister of Public Works and Housing No. 9/2021 on Guidelines for the Implementation of Sustainable Construction (and its amendments); or b. Certified under one of the Green Road USA, INVEST, GreenLites, I-Last programs for highways. 3. Construction activities are not dedicated for the extraction, storage, production, or transportation of fossil fuels. Construction of bridges and flyovers, railways and railway bridges, or tunnels must fulfil the following criteria: 1. The roadworthiness requirements in accordance with Law No. 2/2022 concerning the second amendment to Law No. 38/2004 concerning Roads (and its amendments); and 2. The activity has a Sustainable Construction Certificate in accordance with Government Regulation No. 14/2021 and the Regulation of the Minister of Public Works and Housing No. 9/2021 on Guidelines for the Implementation of Sustainable Construction (and its amendments) and	

Classification	Technical Screening Criteria (TSC)	References
	3. Construction activities are not dedicated for the extraction, storage, production, or transportation of fossil fuels.	
EO2 – Climate Change Adaptation		
Green	The activity meets one or more of the following criteria: 1. The economic activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the physical climate risks material to the activity; or 2. The physical climate risks material to the activity have been identified through a Climate Risk and Vulnerability Assessment (CRVA); or 3. Climate projections and impact assessments are based on best practices and available guidance, considering the latest science for vulnerability and risk analysis. These methodologies should align with the Intergovernmental Panel on Climate Change (IPCC) reports on climate change, peer-reviewed scientific publications, and studies conducted using peer-reviewed, open-source, or paying models. 4. The adaptation solution must: a. not negatively affect adaptation efforts or reduce resilience to physical climate risks for humans, nature, cultural heritage, assets, or other economic activities; or b. either prioritize nature-based solutions, or rely on sustainable infrastructure; or c. be consistent with climate change adaptation plans and strategies at the local, sectoral, regional, or national levels; or d. be monitored and measured against pre-determined indicators, with corrective actions considered if the indicators are not met; or a. (when physical and consisting of activities for which TSC have been established) meet the TSC and not pose significant hazards to those activities.	ATSF version 3
Transition	N/A	
EO3 – Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	
Transition	N/A	
EO4 – Resource Resilience and the Transition to a Circular Economy		
Green	N/A	
Transition	N/A	
KBLI 2017	Description	

F	Construction
42	Civil building construction
422	Construction of irrigation, communication and sewage system
4221	Construction of irrigation, communication and sewage system
42211	Construction of irrigation system This group includes the construction, improvement, maintenance, and repair of water network systems, irrigation canals, reservoirs, siphons, and irrigation drainage systems.
42214	Telecommunications structures, navigation aids and river signage construction This group includes activities related to the construction, maintenance, and repair of telecommunication structures, marine navigation aids, and river signs, such as lighthouses, lighthouse buoys, harbor signal lights, and other components of lighthouses.
42215	Air navigation telecommunications construction This group includes the activities of constructing, maintaining, and repairing air navigation telecommunication buildings, including radar transmitter/receiver buildings, antenna buildings, and similar structures.
42216	Railway signal telecommunications construction This group includes the activities of constructing, maintaining, and repairing railway signal and telecommunication buildings.

Classification	Technical Screening Criteria (TSC)	References
	EO1 – Climate Change Mitigation	
Green	- The construction activity has a Sustainable Construction Certificate with the “Utama” (Advanced) predicate based on Government Regulation No. 14/2021 concerning the Amendment of Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services, and the Regulation of the Minister of Public Works and Housing No. 9/2021 on Guidelines for the Implementation of Sustainable Construction (and its amendments); and - Construction activities are not dedicated for the extraction, storage, production, or transportation of fossil fuels.	- Government Regulation No. 14/2021 concerning the Amendment of Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services - Regulation of the Minister of Public Works and Housing No. 9/2021 on Guidelines for the Implementation of Sustainable Construction (and its amendment)
Transition	The construction fulfills/has a Sustainable Construction Certificate based on Government Regulation No. 14/2021 concerning the Amendment Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services, and the Regulation of the Minister of Public Works and Housing No. 9/2021 on Guidelines for the Implementation of Sustainable Construction (and its amendments); and	

Classification	Technical Screening Criteria (TSC)	References
	2. Construction activities are not specifically intended for the extraction, storage, production, or transportation of fossil fuels	
EO2 – Climate Change Adaptation		
Green	The activity meets one or more of the following criteria: 1. The economic activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the physical climate risks material to the activity; or 2. The physical climate risks material to the activity have been identified through a Climate Risk and Vulnerability Assessment (CRVA); or 3. Climate projections and impact assessments are based on best practices and available guidance, considering the latest science for vulnerability and risk analysis. These methodologies should align with the Intergovernmental Panel on Climate Change (IPCC) reports on climate change, peer-reviewed scientific publications, and studies conducted using peer-reviewed, open-source, or paying models; - and 4. The adaptation solution must: a. not negatively affect adaptation efforts or reduce resilience to physical climate risks for humans, nature, cultural heritage, assets, or other economic activities; or b. either prioritize nature-based solutions, or rely on sustainable infrastructure; or c. be consistent with climate change adaptation plans and strategies at the local, sectoral, regional, or national levels; or d. be monitored and measured against pre-determined indicators, with corrective actions considered if the indicators are not met; or e. (when physical and consisting of activities for which TSC have been established) meet the TSC and not pose significant hazards to those activities.	ATSF version 3
Transition	N/A	
EO3 – Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	
Transition	N/A	
EO4 – Resource Resilience and the Transition to a Circular Economy		
Green	N/A	
Transition	N/A	

KBLI 2017	Description
F	Construction
42	Civil building construction
429	Other civil building construction
4291	Other civil building construction
42911	Construction of water resources infrastructure building This group includes the construction, improvement, maintenance, and repair of water resources infrastructure such as dams, weirs, reservoirs, water gates, gutters, check dams, flood control embankments, sea walls, cribs, and similar structures.
42912	Construction of non-fishery harbor building KBLI 2020: 42912 – Construction of non-fishery harbor building This group includes the construction, maintenance, and repair of docks, port facilities, breakwaters, and similar infrastructure for non-fishing ports. It also includes the construction of waterways or canals, port and river lane facilities, docks, locks (e.g. Panama Canal lock, Hoover Dam), and other related structures.
42913	42922 – Coastal protection construction services This group includes activities related to the construction, maintenance, and/or reconstruction of coastal protection structures including groins, breakwaters, seawalls, artificial headlands, beach nourishment, artificial reefs and other similar work.
42913	Construction of fishery harbor building KBLI 2020: 42913 – Construction of fishery harbor building This group includes the construction, maintenance, and repair of port buildings, docks, port facilities, breakwaters, and similar structures at fishing ports. It also includes the construction of waterways or canals, port and river route facilities, docks, locks (e.g. Panama Canal lock, Hoover Dam), fish auction places, and related infrastructure.
42913	42922 – Coastal protection construction services This group includes activities related to the construction, maintenance, and/or reconstruction of coastal protection structures, including groins, breakwaters, seawalls, artificial headlands, beach nourishment, artificial reefs and other similar work.

Classification	Technical Screening Criteria (TSC)	References
	EO1 – Climate Change Mitigation	

Classification	Technical Screening Criteria (TSC)	References
Green	For the construction of water resources infrastructure buildings including dams: 1. The activity must meet or have a Sustainable Construction Certificate with “<i>Utama</i>” (Advanced) predicate based on Government Regulation No. 14/2021 concerning the Amendment of Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services, and the Regulation of the Minister of Public Works and Housing No. 9/2021 on Guidelines for the Implementation of Sustainable Construction (and its amendments); and 2. Specifically, the construction and management of dams, the activity must meet the rules and requirements of the Regulation of the Minister of Public Works and Housing Number 27/PRT/M/2015 concerning Dams (and its amendments); and 3. Construction activities are not dedicated for the extraction, storage, production, or transportation of fossil fuels. For construction of non-fishing port buildings and/or fishing ports 1. The construction must have a Sustainable Construction Certificate with “<i>Utama</i>” (Advanced) predicate based on Government Regulation No. 14/2021 concerning the Amendment of Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services, and the Regulation of the Minister of Public Works and Housing No. 9/2021 on Guidelines for the Implementation of Sustainable Construction (and its amendments); and 2. Construction activities are not dedicated for the extraction, storage, production, or transportation of fossil fuels.	• Government Regulation No. 14/2021 concerning the Amendment of Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services • Regulation of the Minister of Public Works and Housing No. 9/2021 on Guidelines for the Implementation of Sustainable Construction (and its amendment) • Regulation of the Minister of Public Works and Housing No. 27/PRT/M/2015 of 2015 on Dams (and its amendment)
Transition	For the construction of water resources infrastructure buildings including dams: 1. The construction must have a Sustainable Construction Certificate based on Government Regulation No. 14/2021 concerning the Amendment of Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services, and the Regulation of the Minister of Public Works and Housing No. 9/2021 on Guidelines for the Implementation of Sustainable Construction (and its amendments); and 2. Specifically for the construction and management of dams, the activity must adhere to the rules and requirements of the Regulation of the Minister of Public Works and Housing Number 27/PRT/M/2015 concerning Dams (and its amendments);	

Classification	Technical Screening Criteria (TSC)	References
	and 3. Construction activities are not dedicated for the extraction, storage, production, or transportation of fossil fuels. For the construction of non-fishing port buildings or fishing ports, The construction must meet or have: 1. A Sustainable Construction Certificate based on Government Regulation No. 14/2021 concerning the Amendment of Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services, and the Regulation of the Minister of Public Works and Housing No. 9/2021 on Guidelines for the Implementation of Sustainable Construction (and its amendments); and 2. Construction activities are not dedicated for the extraction, storage, production, or transportation of fossil fuels.	
Green	E02 – Climate Change Adaptation The activity meets one or more of the following criteria: 1. The economic activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the physical climate risks material to the activity; or 2. The physical climate risks material to the activity have been identified through a Climate Risk and Vulnerability Assessment (CRVA); or 3. Climate projections and impact assessments are based on best practices and available guidance, considering the latest science for vulnerability and risk analysis. These methodologies should align with the Intergovernmental Panel on Climate Change (IPCC) reports on climate change, peer-reviewed scientific publications, and studies conducted using peer-reviewed, open-source, or paying models; and 4. The adaptation solution must: a. not negatively affect adaptation efforts or reduce resilience to physical climate risks for humans, nature, cultural heritage, assets, or other economic activities; or b. either prioritize nature-based solutions, or rely on sustainable infrastructure; or c. be consistent with climate change adaptation plans and strategies at the local, sectoral, regional, or national levels; or d. be monitored and measured against pre-determined indicators, with corrective actions considered if the indicators are not met; or	ATSF version 3

Classification	Technical Screening Criteria (TSC)		References
	e. (when physical and consisting of activities for which TSC have been established) meet the TSC and not pose significant hazards to those activities.		
Transition	N/A		
EO3 – Protection of Healthy Ecosystems and Biodiversity			
Green	N/A		
Transition	N/A		
EO4 – Resource Resilience and the Transition to a Circular Economy			
Green	N/A		
Transition	N/A		

KBLI 2017		Description
F	Construction	
42	Construction of civil building	
422	Other civil building construction	
4221	Other civil building construction	
42211	Other civil building construction not otherwise classified (YTDL) This group includes the construction, maintenance, and repair of other civil buildings not covered by groups 42901 to 42905, such as the construction of sports fields, outdoor sports facilities, parking lots, and other facilities in residential areas which are not buildings. It also includes land subdivision for developments, such as additional roads, public infrastructure, and other facilities. KBLI 2020: 42918 – Civil construction of sports facilities This group includes the construction, maintenance, and/or reconstruction of sports facilities, such as stadium buildings, sports fields (for football, baseball, rugby, car and motorcycle racing tracks), basketball courts, hockey rinks, tennis courts, golf courses, swimming pools (including Olympic-standard galvanized stainless steel pools), athletic tracks, archery fields, sports arenas, and other similar facilities. 42919 – Other civil building construction not otherwise classified (YTDL) This group includes the construction, maintenance, and repair of other civil buildings not included in groups 42911 to 42918, such as parking lots and other facilities in residential areas which are not buildings. It also includes land subdivision for developments, such as additional roads, public infrastructure, and other amenities. This group also covers the procurement and construction of microelectronic facilities and processing plants, such as those producing microprocessors, silicon chips and wafers, microcircuits, and semiconductors, as well as textile and clothing processing plants, iron and steel processing plants, and other processing facilities.	

KBLI 2017	Description
	42923 – Civil engineering construction of chemical, petrochemical, pharmaceutical, and other industrial product processing facilities This group includes activities related to the construction, maintenance, and/or reconstruction of basic chemical processing plants, fertilizer production facilities, plastic factories, rubber processing plants, agrochemical processing plants, and other chemical processing plants, including pharmaceutical and petrochemical product processing facilities. 42924 – Civil building construction of military facilities and satellite launching sites This group includes activities related to the construction, maintenance, and/or reconstruction of buildings for military facilities, such as fortifications, shelters, and military testing centers. It also includes the construction of satellite launch sites. 42929 – Other specified civil construction not otherwise classified (YTDL) This group includes activities related to the construction, maintenance, and/or reconstruction of other specialized civil buildings not included in groups 42921 to 42924.

Classification	Technical Screening Criteria (TSC)	References
	EO1 – Climate Change Mitigation	
Green	- The construction activity must have a Sustainable Construction Certificate with “Utama” (Advanced) predicate based on Government Regulation No. 14/2021 concerning the Amendment of Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services, and the Regulation of the Minister of Public Works and Housing No. 9/2021 on Guidelines for the Implementation of Sustainable Construction (and its amendments); and - Construction activities are not dedicated for the extraction, storage, production, or transportation of fossil fuels.	- Government Regulation No. 14/2021 concerning the Amendment of Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services - Regulation of the Minister of Public Works and Housing No. 9/2021 on Guidelines for the Implementation of Sustainable Construction (and its amendment)
Transition	- The construction meets or has received a Sustainable Construction Certificate based on Government Regulation No. 14/2021 concerning the Amendment of Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services, and the Regulation of the Minister of Public Works and Housing No. 9/2021 on Guidelines for the Implementation of Sustainable Construction (and its amendments); and - Construction activities are not dedicated for the extraction, storage, production, or transportation of fossil fuels.	
	EO2 – Climate Change Adaptation	
Green	The activity must meet or have one or more of the following criteria:	ATSF version 3

Classification	Technical Screening Criteria (TSC)	References
	1. The economic activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the physical climate risks material to the activity; or 2. The physical climate risks material to the activity have been identified through a Climate Risk and Vulnerability Assessment (CRVA); or 3. Climate projections and impact assessments are based on best practices and available guidance, considering the latest science for vulnerability and risk analysis. These methodologies should align with the Intergovernmental Panel on Climate Change (IPCC) reports on climate change, peer-reviewed scientific publications, and studies conducted using peer-reviewed, open-source, or paying models; - and 4. The adaptation solution must: a. not negatively affect adaptation efforts or reduce resilience to physical climate risks for humans, nature, cultural heritage, assets, or other economic activities; or b. either prioritize nature-based solutions, or rely on sustainable infrastructure; or c. be consistent with climate change adaptation plans and strategies at the local, sectoral, regional, or national levels; or d. be monitored and measured against pre-determined indicators, with corrective actions considered if the indicators are not met; or e. (when physical and consisting of activities for which TSC have been established) meet the TSC and not pose significant hazards to those activities.	
Transition	N/A	
EO3 – Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	
Transition	N/A	
EO4 – Resource Resilience and the Transition to a Circular Economy		
Green	N/A	
Transition	N/A	

5. Demolition and site preparation

Description	
KBLI 2017	
F	Construction
43	Special construction

KBLI 2017		Description
431		Demolition and site preparation
4311		Demolition
43110		Demolition This group includes the business of demolishing and leveling buildings or other structures, along with site cleanup. It excludes land preparation for oil and gas mining.
4312		Site preparation
43120		Site preparation This group includes land preparation for subsequent construction activities, such as highways, building works, agricultural civil works, transportation, and other land preparation efforts, including hill blasting, test drilling, backfilling, leveling, earthmoving, and coastal reclamation, as well as the construction of drainage channels. Activities in this group also include site clearing for buildings; land clearing (such as excavation, backfilling, construction site leveling, trench digging, rock removal, crushing, or blasting); and excavation, drilling, and sampling for construction, geophysical, geological, or similar purposes. It also covers land preparation for mining, including embankment removal and development, as well as land preparation and mineral properties, excluding land preparation for oil and gas mining. In addition, it includes drainage construction and drying of agricultural or forested land.

Classification	Technical Screening Criteria (TSC)		References
	EO1 – Climate Change Mitigation		
Green	N/A		
Transition	N/A		
	EO2 – Climate Change Adaptation		
Green	N/A		
Transition	N/A		
	EO3 – Protection of Healthy Ecosystems and Biodiversity		
Green	N/A		
Transition	N/A		
	EO4 – Resource Resilience and the Transition to a Circular Economy		
Green	The activity must have and implement a Technical Demolition Plan (RTB) document ; or 1. Before starting demolition activities, the following aspects must be discussed and agreed upon with the client: a. define key performance indicators and target ambition level; and b. identify project-specific constraints that may compromise the target ambition level (such as time, labor, and space/location) and describe how these constraints will be minimized; and		• ATSF version 3 • Regulation of the Minister of Public Works and Housing No. 21/2021 on the Assessment of Green Building Performance

Classification	Technical Screening Criteria (TSC)	References
	c. give details of pre-demolition audit procedures; and d. provide an outline of a waste management plan that prioritizes selective deconstruction, decontamination, and source separation of waste streams. If these actions are not prioritized, an explanation must be provided to justify why selective deconstruction, decontamination, or source separation of waste streams is not technologically feasible for the project. Cost or financial considerations are not acceptable reasons for avoiding compliance with this requirement. and 2. Activity operator to conduct pre-demolition audit: a. All demolition waste generated during demolition activities must be managed in accordance with applicable waste regulations; and b. Meet the national requirement of 40% for the reuse and recycling of non-hazardous demolition waste generated at the demolition site. Definition: <i>Reuse of demolition materials refers to the practice of salvaging and reusing materials and construction components from a demolished structure. These materials can be incorporated into the redevelopment of the same site or made available for use in other construction projects.</i> <i>Recycling of demolition materials involves the collection, sorting, and reprocessing of materials and components discarded during the demolition of a building. Materials such as concrete, wood, metal, and other construction materials are treated to remove contaminants and transformed into new construction materials or products.</i>	Regulation of the Minister of Public Works and Housing Number 18 of 2021 on Standards for Demolition of Buildings
Transition	N/A	

6. Renewable Technologies - Electrical installation

KBLI 2017	Description
F	Construction
43	Special construction
432	Demolition and site preparation
4321	Demolition
43211	Electrical installation This group includes activities related to the construction, installation, maintenance, and reconstruction of electrical installations in power plants, transmission systems, substations, electric power distribution, and power supply systems. It also covers electrical installations in

	buildings for both residential and non-residential purposes, such as the installation of low-voltage electrical networks. Additionally, it includes the installation and maintenance of electrical systems in civil infrastructure, such as highways, railways, and airports.
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Classification	Technical Screening Criteria (TSC)	References
	EO1 – Climate Change Mitigation	
Green	For the activity of installation, maintenance, repair and upgrades of renewable energy systems as part of a residential building: 1. installation, maintenance, and repair of solar photovoltaic systems and supporting technical equipment; or 2. installation, maintenance, and repair of solar hot water panels and supporting technical equipment; or 3. the activity that includes the installation, maintenance, and repair of heat pump systems is directed to advance the use of renewable energy for heating and cooling purposes; or 4. installation, maintenance, and repair of wind turbines and supporting technical equipment; or 5. installation, maintenance, and repair of solar collectors and supporting technical equipment; or 6. installation, maintenance, and repair of heat or electricity storage units and supporting technical equipment; or 7. installation, maintenance, and repair of high-efficiency micro combined heat and power plants; or 8. installation, maintenance, and repair of heat exchanger/recovery systems. For the activity of an electric vehicle charging station The installation, maintenance, and repair of electric vehicle charging stations.	• ATS version 3 • National Policies
Transition	N/A	
	EO2 – Climate Change Adaptation	
Green	The activity has one or more of the following criteria: 1. The economic activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the physical climate risks material to the activity; or 2. The physical climate risks material to the activity have been identified through a Climate Risk and Vulnerability Assessment (CRVA); or 3. Climate projections and impact assessments are based on best practices and available guidance, considering the latest science for vulnerability and risk analysis. These methodologies should align with the Intergovernmental Panel on Climate Change (IPCC) reports on climate change, peer-	ATS version 3

Classification	Technical Screening Criteria (TSC)	References
	reviewed scientific publications, and studies conducted using peer-reviewed, open-source, or paying models. and 4. The adaptation solution must: a. not negatively affect adaptation efforts or reduce resilience to physical climate risks for humans, nature, cultural heritage, assets, or other economic activities; or b. either prioritize nature-based solutions, or rely on sustainable infrastructure; or c. be consistent with climate change adaptation plans and strategies at the local, sectoral, regional, or national levels; or d. be monitored and measured against pre-determined indicators, with corrective actions considered if the indicators are not met; or e. (when physical and consisting of activities for which TSC have been established) meet the TSC and not pose significant hazards to those activities.	
Transition	N/A	
EO3 – Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	
Transition	N/A	
EO4 – Resource Resilience and the Transition to a Circular Economy		
Green	N/A	
Transition	N/A	

7. Energy Efficient Equipment

KBLI 2017	Description
F	Construction
43	Construction of civil building
43	Road and railroad construction
433	Road and railroad construction
43301	Glass and aluminum installation work This group includes glass and aluminum installation activities to complete residential and non-residential buildings. It also includes the installation of doors (excluding automatic and revolving doors), windows, and door and window frames made of wood or other materials.
43302	Floor, wall, sanitary ware and ceiling works

	This group includes activities related to the installation of flooring, walls, sanitary equipment, and ceilings to complete residential or non-residential buildings. It also includes the application of interior and exterior plaster (coating), including related lathing materials, interior finishing such as ceilings, wood wall coverings, partitions/screens that can be disassembled and reassembled, as well as tiling. It also covers the installation of ceramic, concrete wall or floor tiles, parquet (patterned wood flooring), wood flooring, linoleum, carpet, rubber or plastic flooring, terrazzo, marble, granite, and wallpaper.
43304	Interior design This group includes activities related to the installation of flooring, walls, sanitary equipment, and ceilings to complete residential or non-residential buildings. It also includes the application of interior and exterior plaster (coating), including related lathing materials, interior finishing such as ceilings, wood wall coverings, partitions/screens that can be disassembled and reassembled, as well as tiling. It also covers the installation of ceramic, concrete wall or floor tiles, parquet (patterned wood flooring), wood flooring, linoleum, carpet, rubber or plastic flooring, terrazzo, marble, granite, and wallpaper.
43305	Exterior design This group includes exterior decoration activities for residential and non-residential buildings, such as garden construction. Exterior decoration work involves coating the exteriors of buildings or other construction projects with plaster, including related lathing materials, as well as covering exterior walls with ceramics, terrazzo, marble, granite, glass, natural stone, and other materials.

Technical Screening Criteria (TSC)		References
E01 – Climate Change Mitigation		
Green	The activity of installation, maintenance, or repair of energy efficient equipment: The activity supports the activity of new building construction, renovation, real estate, residential area, and civil building construction activity with the “Green” classification and the activity: 1. Adds insulation to existing envelope components, such as external walls (including green walls), roofs (including green roofs), attics, basements, and ground floors (including measures to ensure air tightness, reduce thermal bridges, and scaffolding), as well as using products to apply insulation to the building envelope (including mechanical devices and adhesives); or 2. Replaces existing windows with new energy-efficient windows; or 3. Replaces existing external doors with new energy-efficient doors; or 4. Installs and replaces energy-efficient lighting; or 5. Installs, replaces, maintains, and repairs heating, ventilation, and air-conditioning (HVAC) systems and water heaters, including equipment associated with space heating services using efficient technology.	• ATSF version 3 • Government Regulation No. 16/2021 on the Implementation of Law No. 28/2002 concerning Building Construction • Government Regulation No. 14/2021 concerning the Amendment of Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services
Transition	N/A	
E02 – Climate Change Adaptation		

Classification	Technical Screening Criteria (TSC)	References
Green	The activity meets one or more of the following criteria: 1. The economic activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the physical climate risks material to the activity; or 2. The physical climate risks material to the activity have been identified through a Climate Risk and Vulnerability Assessment (CRVA); or 3. Climate projections and impact assessments are based on best practices and available guidance, considering the latest science for vulnerability and risk analysis. These methodologies should align with the Intergovernmental Panel on Climate Change (IPCC) reports on climate change, peer-reviewed scientific publications, and studies conducted using peer-reviewed, open-source, or paying models. and 4. The adaptation solution must: a. not negatively affect adaptation efforts or reduce resilience to physical climate risks for humans, nature, cultural heritage, assets, or other economic activities; or b. either prioritize nature-based solutions, or rely on sustainable infrastructure; or c. be consistent with climate change adaptation plans and strategies at the local, sectoral, regional, or national levels; or d. be monitored and measured against pre-determined indicators, with corrective actions considered if the indicators are not met; or e. (when physical and consisting of activities for which TSC have been established) meet the TSC and not pose significant hazards to those activities.	ATSF version 3
Transition	N/A	
EO3 – Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	
Transition	N/A	
EO4 – Resource Resilience and the Transition to a Circular Economy		
Green	N/A	
Transition	N/A	

KBLI 2017	Description
F	Construction
43	Special construction
432	Electrical system installation, water (plumbing), and other construction installations

KBLI 2017	Description
4321	Electrical system installation
4322	Plumbing, Heating and Cooling Installation
43221	Water installation (Plumbing) This group includes activities for installing clean water, wastewater, and drainage systems in both residential and non-residential buildings. It also includes maintenance and repair activities for waterline installations
43224	Air Conditioning and Ventilation Installation This group includes specific activities for the installation and maintenance of air conditioning (AC) facilities in buildings, both residential and non-residential.

Classification	Technical Screening Criteria (TSC)	References
Green	EO1 – Climate Change Mitigation For the activity of installation, maintenance, plumbing and repair of air conditioning and ventilation equipment The activity supports the activity of new building construction, renovation, real estate, and residential area with the "Green" classification and the activity includes one of the following: 1. Installs, replaces, maintains, and repairs heating, ventilation, and air-conditioning (HVAC) systems and water heaters, including equipment related to space heating services using efficient technology*; or 2. Installs water-saving sanitary equipment (water fixtures) that comply with the requirements of the Regulation of the Minister of Public Works and Housing No. 21/2021 concerning the Assessment of Green Building Performance; or 3. Install water and energy-efficient kitchen and bathroom fittings that meet the following technical specifications: a. The flow rate is recorded at the standard reference pressure of 3 -0/+ 0.2 bar, or 0.1 -0/+ 0.02 bar for products limited to low pressure. b. The flow rate at a lower pressure of 1.5 - 0.2 bar is $\geq 60\%$ of the maximum available flow rate. c. For mixer showers, the reference temperature is $38 \pm 1^\circ\text{C}$. d. If the flow rate must be lower than 6 L/min, it should comply with the rules set out in point 2. e. For faucets, the test procedure outlined in item 6 is followed, with the following exceptions: • for faucets not limited to low-pressure applications: apply a pressure of 3 -0/+ 0.2 bar to the hot and cold inlets, alternately. • for faucets limited to low-pressure applications: apply a pressure of 0.4 -0/+ 0.02 bar to the hot and cold inlets and fully open the flow control.	• ATSF version 3 • Government Regulation No. 16/2021 on the Implementation of Law No. 28/2002 concerning Building Construction • Government Regulation No. 14/2021 concerning the Amendment of Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services • Regulation of the Minister of Public Works and Housing No. 21/2021 on the Assessment of Green Building Performance.

Classification	Technical Screening Criteria (TSC)	References
	f. Testing procedure: 1) Fully open the obturator. 2) Gradually apply a torque of (6 ± 0.2) Nm to the operating mechanism in the opening direction over $(4 + 2)$ seconds. 3) Maintain this torque for $(300 + 15)$ seconds. 4) Fully close the obturator. 5) Gradually apply more than $(4 + 2)$ seconds of torque (6 ± 0.2) Nm to the operating mechanism in the closing direction;. 6) Maintain this torque for $(300 + 15)$ seconds. 7) Reinsert the screw-down tap holder washer. 8) For shower solutions, mixer showers, shower outlets, and taps, ensure a maximum water flow of 6 L/min or less, as indicated by the market label. *) For example, equipment that meets SKEM (Minimum Energy Performance Standards).	
Transition	N/A	
E02 – Climate Change Adaptation		
Green	The activity meets one or more of the following criteria: 1. The economic activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the physical climate risks material to the activity; or 2. The physical climate risks material to the activity have been identified through a Climate Risk and Vulnerability Assessment (CRVA); or 3. Climate projections and impact assessments are based on best practices and available guidance, considering the latest science for vulnerability and risk analysis. These methodologies should align with the Intergovernmental Panel on Climate Change (IPCC) reports on climate change, peer-reviewed scientific publications, and studies conducted using peer-reviewed, open-source, or paying models. and 4. The adaptation solution must: a. not negatively affect adaptation efforts or reduce resilience to physical climate risks for humans, nature, cultural heritage, assets, or other economic activities; or b. either prioritize nature-based solutions, or rely on sustainable infrastructure; or c. be consistent with climate change adaptation plans and strategies at the local, sectoral, regional, or national levels; or	ATSF version 3

Classification	Technical Screening Criteria (TSC)		References
	d.	be monitored and measured against pre-determined indicators, with corrective actions considered if the indicators are not met; or	
	e.	(when physical and consisting of activities for which TSC have been established) meet the TSC and not pose significant hazards to those activities.	
Transition	N/A		
EO3 – Protection of Healthy Ecosystems and Biodiversity			
Green	N/A		
Transition	N/A		
EO4 – Resource Resilience and the Transition to a Circular Economy			
Green	N/A		
Transition	N/A		

8. Energy Performance Measurement, Regulation, and Control

KBLI 2017	Description
F	Construction
43	Special Construction
432	Electrical system installation, water (plumbing), and other construction installations
4321	Electrical system installation
43217	Electronic Installation This group includes activities related to the installation of electronic systems in residential and non-residential buildings, such as alarm systems, closed-circuit TVs (CCTV), and sound systems.
4329	Other installations of construction
43291	Mechanical Installation This group includes activities related to the installation and maintenance of mechanical systems in buildings, such as lifts, escalators, conveyors, gondolas, and automatic doors.

Classification	Technical Screening Criteria (TSC)		References
	EO1 – Climate Change Mitigation		
Green	For the measurement, regulation, and control of energy performance The activity supports the activity of new building construction, renovation, real estate, and residential area projects with the “Green” classification and the activity includes one of the following:		• ATSF version 3 • Government Regulation No. 16/2021 on the Implementation of Law No.

Classification	Technical Screening Criteria (TSC)	References
	1. Installs, maintains, and repairs zoned thermostats, smart thermostat systems, and sensing devices, including motion and daylight controls; or 2. Installs, maintains, and repairs building automation and control systems, building energy management systems (BEMS), lighting control systems, and energy management systems (EMS); or 3. Installs, maintains, and repairs smart meters for gas, heat, cold, and electricity; or 4. Installs, maintains, and repairs facade and roof elements with sun-shading or sun-regulating functions, including those that support vegetation growth.	28/2002 concerning Building Construction • Government Regulation No. 14/2021 amending Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services • Regulation of the Minister of Public Works and Housing Number 21 of 2021 concerning the Assessment of Green Building Performance
Transition	N/A	
E02 – Climate Change Adaptation		
Green	The activity is 'green' when it meets one or more of the following criteria: 1. The economic activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the physical climate risks material to the activity; or 2. The physical climate risks material to the activity have been identified through a Climate Risk and Vulnerability Assessment (CRVA); or 3. Climate projections and impact assessments are based on best practices and available guidance, considering the latest science for vulnerability and risk analysis. These methodologies should align with the Intergovernmental Panel on Climate Change (IPCC) reports on climate change, peer-reviewed scientific publications, and studies conducted using peer-reviewed, open-source, or paying models. and 4. The adaptation solution must: a. not negatively affect adaptation efforts or reduce resilience to physical climate risks for humans, nature, cultural heritage, assets, or other economic activities; or b. either prioritize nature-based solutions, or rely on sustainable infrastructure; or c. be consistent with climate change adaptation plans and strategies at the local, sectoral, regional, or national levels; or	ATSF version 3

Classification	Technical Screening Criteria (TSC)		References
	d.	be monitored and measured against pre-determined indicators, with corrective actions considered if the indicators are not met; or	
	e.	(when physical and consisting of activities for which TSC have been established) meet the TSC and not pose significant hazards to those activities.	
Transition	N/A		
EO3 – Protection of Healthy Ecosystems and Biodiversity			
Green	N/A		
Transition	N/A		
EO4 – Resource Resilience and the Transition to a Circular Economy			
Green	N/A		
Transition	N/A		

9. Enabling Activities

a. Prefabricated Building Installation

KBLI 2017	Description
F	Construction
41	Building Construction
410	Building Construction
4101	Building Construction
41020	Prefabricated Building Installation This group includes the specific activity of installing prefabricated concrete buildings as part of building construction work, typically carried out on a subcontract basis. This service is included in the construction services business.
42	Civil Building Construction
421	Road and Railway Construction
4212	Installation of Prefabricated Buildings for Road and Railway Construction
42120	Installation of Prefabricated Buildings for Road and Railway Construction This group includes specialized activities involving the erection of prefabricated concrete buildings for road and railway construction (activities of subgroup 4211). These activities are part of civil engineering construction work and are typically carried out on a subcontract basis.
4222	Installation of Prefabricated Buildings for the Construction of Irrigation, Communication, and Sewage Canal Networks
42220	Installation of Prefabricated Buildings for the Construction of Irrigation, Communication, and Sewage Canal Networks

des specialized activities involving the erection of prefabricated concrete buildings for the construction of irrigation, and wastewater networks. These activities are part of civil engineering construction work and are typically carried out on a project basis.
activities 42120 and 42220 are combined under: refabricated Civil Building Construction Work Services
des activities involving the installation of factory-produced materials, such as precast concrete, steel, plastic, rubber, and/or manufactured materials, using fabrication, erection, and/or assembly methods for civil buildings.

Technical Screening Criteria (TSC)		References
EO1 – Climate Change Mitigation		
involves the installation of prefabricated buildings: ports the activity of new building construction, renovation, real estate, and residential “green” classification. refabricated Buildings for Road and Railway Construction, as well as the of Irrigation, Communication, and Sewerage Systems: ports the Civil Building Construction with the “Green” classification. ed Building Installation: ports the activity of new building construction, renovation, real estate, and residential “transition” classification. refabricated Buildings for Road and Railway Construction, and Construction of munication, and Sewerage Networks: ports the Civil Building Construction with the “Transition” classification.		- Government Regulation No. 16/2021 on the Implementing Regulations of Law Number 28 of 2002 concerning Building Construction - Government Regulation No. 14/2021 concerning the Amendment of Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services
EO2 – Climate Change Adaptation		
its one or more of the following: ic activity has implemented physical and non-physical solutions (‘adaptation solutions’) tially reduce the physical climate risks material to the activity; or l climate risks material to the activity have been identified through a Climate Risk and Assessment (CRVA); or ctions and impact assessments are based on best practices and available guidance, the latest science for vulnerability and risk analysis. These methodologies should align rgovernmental Panel on Climate Change (IPCC) reports on climate change, peer-		ATSF version 3

Classification	Technical Screening Criteria (TSC)		References
	reviewed scientific publications, and studies conducted using peer-reviewed, open-source, or paying models.		
	and		
	4. The adaptation solution must:		
	a. not negatively affect adaptation efforts or reduce resilience to physical climate risks for humans, nature, cultural heritage, assets, or other economic activities; or		
	b. either prioritize nature-based solutions, or rely on sustainable infrastructure; or		
	c. be consistent with climate change adaptation plans and strategies at the local, sectoral, regional, or national levels; or		
	d. be monitored and measured against pre-determined indicators, with corrective actions considered if the indicators are not met; or		
	e. (when physical and consisting of activities for which TSC have been established) meet the TSC and not pose significant hazards to those activities.		
Transition	N/A		
EO3 – Protection of Healthy Ecosystems and Biodiversity			
Green	N/A		
Transition	N/A		
EO4 – Resource Resilience and the Transition to a Circular Economy			
Green	N/A		
Transition	N/A		

b. Dredging

KBLI 2017	Description
F	Construction
42	Civil Building Construction
429	Construction of other Civil Buildings
4291	Construction of other Civil Buildings
42915	Dredging This group includes dredging and maintenance of rivers, ports, swamps, lakes, shipping lanes, ponds, and canals, whether for light, medium, or heavy work. It also includes dredging for the creation of water transportation routes.

Classification	Technical Screening Criteria (TSC)		References
	EO1 – Climate Change Mitigation		
Green	The activity supports the Civil Building Construction with the “Green” classification.		Government Regulation Number 14 of 2021 amending Government Regulation Number 22 of 2020 on the Implementing Regulations of Law Number 2 of 2017 concerning Construction Services
Transition	The activity supports the Civil Building Construction with the “Transition” classification.		
	EO2: Climate Change Adaptation		
Green	The activity meets one or more of the following: - The economic activity has implemented physical and non-physical solutions ('adaptation solutions') that substantially reduce the physical climate risks material to the activity; or - The physical climate risks material to the activity have been identified through a Climate Risk and Vulnerability Assessment (CRVA); or - Climate projections and impact assessments are based on best practices and available guidance, considering the latest science for vulnerability and risk analysis. These methodologies should align with the Intergovernmental Panel on Climate Change (IPCC) reports on climate change, peer-reviewed scientific publications, and studies conducted using peer-reviewed, open-source, or paying models. and - The adaptation solution must: - not negatively affect adaptation efforts or reduce resilience to physical climate risks for humans, nature, cultural heritage, assets, or other economic activities; or - either prioritize nature-based solutions, or rely on sustainable infrastructure; or - be consistent with climate change adaptation plans and strategies at the local, sectoral, regional, or national levels; or - be monitored and measured against pre-determined indicators, with corrective actions considered if the indicators are not met; or (when physical and consisting of activities for which TSC have been established) meet the TSC and not pose significant hazards to those activities.		ATSF version 3
Transition	N/A		
	EO3: Protection of Healthy Ecosystems and Biodiversity		

Classification	Technical Screening Criteria (TSC)		References
Green	N/A		
Transition	N/A		
EO4: Resource Resilience and the Transition to a Circular Economy			
Green	N/A		
Transition	N/A		

c. Telecommunication Installations and Marine, River, and Air Navigation Installations

TKBLI 2017	Description
F	Construction
43	Special Construction
432	Telecommunication Installations and Marine, River, and Air Navigation Installations.
4321	Electrical System Installation
43212	Telecommunication Installation This group includes activities related to the installation of telecommunication systems in both residential and non-residential buildings, such as antenna installation. It also covers the installation, maintenance, and repair of telecommunication systems in telephone/telegaph exchanges, microwave radar transmitter stations, small earth stations/satellite stations, and similar facilities. Additionally, it includes activities for the installation of transmission and telecommunication networks.
43213	Marine and River Navigation Installations This group includes activities related to the installation and maintenance of marine and river navigation systems, including the installation of lighthouses, beacons, buoys, harbor lights, and other beacon components.
43214	Air Navigation Installation This group includes activities related to the installation of air navigation systems, such as installations on air navigation telecommunications buildings, radar transmitters/receivers, approach lighting systems, runway lighting, DVOR, ILS, NDB, and similar systems. In KBLI 2020, activities 43213 and 43214 are combined into: 43214 - Sea, River, and Air Navigation Construction Installation Services This group includes activities related to the installation and maintenance of construction and equipment for marine, river, and air navigation aids, shipping/aviation telecommunications, hydrography, meteorology, crossing routes, and pilotage, all aimed at ensuring shipping and aviation safety.
43215	Railway Signal and Telecommunication Installation This group includes the installation, maintenance, and repair of railroad signal and telecommunication systems.

Classification	Technical Screening Criteria (TSC)		References
	EO1 – Climate Change Mitigation		
Green	The activity supports: 1. The activity supports the activity of new building construction, renovation, real estate, and residential area projects with the “Green” classification; or 2. The activity supports the Civil Building Construction with the “Green” classification.		- Government Regulation Number 16 of 2021 on the Implementation of Law Number 28 of 2002 concerning Building Construction - Government Regulation Number 14 of 2021 amending Government Regulation Number 22 of 2020 on the Implementing Regulations of Law Number 2 of 2017 concerning Construction Services
Transition	The activity supports: 1. The activity supports the activity of new building construction, renovation, real estate, and residential area projects with the “Transition” classification; or 2. The activity supports the Civil Building Construction with the “Transition” classification.		
	EO2: Climate Change Adaptation		
Green	For an activity related to the Early Warning System (EWS): The activity meets one or more of the following criteria: - The economic activity has implemented physical and non-physical solutions (“adaptation solutions”) that substantially reduce the physical climate risks material to the activity; or - The physical climate risks material to the activity have been identified through a Climate Risk and Vulnerability Assessment (CRVA); or - Climate projections and impact assessments are based on best practices and available guidance, considering the latest science for vulnerability and risk analysis. These methodologies align with the Intergovernmental Panel on Climate Change (IPCC) reports on climate change, peer-reviewed scientific publications, and studies conducted using peer-reviewed, open-source, or paying models and - Adaptation solution to be applied: - does not negatively impact adaptation efforts or reduce resilience to physical climate risks for humans, nature, cultural heritage, assets, or other economic activities; or - prioritizes nature-based solutions or relies on sustainable infrastructure; or		ATSF version 3

Classification	Technical Screening Criteria (TSC)	References
	c. consistent with climate change adaptation plans and strategies at the local, sectoral, regional, or national levels; or d. monitored and measured against pre-determined indicators, with corrective actions considered if the indicators are not met; or e. if the implemented solution is physical and consists of activities for which the TSC has been established, then the solution meets the TSC and does not pose significant hazards to those activities. *) Early Warning Systems refer to activities involving the installation, maintenance, testing, and repair of instruments and devices designed to provide early warnings for climate-related hazards. This includes instruments and devices associated with early warning communication systems and specialized hazard systems.	
Transition	N/A	
EO3: Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	
Transition	N/A	
EO4: Resource Resilience and the Transition to a Circular Economy		
Green	N/A	
Transition	N/A	



A. Background context

Globally, the transportation sector produced around 24% of total energy-related CO₂ emissions (IEA, 2022)¹⁵. Most of these emissions come from the road transportation subsector, particularly private vehicles powered by fossil fuels such as petrol and diesel. In addition, rapid population growth and urbanization are increasing demand for transportation, which intensifying the sector's contribution to climate change. The aviation and maritime transportation subsectors also contribute substantially to global greenhouse gas (GHG) emissions. Road transportation accounts for approximately 70% GHG emissions in the transportation sector, while rail, maritime, and aviation subsectors contribute 1%, 11%, and 12%, respectively (IPCC, 2021)¹⁶. Therefore, the reduction of GHG emissions from the transportation sector has now become a global priority, with measures such as the development of alternative fuels, advancing electrification, and the enhancement of operational efficiency and logistics infrastructure.

In Indonesia, the transportation sector is the backbone of the country's economic growth. Every mode of transportation (land, sea, and air) contributes to the improvement of supply chains, the promotion of industrial growth, and the facilitation of the movement of goods and individuals. Improvements in transportation infrastructure not only boost productivity and economic efficiency, but also enhance Indonesia's global competitiveness. According to the data from the Central Statistics Agency (BPS)¹⁷ Indonesia's economy grew by 4.95% in 2024. Growth was recorded across all sectors, with the transportation and warehousing sector showing the highest growth of 8.64%. The transportation sector will also be instrumental in supporting a just energy transition towards the sustainable use of renewable energy, which will be supported by an integrated electricity network and green transportation, as outlined in Law No. 59 of 2024 on the National Long-Term Development Plan for 2025 -2045.

Indonesia's largest transport subsector is land transportation, which includes public transportation, railways, and highways. Indonesia is also heavily dependent on water transportation due to its archipelagic nature. River and ferry transport, particularly roll on-roll off (ro-ro) services, is crucial for the purpose of connecting remote areas and meeting the demand of logistics and tourism. Meanwhile, maritime transport is critical for domestic and international trade and its network is central to economic activities. Lastly, air transport is equally important in facilitating the fast movement of goods and people, and promoting growth in the tourism sector.

The transportation sector accounted for 26.9% of the country's total emissions, contributing 155.6 million tons of CO₂e, according to the Indonesia Energy Outlook 2023¹⁸. The emissions were primarily attributed to passenger transportation at 73.1% of the total emissions, with motorcycles accounting for 36.1%, private cars 21.8%, buses 12.5%, aviation 2.3%, sea transport 0.3%, and rail 0.1%.

¹⁵ International Energy Agency. (2022). *CO₂ emissions from fuel combustion highlights 2022*. IEA Publications. Available at: <https://www.iea.org/reports/co2-emissions-from-fuel-combustion-2022>

¹⁶ Intergovernmental Panel on Climate Change. (2021). *IPCC 6th assessment report (AR6)*. IPCC. Available at: <https://www.ipcc.ch/report/ar6/wg3/chapter/chapter-10/>

¹⁷ BPS (2024) <https://www.bps.go.id/id/pressrelease/2024/11/05/2382/ekonomi-indonesia-triwulan-iii-2024-tumbuh-1-50-persen-q-to-q-.html>

¹⁸ <https://den.go.id/publikasi/Outlook-Energi-Indonesia>

The high emissions from land transportation are primarily due to the extensive use of private vehicles, reliance on fossil fuels, low energy efficiency – particularly among trucks and buses – and the high volume of freight transported by road compared with rail. Although air transport contributes a lower percentage of emissions than road transport, its emissions intensity per trip or ton-kilometer is substantially higher, especially for long-distance routes.



Figure 1

Sustainable urban transport: Avoid, Shift, Improve (ASI), GIZ¹⁹

Decarbonization in the land transportation sector generally refers to the concept of Avoid, Shift, and Improve, as described below:

1. **Avoid:** Efforts to reduce travel demand have been implemented through the transit-oriented development (TOD) policies in major cities such as Jakarta and Surabaya. The development of this policy aims to create an environment that allows people to live, work, and do activities within close proximity to public transportation, reducing dependence on private vehicles. In addition, the digitalization of public and business services such as e-commerce, telemedicine, and remote working platforms has been instrumental in reducing the need for physical travel.
2. **Shift:** The Government has promoted the use of sustainable public transportation as an environmentally friendly alternative, including Transjakarta, Mass Rapid Transit (MRT) and Light Rail Transit (LRT) systems. Additionally, campaigns have implemented in several major cities to promote cycling and walking for short distances, with the support of the necessary infrastructure development. The government also developing an electric vehicle (EV) ecosystem, including the construction of public electric vehicle charging stations (SPKLU) and a electrification program to convert fossil-fuel-powered motorcycles to electric.
3. **Improve:** To improve energy efficiency of vehicles, reduce air pollution and carbon emissions, and reduce fossil fuels dependence, Indonesia has adopted the EURO 4 emission standards for motor vehicles which will continue to improve in the future. Additionally, the government has promoted the

¹⁹ Bongardt D, Stiller L, Swart A & Wagner A. (2019). <https://changing-transport.org/publication/asi/>

implementation of biofuels such as B35 (a blend of 35% palm oil and 65% diesel), and has encouraged the use of EVs ones with a target of the deployment of 1.76 million electric motorcycles and 400,000 electric cars by 2025²⁰

Efforts to decarbonize **maritime and inland waterways transportation** includes several key strategies:

1. Energy efficiency, among others:

- optimizing vessels design by incorporating more efficient hull shapes to reduce water resistance, improve aerodynamics and reduce fuel consumption.
- reducing fuel consumption and carbon emissions as well as energy savings through route and speed management utilizing Artificial Intelligence (AI)-based technologies, slow steaming techniques, use of technologies such as air lubrication systems, sail-assisted propulsion (hybrid sailing vessels).
- utilizing renewable energy sources such as wind energy for vessels that are equipped with modern sails or wind rotors (e.g. hybrid wind-assisted vessels) and utilizing solar panels to generate the electrical energy needed for the vessel's internal systems.

2. Fuel transition, among others:

- transitioning to low-carbon fuels such as Liquefied Natural Gas (LNG), green hydrogen, ammonia, and biofuels such as the use of B35 which will be upgraded to B40.²¹
- developing carbon capture and storage (CCS) technology, that allows vessels to capture and store carbon emissions generated during voyages.

3. Operational optimization, among others:

- using Internet of Things (IoT) and AI-based systems to improve operational efficiency, reduce waiting time at ports, and monitor vessel performance in real-time, enabling quick adjustments to reduce fuel consumption.
- improving logistics efficiency through multimodal transportation integration and cargo consolidation, which can reduce the number of vessel trips operating with empty or not full loads.

4. International standard application, among others:

- supports the implementation of the International Maritime Organisation (IMO) GHG Strategy 2023²² and its emission reduction targets, aiming for a 40% reduction by 2030 and a 50% reduction by 2050 compared to the 2008 baseline. The implementation of this standard will encourage the use of more environmentally friendly technologies and fuel transition.
- support the implementation of the Ballast Water Management Convention (BWM Convention), which aims to prevent pollution of the marine environment through the management of ship *ballast water*.

5. Port infrastructure, among others:

²⁰ <https://baketrans.kemhub.go.id/index.php/berita/skema-phase-out-kendaraan-internal-combustion-engine-menuju-battery-electric-vehicle#>

²¹ <https://www.esdm.go.id/id/media-center/arsip-berita/menteri-esdm-b40-bisa-jalan-tahun-depan>

²² *International Maritime Organization (IMO) GHG Strategy 2023*: <https://www.imo.org/en/OurWork/Environment/Pages/2023-IMO-Strategy-on-Reduction-of-GHG-Emissions-from-Ships.aspx#:~:text=The%202023%20IMO%20GHG%20Strategy%20envisages%2C%20in%20particular%2C%20a%20reduction,at%20least%2040%25%20by%202030.>

- Utilization of renewable energy in ports,
- environmentally friendly waste management systems, and
- shore-to-ship power.

6. Data Collection System (DCS) and Carbon Intensity Indicator (CII Ratings)²³: IMO's DCS is used to collect and report data on a ship's CII:

- Ships that exceed 5,000 GT required to submit a report. Approximately 85% of the total CO2 emissions from international shipping are generated by these ships.
- CII must be reported to the DCS verifier annually through the Ministry of Transportation.
- The report includes CII, aggregated DCS data from the previous year, and correction and voyage adjustment factors.
- The DCS Statement of Compliance (SoC) must be retained by the ship for a period of five years.
- The CII is calculated using data collected by the IMO's DCS. The CII is rated on a scale of A to E, with A representing the highest quality.
- The evaluation serves as an indicator of the vessel's operational efficiency. The A rating, which represents the highest standard in carbon efficiency, is achieved by only approximately 15% of the most operationally efficient global ships. A retrofit action plan must be submitted by a ship that has received a D rating for three consecutive years or an E rating for one year.

The IMO DCS was implemented in 2016 to identify strategies to reduce GHG emissions from ships. The CII is part of a formal review to be completed by 1 January 2026. During this review, IMO invites member states and international organizations to collect data and submit proposals to improve the CII system.

Air transport decarbonization under the **International Civil Aviation Organization (ICAO)**²⁴ includes several strategic approaches to reduce GHG emissions from the aviation sector which consist of *in-and-out sector measures*.

In-sector measures, consisting of:

1. Technology development:

ICAO encourages the development and adoption of more efficient and environmentally friendly aviation technologies, including innovations in aircraft design, such as the use of lightweight materials and better aerodynamics to reduce drag. In addition, improving engine efficiency and developing electric and hybrid aviation technologies are also key focuses.

2. The use of sustainable fuel:

²³ IMO Data Collection System (DCS) 2023 <https://www.imo.org/en/ourwork/environment/pages/data-collection-system.aspx#:~:text=Starting%20from%201%20January%202019,wel%20as%20other%20specified%20data>

²⁴ ICAO. (2016). Resolution A39-3: Consolidated statement of continuing ICAO policies and practices related to environmental protection – global market-based measure (MBM) scheme. International Civil Aviation Organization. Available at: <https://www.icao.int/environmental-protection/CORSIA/Pages/default.aspx>

ICAO supports the use of Sustainable Aviation Fuels (SAF) made from more environmentally friendly sources, such as biomass or waste. SAF has the potential to reduce emissions by up to 80% compared with traditional fossil fuels. ICAO encourages collaboration between governments, industry, and researchers to increase the production and use of SAF and accelerate the transition to more sustainable fuels around the world.

The 41st Session of the ICAO Assembly in 2022 agreed on a Long-Term Global Aspirational Goal (LTAG) to achieve net zero carbon emissions from international aviation by 2050. This goal is in line with and supports the Paris Agreement targets. The LTAG report also highlights the importance of SAF, Lower Carbon Aviation Fuels (LCAF) and other clean energy sources in achieving the aviation sector's emissions reduction scenario.

ICAO has also provided recommendation for categories of feedstock component that can be use in SAF programs in accordance with the CORSIA framework, including:

- **Primary and co-products** – the main output of a production process. These products have significant economic value and an elastic supply, which indicates that there is a causal relationship between the price of the raw material and the quantity of raw material produced.
- **By-products** – secondary products with inelastic supply and economic value.
- **Wastes** – materials with inelastic supply and no economic value. Waste refers to any substance or object that is discarded or intended or required to be discarded by its owner. Raw materials or substances that have been intentionally modified or contaminated to meet this definition are not covered by this definition.
- **Residues** – secondary materials with inelastic supply and little economic value.

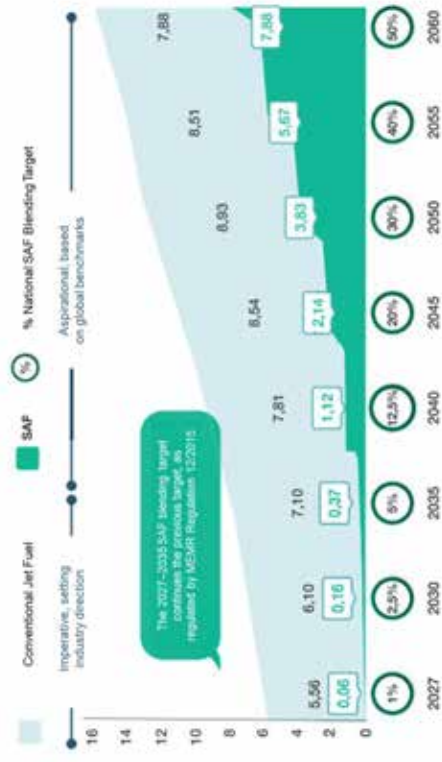


Figure 2: Roadmap for SAF Implementation in Indonesia²⁵

²⁵ Ministry of Maritime Coordination and Investment (2024), Sustainable Aviation Fuels Roadmap: <https://maritim.go.id/uploads/magazine/20241015092900-2024-10-15magazine092716.pdf>

Table 1 - Overview of Key SAF Technologies in the Global Context

	Hydro-processed Esters and Fatty Acids(HEFA)	Alcohol-to-Jet (AtJ)	Fischer-Tropsch (FT)	Power-to-Liquid (PtL)
Technology Description	Mature technology: Secure, proven and scalable	Technology in early commercial stage: Potential in the medium term, given the possibility of high emission reductions. However, there are still significant technological and economic uncertainties	Potential in the medium term, given the possibility of high emission reductions. However, there are still significant technological and economic uncertainties	<u>Early stage of development:</u> Concept 2025+, in areas with high-volume and low-cost renewable energy
Raw Materials	Waste and lipid residues, energy crops (e.g. UCO, tallow, palm oil)	Agricultural and forestry residues, municipal solid waste, intentionally grown cellulosic energy crops (e.g. sugarcane, maize grain)		CO ₂ & renewable electricity; unlimited potential through carbon capture
Emission reduction	14%-84% (proven to be technically capable up to 85%)	13%-73% (potentially up to 85%)	86%-100%	98%

Currently, Indonesia has successfully tested the production of SAF J2.4 through HEFA (Hydro-processed Esters and Fatty Acids) Co-Processing technology from Refined, Bleached, and Deodorized Palm Kernel Oil (RBDPKO). In general, SAF production in Indonesia still relies on the HEFA route with *Palm Kernel Oil* (PKO) as feedstock. *Palm Fatty Acid Distillate* (PFAD) and *Used Cooking Oil* (UCO) which are categorised as waste are considered as alternatives to be used as feedstock for the next generation HEFA. Going forward in line with readiness, Indonesia will lead to the use of the next SAF technologies namely AtJ, FT and PtL.

3. Operational optimization:

ICAO also recommends the implementation of more efficient operational practices to reduce emissions, such as flight route optimization and the use of technologies such as Performance Based Navigation that enables aircraft to fly more efficient routes. In addition, better implementation of Air Traffic Management (ATM) can reduce travel times and fuel consumption, which reducing inflight emissions.

B. General principles for setting Technical Screening Criteria (TSC) in the Transportation and Storage (T&S) sector

This section outlines the basis for determining the TSC for T&S for each Environmental Objective (EO). See Section 3 of the Appendix for further details.

Tabel 2 - General Principles for Setting TSC in the T&S Sector
Principles for applying TSC EO1: Climate Change Mitigation

Classification	Description
Green	The activities seek to achieve a level of GHG emissions that is credible and consistent with the 1.5°C target of the Paris Agreement. This is generally defined by a quantitative threshold, such as g CO ₂ e per passenger-kilometer, vehicle-kilometer, or ton-kilometer. The activities include: a. Land and air transport infrastructure with near-zero or zero direct tailpipes, such as electric vehicles (EVs), hybrid vehicles, hydrogen refueling stations, and related infrastructure; and 1. Water transport and infrastructure with near zero or zero direct tailpipe or meeting emission reduction standards set by the International Maritime Organization (IMO) GHG Strategy 2023.
Transition	Activities that support the transition to 'green' over a defined period include: 1. Contributing to an EO: the activity uses technology that emits the lowest levels of carbon which are technically and economically feasible at the moment; or 2. Supporting other activities: the activity which promotes or enables other activities to adopt sustainable or 'green' practices.
Classification	Description
Green	1. Activities that have adopted specific strategies to ensure resilience to climate change impacts and contribute to overall resilience at both local and national levels.
Transition	2. Activities that serve as enablers, fostering the adoption of resilience-building practices in other sectors or activities, which contributing to greater climate adaptation.
N/A	N/A
Classification	Description
Green	N/A
Transition	N/A
Classification	Description
Green	N/A
Transition	N/A
Classification	Description
Green	N/A
Transition	N/A

C. Definitions related to terminology used in TSC

- **“zero direct tailpipe emissions”**: a vehicle that does not produce direct emissions from the tailpipe during operation²⁶.
- **“tank-to-wake”**: used in water transport, a term utilized in water transport that exclusively addresses emissions from fuel stored in the vessel's tanks. TKBI currently employs tank-to-wake in accordance with ATSF version 3. However, future versions may transition to a “well-to-wake” approach, which will account for the activity's entire life cycle emissions.
- **“Technologically and economically infeasible/viable”**: denotes the circumstances under which a project or investment is financially viable and can be executed using available technologies and resources. Projects that:
 - a. Utilize current or future technologies that can be implemented, and
 - b. Can be sustained over time without creating an undue economic burden or impeding economic development.
- **“Dedicated to the transport of fossil fuels”** implies that land, water and air transport are not exclusively dedicated to the transportation of fossil fuels. Furthermore, in the context of water transport, there are certain conditions that pertain to vessels that may be exempted as follows:

Table 3 - Vessels excluded due to being “dedicated to the transport of fossil fuels”²⁷

Activity	Green classification		Transition classification	
	Excluded in all cases		Excluded in all cases	
Crude Oil Tankers			Excluded in all cases	
LNG Tankers	a.	Until 31 December 2030: excluded if more than 25% of tonnage transported annually is consumed at a ‘non-Green’ facility.	Not excluded	
	b.	From 1 January 2031: exclusion to be reassessed, subjected to prevailing technology standards and market practices.		
	c.	Until 31 December 2030: excluded if more than 25% of tonnage transported annually is fossil fuel consumed at a ‘non-Green’ facility.		
	d.	From 1 January 2031: excluded if any tonnage transported annually is fossil fuel consumed at a ‘non - Green’ facility.		
Dry bulk carriers	a.	Until 31 December 2030: excluded if more than 25% of tonnage transported annually is fossil fuel consumed at a “non - Green” facility.		• Until 31 December 2030: excluded if more than 25% of the tonnage transport annually is fossil fuel consumed at a “non - transition” facility.

²⁶ International Council on Clean Transportation (ICCT), 2021: <https://theicct.org/sites/default/files/publications/EU-vehicle-standards-green-deal-mar21.pdf>

²⁷ ASEAN Taxonomy for Sustainable Finance version 3, Appendix C

	b. From 1 January 2031: excluded if any tonnage transported annually is fossil fuel consumed at a 'non - Green' facility.	From 1 January 2031: excluded if any tonnage transported annually is fossil fuels consumed at "non-transition" facility.
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Description:

- "Non-Green facility" in this context means a facility (e.g. power plant) that does not fulfil the TSC 'Green' classification as outlined by the TKBI. Unless an individual classification is also being sought for the facility, assessors are not typically expected to conduct a comprehensive TKBI assessment of a facility that is intended to be the final destination of the transported fuel. Nevertheless, the assessor should at the very least be able to observe evidence that the destination facility will satisfy the TSC "Green" classification.
- "Non-Transition facilities" have a similar definition to "non-Green facilities" with the exception that they are classified as "Transition" by the TSC.
- "Alternative fuels"**: are materials or substances that can be used as fossil fuels substitutes that do not produce CO2 exhaust emissions or produce lower emissions than fossil fuels, such as biofuels, gaseous fossil fuels (propane, natural gas, methane, and ammonia, green hydrogen), and ethanol. The alternative fuels list are based on followings:
 - Fourth IMO GHG Study (2020), Table 75: <https://www.wcdn.imo.org/localresources/en/OurWork/Environment/Documents/Fourth%20IMO%20GHG%20Study%202020%20-%20Full%20report%20and%20annexes.pdf>; or
 - EU: <https://alternative-fuels-observatory.ec.europa.eu/general-information/alternative-fuels>

The term **"alternative fuels"** currently excludes circumstances in which carbon emission avoidance is achieved through **onboard carbon capture and storage (OCCS)** technology. However, the technology will be incorporated into the TKBI as it evolves, once it is widely available and implemented.
- "Until [date]"**: TSC is applicable until a specified date. TSC is no longer valid after the specified date.

D. Rationale for TSC activities in the T&S sector:

The TSC primarily adheres the ASEAN Taxonomy for Sustainable Finance (ATSF) version 3, which serves as one of the primary references for the Indonesia Taxonomy for Sustainable Finance (TKBI). Additionally, the TSC are in accordance with Indonesia's policies and regulations, ensuring compliance with national legal frameworks. The TSC is designed to support national decarbonization goals and facilitate sustainable capital allocation and investment in the T&S sector.

- TSC for the 'green' classification are intended to be interoperable and align with best practices and widely accepted international taxonomies.
- TSC for the 'transition' classification are developed based on future emission projections for all types of transportation (land, water, and air), including freight and passenger vehicles in ASEAN countries. These projections are derived from the NZE scenario, with adjustments made to reflect national conditions.

TSC considers the following matters:

- a. **Land transportation activity:** The most economically and technically feasible proxy data for GHG emissions, including EURO standards and the lowest carbon emitting technologies currently available, are suitable for widespread use in ASEAN.
- b. **Water transportation activity:** ATSF version 3 applies the IMO 2023 modelling framework, which is based on the GHG Emissions Strategy and takes into account growth scenarios to maintain alignment with the 1.5°C pathway. Globally, there are two metrics for measuring energy efficiency and GHG emissions from ships:
 - 1) Annual Efficiency Ratio (AER) is a metric that assesses the overall efficiency of a given period by dividing the total CO₂ emissions per ton of cargo transported over one year by the total distance traveled in nautical miles.
 - 2) The Energy Efficiency Design Index (EEDI) and Energy Efficiency Existing Ship Index (EEXI) indicate the operational energy efficiency of a ship during voyages by calculating the sum of CO₂ emissions produced per ton of cargo transported for each nautical mile travelled. EEDI is a design metric that is applicable to new ships, whereas EEXI is applicable to existing ships.
- c. **Air transportation activity:** The percentage of SAF in the fuel mix is a critical solution for decarbonization in air transport activities. The SAF production industry and supply chain in each country remain as primary obstacle to SAF implementation. Different countries and institutions have developed a variety of SAF pathways that are tailored to the context and readiness of each jurisdiction, as illustrated in Figure 3.

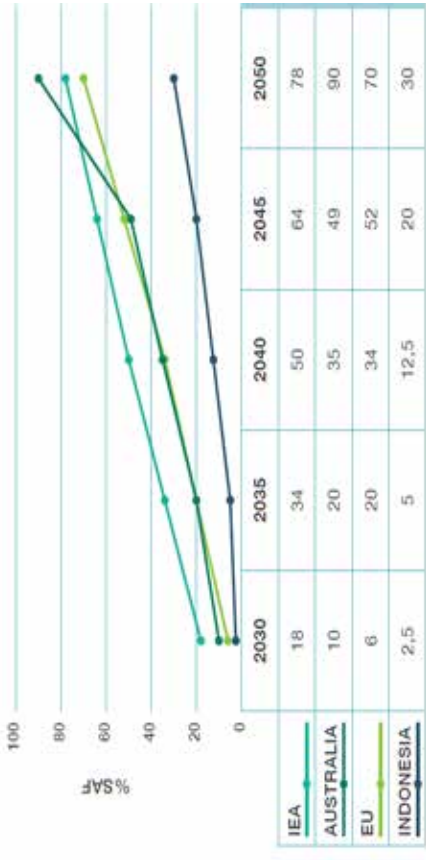


Figure 3: Roadmap for SAF Implementation by different countries and institutions (Source: CBI, 2024).

Considering the interoperability and SAF requirements in the global taxonomy as well as the SAF development plan in Indonesia, the TSC 'Green' classification is currently established with the requirement that aircraft operate with *zero direct tailpipe CO₂ emission*; or aircraft operate with SAF based on a *credible, science-based, and 1.5°C-aligned pathway* to be developed by ICAO. Meanwhile, the SAF target in Indonesia can be used as a proxy for the 'Transition' classification. The TSC will be reviewed subsequent to the publication of the SAF pathway by the ICAO and/or taxonomic developments in the region. Indonesia is currently developing its infrastructure and ecosystem, including conducting initial trials of the use of SAF fuel for aviation.

A TSC classification is in place to ensure that land, water, and air transportation vehicles are not exclusively used for the transportation of fossil fuels, thereby preserving interoperability between the TKBI regional and global taxonomies.

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.

Table 4 - List of T&S sector activities

KBLI 2017		KBLI 2020		Description*
KBLI Level 5	Activities	KBLI Level 5	Activities	
Land				
49211	Intercity bus transportation	49211	Intercity bus transportation	Using TSC for ATSF v3 of Urban and suburban transport, road passenger transport activities and national policies EO1: Green and Transition EO2: Green EO3 and EO4: N/A
49212	Cross-border bus transportation	49212	Cross-border bus transportation	
49213	Interprovincial intercity bus transport	49213	Interprovincial intercity bus transport	
49214	City bus transportation	49214	City bus transportation	
49215	International cross-border bus transportation	49215	International cross-border bus transportation	
49216	Special bus transportation	49216	Special bus transportation	
49219	Other scheduled bus transportation	49219	Other scheduled bus transportation	
49221	Tourist bus transportation	49221	Tourist bus transportation	
49229	Other non-scheduled bus transportation	49229	Other non-scheduled bus transportation	
49411	Scheduled non-bus cross-border transportation	49411	Scheduled non-bus cross-border transportation	
49412	Scheduled non-bus interprovincial intercity transportation	49412	Scheduled non-bus interprovincial intercity transportation	
49413	Scheduled non-bus urban transportation	49413	Scheduled non-bus urban transportation	
49414	Scheduled non-bus rural transportation	49414	Scheduled non-bus rural transportation	
49415	Specialized non-bus land transportation	49415	Specialized non-bus land transportation	
49419	Other scheduled non-bus passenger land transportation	49419	Other scheduled non-bus passenger land transportation	
49421	Taxi	49421	Taxi	

KBLI 2017		KBLI 2020		Description*
KBLI Level 5	Activities	KBLI Level 5	Activities	
49422	Rental transportation	49422	Rental transportation	Using TSC for ATSF v3 of Transport by motorbikes, passenger cars and light commercial vehicles activities and national policies EO1: Green and Transition EO2: Green EO3 and EO4: N/A
49424	Motorbike taxi transportation	49426	Special chartered transportation	
49425	Tourist land transportation	49424	Motorbike taxi transportation	
49429	Other passengers land transportation	49425	Tourist land transportation	
49431	Motorized transportation for general goods	49429	Other passengers land transportation	
49432	Motorized transportation for special goods	49431	Motorized transportation for general goods	Using TSC for ATSF v3 of Freight transport services by road activities EO1: Green and Transition EO2: Green EO3 and EO4: N/A
49423	Non-motorized passengers transportation	49432	Motorized transportation for special goods	
49433	Non-motorized transportation for general goods	49423	Non-motorized passengers transportation	Using TSC for ATSF v3 of Operation of personal mobility devices, cycle logistics activities EO1: Green and Transition EO2: Green EO3 and EO4: N/A
49110	Passengers Long-distance rail transportation	49433	Non-motorized transportation for general goods	
49441	Urban rail transportation	49110	Passenger Rail transportation	
49442	Rail transportation for tourism	49441	Urban rail transportation	
49450	Other rail transportation	49442	Rail transportation for tourism	
49120	Freight rail transport	49450	Other rail transportation	Using TSC for ATSF v3 of Passenger interurban rail transport activities and national policies EO1: Green and Transition EO2: Green EO3 and EO4: N/A
52211	Land terminal activities	49120	Freight rail transport	
		52211	Land terminal activities	Using TSC for ATSF v3 of Freight rail transport activities EO1: Green and Transition EO2: Green EO3 and EO4: N/A

KBLI 2017		KBLI 2020		Description*
KBLI Level 5	Activities	KBLI Level 5	Activities	
52213	Toll road activities	52213	Toll road activities	Using TSC for ATSF v3 of Infrastructure for road and public transportation, including infrastructure to enable low-carbon land transport and national policies EO1: Green and Transition EO2: Green EO3 and EO4: N/A
52214	On street parking	52214	On street parking	
52215	Off street parking	52215	Off street parking	
52219	Other supporting activities for land transportation	52219	Other supporting activities for land transportation	
52212	Railway station activities	52212	Railway station activities	Using TSC ATSF v3 Infrastructure for rail transport EO1: Green and Transition EO2: Green EO3 and EO4: N/A
52292	Rail cargo expedition and land transportation expedition activities (<i>EMKA & EAD</i>)	52292	Rail cargo expedition and land transportation expedition activities (<i>EMKA & EAD</i>)	
Water: sea, lake, river				Using TSC for ATSF v3 Sea and coastal passenger water transport, CBI Principles and national policies EO1: Green and Transition EO2: Green EO3 and EO4: N/A
50111	Passengers Domestic sea transport liner	50111	Passengers Domestic sea transport liner and tramper	
50112	Passengers Domestic sea transport tramper			
50113	Domestic sea transport for tourism	50113	Domestic sea transport for tourism	
50114	Passengers Pioneer domestic sea transport	50114	Passengers Pioneer domestic sea transport	
50121	Passengers International sea transport liner	50121	Passengers International sea transport liner and tramper	
50122	Passengers International sea transport tramper			
50123	International sea transport for tourism	50122	International sea transport for tourism	
50214	Inter-province passenger ferry transport	50214	Inter-province passenger ferry transport	
50215	Pioneer inter-province passenger ferry transport	50215	Pioneer inter-province passenger ferry transport	
50216	Inter-county/city passenger ferry transport	50216	Inter-county/city passenger ferry transport	

KBLI 2017		KBLI 2020		Description*
KBLI Level 5	Activities	KBLI Level 5	Activities	
50217	Pioneer inter-county/city passenger ferry transport	50217	Pioneer inter-county/city passenger ferry transport	
50218	Intra-county/city passenger ferry transport	50218	Intra-county/city passenger ferry transport	
50219	Other passenger ferry transport, including international ferry transport	50219	Other passenger ferry transport, including international ferry transport	
50211	Passengers River and lake liner transport (fixed and regular routes)	50211	Passengers River and lake liner transport (fixed and regular routes)	Using TSC for ATSF v3 of Inland passenger water transport and national policies EO1: Green and Transition EO2: Green EO3 and EO4: N/A
50212	Passengers River and lake tramper transport (non-fixed and irregular routes)	50212	Passengers River and lake tramper transport (non-fixed and irregular routes)	
50213	River and lake transport for tourism and related thereto	50213	River and lake transport for tourism and related thereto	
50131	Freight Domestic sea liner transport	50131	Domestic sea transport for special goods	Using TSC ATSF v3 Sea and coastal freight water transport , vessels for port operations and auxiliary activities and Retrofitting of sea and coastal freight and passenger water transport and National Policy . EO1: Green and Transition EO2: Green EO3 and EO4: N/A
50132	Freight Domestic sea tramper transport	50131	Domestic sea transport for special goods	
50133	Domestic sea transport for special goods	50133	Domestic sea transport for special goods	
50134	Freight Pioneer domestic sea transport	50134	Freight Pioneer domestic sea transport	Using TSC ATSF v3 and CBI Principles and National Policy : EO1: Green and Transition EO2: Green EO3 and EO4: N/A
50135	Domestic traditional shipping	50135	Domestic traditional shipping	
50141	Freight International sea liner transport	50141	International sea transport for general goods	
50142	Freight International sea tramper transport			
50143	International sea transport for special goods	50142	International sea transport for special goods	
50144	International traditional shipping	50143	International traditional shipping	
50221	River and lake transport for general goods and/or animals	50221	River and lake transport for general goods and/or animals	
50222	River and lake transport for special goods	50222	River and lake transport for special goods	
50223	River and lake transport for dangerous goods	50223	River and lake transport for dangerous goods	

KBLI 2017		KBLI 2020		Description*
KBLI Level 5	Activities	KBLI Level 5	Activities	
50224	General Freight interprovincial ferry transport	50224	General Freight interprovincial ferry transport	<i>Inland freight water transport and Retrofitting of inland water freight transport</i> EO1: Green and Transition EO2: Green EO3 and EO4: N/A
50225	Freight Pioneer interprovincial ferry transport	50225	Freight Pioneer interprovincial ferry transport	
50226	General Freight cross-county/city ferry transport	50226	General Freight cross-county/city ferry transport	
50227	Freight Pioneer cross-county/city ferry transport	50227	Freight Pioneer cross-county/city ferry transport	
50228	Freight General ferry transport within county/city	50228	Freight General ferry transport within county/city	Using TSC ATSF v3 Infrastructure for water transportation, including infrastructure to enable low-carbon water transport EO1: Green and Transition EO2: Green EO3 and EO4: N/A
50229	Other Freight ferry transport, including international ferry transport	50229	Other freight ferry transport, including international ferry transport	
52221	Sea port service activities	52221	Sea port service activities	
52222	River and lake port service activities	52229	Other water transportation enabling activities	
52223	Ferry port service activities	52222	River and lake port service activities	
52225	Ship management activities	52229	Other water transportation enabling activities	
52229	Other water transportation enabling activities	52223	Ferry port service activities	
52293	Activities related to the expedition or freight forwarding of goods by sea	52229	Other water transportation enabling activities	
		52225	Ship management activities	
		52225	Ship management activities	
		52229	Other water transportation enabling activities	
		52293	Activities related to the expedition or freight forwarding of goods by sea	
Air				
51101	Passenger General domestic scheduled air transportation	51101	Domestic scheduled commercial air transportation for passengers or passengers and cargo	Using TSC <i>Air transport for passengers and cargo</i> aligned with

KBLI 2017		KBLI 2020		Description*
KBLI Level 5	Activities	KBLI Level 5	Activities	
51102	Passenger Pioneer scheduled domestic air transportation	51102	Domestic non-scheduled commercial air transportation for passengers or passengers and cargo	best practices, global and national policies EO1: Green and Transition EO2, EO3 and EO4: N/A
51103	Passenger Scheduled international air transportation	51103	International scheduled commercial air transportation for passengers or passengers and cargo	
51104	Passenger Non-scheduled domestic general air transportation	51102	Domestic non-scheduled commercial air transportation for passengers or passengers and cargo	
51105	Passenger Pioneer non-scheduled domestic air transportation	51102	Domestic non-scheduled commercial air transportation for passengers or passengers and cargo	
51106	Air transportation for sports	51106	Air transportation for sports	
51107	Air transportation for tourism	51107	Air transportation for tourism	
51109	Passenger Other air transportation	51109	Passenger Other air transportation	
51201	Freight Scheduled domestic general air transportation	51201	Domestic scheduled commercial air transport for cargo	
51202	Freight Pioneer scheduled domestic air transportation	51202	Domestic non-scheduled commercial air transport for cargo	
51203	Freight Scheduled international air transportation	51203	International scheduled commercial air transport for cargo	
51204	Freight Non-scheduled domestic general air transportation	51202	Domestic non-scheduled commercial air transport for cargo	
51205	Freight Pioneer non-scheduled domestic air transportation	51202	Domestic non-scheduled commercial air transport for cargo	
52230	Airport operations	52231	Airport operations	
		52232	Aviation navigation services	
Using TSC ATSF v3 Airport infrastructure, including low-carbon				

KBLI 2017		KBLI 2020		Description*
KBLI Level 5	Activities	KBLI Level 5	Activities	
52294	Air cargo expedition activities (EMPU)	52294	Air cargo expedition activities (EMPU)	<i>assets and facilities</i> and national policies EO1: Green and Transition EO2: Green EO3 and EO4: N/A

*) Grouping based on the similarity of activity types and TSC implementation can be combined.

Table 8 - List of T&S sector-enabling activities

Enabling activities ²⁸ are activities that improve the performance of other sectors or activities without posing a risk to the EOs. These activities can either be an integral part or a supporting element of the main transportation activities.

KBLI 2017		KBLI 2020		Description*
KBLI Level 5	Activities	KBLI Level 5	Activities	
52240	Cargo handling (loading and unloading of goods)	52240	Cargo handling (loading and unloading of goods)	Transportation and warehousing activities that support land, sea, and air transportation can be aligned with national policies. EO1: Green EO2: Green EO3 and EO4: N/A
52291	Transportation management services	52291	Transportation management services	
52295	Multimodal transportation	52295	Multimodal transportation	
52299	Other transportation support activities not otherwise classified	52299	Other transportation support activities not otherwise classified	

*) Grouping based on the similarity of activity types and TSC implementation can be combined.

²⁸ Indonesia Taxonomy for Sustainable Finance (2024) according to TEG EU, 2020, <http://gapura.ojk.go.id/tkbi2024>

E. TSC for T&S sector

1. Passenger Land and other passenger transport

KBLI 2017	Description
H	Transportation and storage
49	Land transport and pipeline transport
492	Bus transportation
4921	Scheduled bus transportation
49211	Intercity and interprovincial bus transportation (AKAP) This group includes transportation businesses that operate public double-decker, maxi, large, medium, and/or small buses on designated intercity and provincial (AKAP) routes, following a specific schedule.
49212	Cross-border bus transportation This group includes transportation businesses operating in districts/cities that directly border one another, using public double-decker, maxi, large, medium, and/or small buses, and which are not yet served by AKAP/AKDP routes.
49213	Interprovincial intercity bus transport (AKDP) This group includes transportation businesses operating double-decker, maxi, large, and/or medium-sized public buses based on schedules and designated AKDP routes.
49214	City bus transportation This group includes transportation businesses that operate public buses (large/medium-sized) on designated routes within a single city area, district capital area, or special capital city region.
49215	International cross-border bus transportation This group includes transportation businesses that operate public buses (large/medium-sized) on designated routes from one city to another across national borders.
49216	Special bus transportation This group includes passenger transportation businesses with fixed origins and/or destinations, such as shuttle services, employee transportation, residential transportation, and mixed-mode transportation using large/medium public buses. This also includes shuttle bus operations.
49219	Other scheduled bus transportation The group includes passenger transport businesses using buses on routes not classified elsewhere, such as bus services operating between cities and airports or cities and stations.
4922	Other non-scheduled bus transportation
49221	Tourist bus transportation This group includes passenger transport businesses using public buses for tourism or other purposes outside of regular route services, such as individual or group tourist trips using small, medium, large, maxi, and double-decker public buses.
49229	Other non-scheduled bus transportation

KBLI 2017	Description
	This group includes non-scheduled bus land transportation, excluding tourist bus services, such as charter bus transportation, excursions, and other regular non-scheduled bus services.
494	Non-bus land transportation
4941	Scheduled non-bus passenger land transportation
49411	Scheduled non-bus cross-border transportation This group includes businesses that transport passengers between adjacent districts/cities using non-bus motorized vehicles that are not yet served by AKAP/AKDP routes.
49412	Scheduled non-bus interprovincial intercity transportation This group includes businesses that transport passengers using motorized vehicles other than buses, following a schedule and designated AKDP route.
49414	Scheduled non-bus rural transportation This group includes businesses that transport passengers within urban areas using motorized vehicles other than buses, operating on fixed routes.
49415	Specialized non-bus land transportation This group includes businesses that provide passenger transport services with fixed origins and/or destinations. These services may include residential transportation, where passengers are transported to and from homes, as well as mixed-mode transport that utilizes non-bus motor vehicles.
49419	Passenger Other scheduled non-bus land transportation This group includes land transportation services for passengers within urban or rural areas, following designated routes. These services operate on fixed schedules and routes, ensuring passengers are picked up and dropped off at specific locations at the appropriate times.

Classification	Technical Screening Criteria (TSC)	References
Green	EO1: Climate Change Mitigation	
	If the urban or suburban passenger transport activities and/or activities providing interurban passenger road transport - If the passenger transport buses fall into categories M2 and M3 with types of bodyworks classified as CA, CB, CC, CD, the activity complies with one or all of the following criteria: - The activity provides urban or suburban passenger transport with zero direct (tailpipe) CO₂ emissions; and	- ATSF version 3 - Regulation of the Minister of Environment and Forestry No. 8 of 2023 on the Implementation of Motor Vehicle Emission Quality Standards for Category M, Category N, Category O, and category L.

Classification	Technical Screening Criteria (TSC)	References
	b. Until December 31, 2030, the activity provides interurban passenger road transport that complies with the latest EURO VI standard or has implemented fuel efficiency standards similar to EURO VI.	- Regulation of the Minister of Industry No. 6 of 2022 on Specifications, Development Roadmap, and Provisions for Calculating the Domestic Component Level (TKDN) Value for Battery Electric Vehicles - Regulation of the Minister of Environment and Forestry No. P.20/MENLHK/SETJEN/KUM.1/3/2017 on Exhaust Gas Emission Quality Standards for New Type Motor Vehicles in Category M, Category N, and Category O. - Decree of the Minister of Transportation Number 123 of 2022 concerning Service Standards at the Roadworthiness Testing and Certification Center for Motor Vehicles
Transition	If urban or suburban passenger transport activities: N/A If the activities provide interurban passenger road transport: - If the activity provides interurban passenger road transport using vehicles classified as M2 and M3 categories with bodywork classified as CA, CB, CC, CD; and - Until 31 December 2030, complies with the latest EURO IV standard or has implemented fuel efficiency standards similar to EURO IV.	
Notes: - M2: A motor vehicle designed for the transportation of people, with more than eight seats excluding the driver's seat, and a total allowable weight (GVW) of up to 5 tons. - M3: A motor vehicle designed for the transportation of people, with more than eight seats excluding the driver's seat, and a total allowable weight (GVW) exceeding 5 tons. - CA: single-deck vehicle; CB: double-deck vehicle; CC: single-deck articulated vehicle; CD: double-deck articulated vehicle. - The EURO standard refers to the European Emission Standard, which defines acceptable limits for exhaust emissions of new vehicles sold in EU and EEA member states. However, the EURO standard applies to M2 and M3 vehicles (primarily buses) as a benchmark for low-emission performance, measured in terms of grams of CO2 equivalent per passenger-kilometre (gCO2e/p-km). Some of the following terms as per section C. Definitions related to terminology used in TSC: "zero direct tailpipe emissions"		
EO2: Climate Change Adaptation		
Green	The activity has implemented both physical and non-physical solutions ('adaptation solutions') that substantially reduce the most important physical climate risks to the activity, as demonstrated by a Climate Risk and Vulnerability Assessment (CRVA); and	ATSF version 3

Classification	Technical Screening Criteria (TSC)	References
	2. The activities must be able to demonstrate the provision of transport security for consumers, considering potential future climate-related disruptions. In this context, the following examples may be considered relevant: a. Operation of equipment that has been constructed or upgraded to be more capable of operating in floods, storms, or higher temperature conditions; or b. Operation of monitoring and control equipment, or other related IT systems, to operate or maintain equipment during floods, storms, or higher temperature conditions; or c. Operation of facilities or equipment to provide support, storage, or training related to the operation, maintenance, or repair of equipment in scenarios involving floods, storms, or higher temperatures.	
Transition	N/A	
EO3: Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	
Transition	N/A	
EO4: Resource Resilience and the Transition to a Circular Economy		
Green	N/A	
Transition	N/A	

2. Transport by motorbikes, passenger cars and light commercial vehicles

KBLI 2017	Description
H	Transportation and storage
49	Land transportation and pipeline transportation
494	Non-bus transportation
4942	Scheduled non-bus passenger land transportation
49421	Taxi This group includes passenger transport businesses using specially marked passenger cars equipped with taximeters, providing door-to-door transportation within limited operating areas.
49422	Rental transportation KBLI 2020:

KBLI 2017	Description
	49422 – Rental transportation This group includes passenger transport businesses using public passenger cars that provide door-to-door services, with operating areas not restricted by administrative boundaries and fares determined through agreements between users and providers. It includes charter services, excursions, seasonal charter transportation, and car rental or other private transportation with drivers, as well as <i>bajaj</i>, <i>kancil</i>, <i>bentor</i>, and other rental vehicles. This group does not include taxi transportation (49421) or motorcycle taxi transportation (49424).
49424	49426 – Special chartered transportation This group includes door-to-door transportation services with drivers, using public vehicles (sedans/non-sedans), operating within urban areas, to and from airports, ports, or other transportation hubs, with bookings made through information technology-based applications and fares listed in the app. This group does not include taxi transportation (49421) or motorcycle taxi transportation (49424).
49425	Motorbike taxi transportation This group includes passenger transport businesses using two-wheeled motor vehicles, such as motorbike taxis and online motorbike taxis.
49429	Tourist land transportation This group includes the operation of land transportation using motorized and non-motorized vehicles at tourism destinations/areas. Other Passenger land transportation This group includes other land transportation operations for passengers, such as shuttle services, employee transportation, residential transportation, and mixed-mode transportation using non-bus motor vehicles.

Classification	Technical Screening Criteria (TSC)	References
EO1 – Climate Change Mitigation		
Green	1. The activities comply with the following criteria: a. For vehicles of category M1 and N1: i. Until 31 December 2025, CO₂ emissions are ≤50 g CO₂e/v-km; ii. From 1 January 2026, CO₂ emissions are 0 g CO₂e/v-km; or b. For vehicles in category L, exhaust CO₂ emissions are 0 g CO₂e/v-km; and 2. Vehicles are not dedicated for transport of the fossil fuels	• ATSF version 3 • Regulation of the Minister of Environment and Forestry No. P.20/MENLHK/SETJEN/KUM.1/3/2017 on Exhaust Gas Emission Quality Standards for New Type Motor Vehicles in Category M, Category N, and Category O. • Regulation of the Minister of Environment and Forestry No. 8 of 2023 on the Implementation of Motor Vehicle Emission Quality Standards for Category M, Category N, Category O, and Category L.
Transition	The activities comply with the following criteria: a. For vehicles of category M1 and N1: until 31 December 2030, specific CO₂ emissions are ≤100 g CO₂e/v-km; and b. Vehicles are not dedicated for transport of the fossil fuels	• Regulation of the Minister of Transportation No. PM 44 of 2020 concerning the Physical Type Testing of Motorized Vehicles Powered by Electric Motors.

Classification	Technical Screening Criteria (TSC)	References
		- Regulation of the Minister of Industry No. 6 of 2022 on Specifications, Development Roadmap, and Provisions for Calculating the Domestic Component Level (TKDN) Value for Battery Electric Vehicles. - Decree of the Minister of Transportation Number 123 of 2022 concerning Service Standards at the Roadworthiness Testing and Certification Center for Motor Vehicles
Notes: - M1: A motor vehicle that is designed for transporting of individuals, and has a maximum of eight seats, excluding the driver's seat. - N1: A motor vehicle used for transporting goods, with a Gross Vehicle Weight (GVW) not more than 0.75 tons. - L: Vehicles with fewer than four wheels, such as two-wheel motorcycles. Some of the following terms as per section C. Definitions related to terminology used in TSC: "zero direct tailpipe emissions" "Until (date)"		
EO2: Climate Change Adaptation		
Green	1. The activity has implemented both physical and non-physical solutions ('adaptation solutions') that substantially reduce the key physical climate risks relevant to the activity, as demonstrated by a Climate Risk and Vulnerability Assessment (CRVA); and 2. Activities must demonstrate the provision of transport security for consumers, considering potential future climate-related disruptions. The following examples may be considered relevant in this context: - Operation of equipment that has been constructed or upgraded to be more capable of operating in floods, storms, or higher temperature conditions; or - Operation of monitoring and control equipment, or other related IT systems, to operate or maintain equipment during floods, storms, or higher temperature conditions; or - Operation of facilities or equipment to provide support, storage, or training related to the operation, maintenance, or repair of equipment in scenarios involving floods, storms, or higher temperatures.	ATSF version 3

Classification	Technical Screening Criteria (TSC)	References
Transition	N/A	
EO3: Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	
Transition	N/A	
EO4: Resource Resilience and the Transition to a Circular Economy		
Green	N/A	
Transition	N/A	

3. Freight Road transport

KBLI 2017	Description
H	Transportation and storage
49	Land transportation and pipeline transportation
494	Non-bus land transportation
4943	Freight Road transport
49431	Motorized transportation for general goods This group includes goods transport operations using motorized vehicles capable of transporting multiple types of goods, such as trucks, pick-ups, and open-bed or closed-bed (box) vehicles.
49432	Motorized transportation for special goods This group includes freight transport operations using motorized vehicles dedicated to transporting a specific type of goods, such as fuel oil, petroleum, processed products, LPG, LNG, CNG, hazardous materials, hazardous and toxic waste, heavy equipment, containers, live plants, live animals, and motorized vehicles.

Classification	Technical Screening Criteria (TSC)	References
EO1: Climate Change Mitigation		
Green	1. The activity complies with one or all of the following criteria: a. Category N1 vehicles with zero direct (tailpipe) CO₂ emissions; or b. Category N2 and N3 vehicles with a maximum technically permitted payload mass not exceeding 7.5 tons, classified as 'zero-emission heavy-duty vehicles'; or c. Category N2 and N3 vehicles with a maximum technically permitted payload mass exceeding 7.5 tons must be one of the following:	• ATSF version 3 • Regulation of the Minister of Environment and Forestry No. P.20/MENLHK/SETJEN/KUM.1/3/2017 on Exhaust Gas Emission Quality Standards for New Type Motor Vehicles in Category M, Category N, and Category O.

Classification	Technical Screening Criteria (TSC)	References
	i. Vehicles classified as zero-emission heavy-duty vehicles; or ii. If meeting the criterion in (a) is not technologically and economically feasible, then by 31 December 2030, direct (tailpipe) CO₂ emissions are <21 g CO₂/t-km*; and 2. Vehicles are not dedicated for transport of the fossil fuels.	- Regulation of the Minister of Transportation No. PM 44 of 2020 concerning the Physical Type Testing of Motorized Vehicles Powered by Electric Motors. - Regulation of the Minister of Finance No. 138 of 2021 concerning Types and Tariffs for Volatile Non-Tax State Revenue and Urgent Needs Applicable to the Ministry of Transportation. - Decree of the Minister of Transportation Number 123 of 2022 concerning Service Standards at the Roadworthiness Testing and Certification Center for Motor Vehicles
Transition	1. The Vehicles in categories N2 and N3 with a maximum technically permissible load mass exceeding 7.5 tons are required, If achieving zero direct (tailpipe) CO₂ emissions is not technologically and economically feasible, direct (tailpipe) CO₂ emissions are <42 g CO₂/t-km by 31 December 2030, and are <21 g CO₂/t-km from 1 January 2031 onwards; and 2. Vehicles are not dedicated for transport of the fossil fuels.	
Description: - N1: Motor vehicles used for freight transport and has a Gross Vehicle Weight (GVW) of not more than 3.5 tons. - N2: Motor vehicles used for freight transport and has a Gross Vehicle Weight (GVW) of more than 3.5 tons but not more than 12 tons. - N3: Motor vehicles used for freight transport and has a Gross Vehicle Weight (GVW) of more than 12 tons. The following terms as per section C. Definitions related to terminology used in TSC: "zero direct tailpipe emissions" - technologically and economically infeasible "Until (date)"		
E02: Climate Change Adaptation		
Green	1. The activity has implemented both physical and non-physical solutions ('adaptation solutions') that substantially reduce the key physical climate risks relevant to the activity, as demonstrated by a Climate Risk and Vulnerability Assessment (CRVA); and 2. Activities must demonstrate the provision of transport security for consumers, considering potential future climate-related disruptions. The following examples may be considered relevant in this context: a) Operation of equipment that has been constructed or upgraded to be more capable of operating in floods, storms, or higher temperature conditions;	ATSF version 3

Classification	Technical Screening Criteria (TSC)	References
	or b) Operation of monitoring and control equipment, or other related IT systems, to operate or maintain equipment during floods, storms, or higher temperature conditions; or 3. Operation of facilities or equipment for support, storage, or training related to the operation, maintenance, or repair of equipment in scenarios involving floods, storms, or higher temperatures.	
Transition	N/A	
	EO3: Protection of Healthy Ecosystems and Biodiversity	
Green	N/A	
Transition	N/A	
	EO4: Resource Resilience and the Transition to a Circular Economy	
Green	N/A	
Transition	N/A	

4. Operation of personal mobility devices, cycle logistics

KBLI 2017	Description
H	Transportation and storage
49	Land transportation and pipeline transportation
494	Non-bus land transportation
4942	Other passenger land transportation
49423	Passengers Non-motorized transportation This group includes passenger transportation businesses using non-motorized vehicles, such as <i>delman/bendi/andong/dokar, becaks</i>, and bicycles. It does not include non-motorized transportation for passengers in tourist areas (49425).
4943	Freight Road transport
49433	Non-motorized transportation for general goods This group includes passenger transportation businesses using non-motorized vehicles, such as <i>delman/bendi/andong/dokar, becaks</i>, and bicycles. It does not include non-motorized transportation for passengers in tourist areas (49425).

Classification	Technical Screening Criteria (TSC)	References
	EO1: Climate Change Mitigation	

Classification	Technical Screening Criteria (TSC)	References
Green	- The propulsion of the personal mobility device should be powered by the user's physical activity, a zero-emission motor, or a mix of a zero-emission motor and physical activity; or - The personal mobility devices are allowed to be operated on the same public infrastructure as bicycles or pedestrian pathways.	ATSF version 3
Transition	N/A	
EO2: Climate Change Adaptation		
Green	- The activity has implemented both physical and non-physical solutions ('adaptation solutions') that substantially reduce the key physical climate risks relevant to the activity, as demonstrated by a Climate Risk and Vulnerability Assessment (CRVA); and - Activities must demonstrate the provision of transport security for consumers, with consideration to future climate-related disruptions. The following examples may be considered relevant in this context: - Operation of equipment that has been built or upgraded to be better able to operate in projected flooding, storm conditions, or higher temperature conditions; or - Operation of monitoring and control equipment, or related IT systems, to operate or maintain equipment during projected flooding, storm conditions, or higher temperature; or - Operation of facilities or equipment for support, storage, or training related to the operation, maintenance, or repair of equipment in scenarios of projected flooding, storm conditions, or higher temperatures.	ATSF version 3
Transition	N/A	
EO3: Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	
Transition	N/A	
EO4: Resource Resilience and the Transition to a Circular Economy		
Green	N/A	
Transition	N/A	

5. Passengers interurban rail transport

KBLI 2017	Description
H	Transportation and storage
49	Land transportation and pipeline transportation
491	Rail transportation
4911	Passenger Long-distance rail transportation
49110	Passenger Long-distance rail transportation This group includes intercity passenger transport by train, including the operation of sleeping trains or dining trains as part of an integrated operation by the railway company.
494	Passenger Other non-bus land transportation
4944	Passenger Urban rail and tourism transportation
49441	Urban rail transportation This group includes passenger transportation businesses utilizing various modes of urban rail transport, such as trams, monorails, electric trains, subways, elevated trains, and others. It also includes the operation of cable cars, hill trains, and gondolas if they are part of the urban route system, as well as rail transportation on city-to-airport or city-to-station routes.
49442	Rail transportation for tourism This group includes the operation of trains on special tracks designated for tourism, such as rail transport in tourist areas like the Mak Itam tourist train in West Sumatra, Lake Singkarak tourist train in West Sumatra, Kaliraga lorry tourist train in East Java, and Ambarawa tourist train in Central Java.
4945	Other rail transportation
49450	Other rail transportation This group includes the operation of cable cars, hill railways, funiculars (gondolas), and similar modes of transport when they are not part of the urban route system.

Classification	Technical Screening Criteria (TSC)	References
Green	EO1: Climate Change Mitigation	
	1. The activity complies with one of both the following criteria: a. The trains and wagons have zero direct tailpipe CO₂ emissions; or The trains and wagons have zero direct tailpipe CO₂ emissions when operated on tracks with necessary infrastructure, and use conventional engines where such infrastructure is not available (bimodal operation). and 2. The trains and wagons are not dedicated to the transport of fossil fuels.	• ATSF version 3 • National Railway Masterplan/RIPNAS 2030)

Classification	Technical Screening Criteria (TSC)	References
Transition	Until 2027, passenger cars direct CO ₂ emissions are below 50 g CO ₂ e/p-km. After 2027, only trains with zero direct tailpipe CO ₂ emissions will be eligible.	
Some of the following terms as per section C. Definitions related to the terminology used in the TSC: • “Zero direct tailpipe emissions” • “Dedicated to the transportation of fossil fuels” • “Until [date]”		
EO2: Climate Change Adaptation		
Green	1. The activity has implemented both physical and non-physical solutions ('adaptation solutions') that substantially reduce the key physical climate risks relevant to the activity, as demonstrated by a Climate Risk and Vulnerability Assessment (CRVA); and 2. Activities must demonstrate the provision of transport security for consumers, considering potential future climate-related disruptions. The following examples may be considered relevant in this context: a) Operation of equipment that has been constructed or upgraded to be more capable of operating in floods, storms, or higher temperature conditions; or b) Operation of monitoring and control equipment, or related IT systems, to manage or maintain equipment during floods, storms, or higher temperature conditions; or c) Operation of facilities or equipment for support, storage, or training related to the operation, maintenance, or repair of equipment in scenarios involving floods, storms, or higher temperatures	• ATSF version 3
Transition	N/A	
EO3: Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	
Transition	N/A	
EO4: Resource Resilience and the Transition to a Circular Economy		
Green	N/A	
Transition	N/A	

6. Freight interurban rail transport

KBLI 2017	Description
H	Transportation and storage
49	Land transportation and pipeline transportation
491	Rail transportation
4912	Freight Rail transportation
49120	Freight interurban rail transport This group includes businesses involved in freight transport via the main lines of the long-distance railway network, as well as special lines for short-distance freight transport. This includes the transportation of agricultural, mining, excavation products, industrial goods, and other types of goods.

Classification	Technical Screening Criteria (TSC)	References
EO1: Climate Change Mitigation		
Green	1. The activity complies with one or both of the following criteria: - The trains and wagons have zero direct tailpipe CO₂ emissions; or - The trains and wagons have zero direct tailpipe CO₂ emissions when operated on tracks with available infrastructure, while utilizing conventional engines on sections where such infrastructure is not available (bimodal operation); and 2. The trains and wagons are not dedicated to the transport of the fossil fuels.	- ATSF version 3 - National Railway Masterplan/RIPNAS 2030)
Transition	Until 2027, passenger cars direct CO ₂ emissions are below than 25 g CO ₂ e/p-km. After 2027, only trains with zero direct tailpipe CO ₂ emissions will be eligible.	
Some of the following terms as per section C. Definitions related to the terminology used in the TSC:		
	"Zero direct tailpipe emissions" "Dedicated to the transportation of fossil fuels" "Until [date]"	
EO2: Climate Change Adaptation		
Green	1. The activity has implemented both physical and non-physical solutions ('adaptation solutions') that substantially reduce the key physical climate	ATSF version 3

Classification	Technical Screening Criteria (TSC)	References
	risks relevant to the activity, as demonstrated by a Climate Risk and Vulnerability Assessment (CRVA); and 2. Activities must demonstrate the provision of transport security for consumers, considering potential future climate-related disruptions. The following examples may be considered relevant in this context: a) Operation of equipment that has been constructed or upgraded to be more capable of operating in floods, storms, or higher temperature conditions; or b) Operation of monitoring and control equipment, or related IT systems, to manage or maintain equipment during floods, storms, or higher temperature conditions; or c) Operation of facilities or equipment for support, storage, or training related to the operation, maintenance, or repair of equipment in scenarios involving floods, storms, or higher temperatures.	
Transition	N/A	
EO3: Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	
Transition	N/A	
EO4: Resource Resilience and the Transition to a Circular Economy		
Green	N/A	
Transition	N/A	

7. Infrastructure for road and public transportation, including infrastructure to enable low-carbon land transport

KBLI 2017	Description
H	Transportation and storage
52	Storage and transportation enabling activities
522	Transportation enabling activities
5221	Transportation enabling activities
52211	Land terminal activities

	This group includes land terminal business activities, such as parking services, vehicle departure scheduling (for public transportation), and passenger boarding.	
52213	Toll road activities This group includes business activities that provide vehicle traffic services through toll roads or bridges.	
52214	On street parking This group includes business activities related to organizing parking along the roadside.	
52215	Off street parking This group includes business activities related to organizing off-road parking, such as parking structures, parking lots within office buildings, shopping centers, hospitals, and other off-road parking services.	
52219	Other supporting activities for land transportation This group includes business activities related to switching and shunting, towing assistance, gas liquefaction for transportation purposes, and other land transportation enabling services.	
Classification	Technical Screening Criteria (TSC)	References
Green	If the activity supports land transportation: 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 CO ₂ emissions, such as electric charging points, electric grid connections upgrades, hydrogen refuelling stations, or electric road systems (ERS); or b. The infrastructure and installations are dedicated to trans-shipping freight between the modes, including terminal infrastructure and superstructure for loading and unloading goods; or c. The infrastructure and installations are dedicated to urban and suburban public passenger transport, including associated signaling systems for metro, tram, and rail systems; or d. The infrastructure is supported by the use of renewable energy; and 2. If the activity uses energy and/or energy sources ≥500 Ton of Oil Equivalent (TOE) per year, it must have evidence of the implementation of energy management in accordance with Government Regulation of the Republic of Indonesia Number 33 of 2023 concerning Energy Conservation:	• ATSF version 3 • Presidential Regulation of the Republic of Indonesia No. 22 of 2017 concerning the National Energy General Plan (Annex II). • Decree of the Minister of Transportation No. KM 8 of 2023 concerning the Determination of Climate Change Mitigation Actions in the Transportation Sector for Achieving Nationally Determined Contribution Targets.

Classification	Technical Screening Criteria (TSC)	References
	and 3. The infrastructure is not dedicated to the transport or storage of the fossil fuels. If the activity supports personal mobility and cycling: The infrastructure constructed, operated, and dedicated to personal mobility or cycling logistics, including sidewalks, bicycle lanes, pedestrian zones, electric charging and hydrogen refueling installations for personal mobility devices.	
Transition	N/A	
Some of the following terms as per section C. Definitions related to the terminology used in the TSC:		
	• "Zero direct tailpipe emissions" • "Dedicated to the transportation of fossil fuels"	
EO2: Climate Change Adaptation		
Green	1. The activity has implemented both physical and non-physical solutions ('adaptation solutions') that substantially reduce the key physical climate risks relevant to the activity, as demonstrated by a Climate Risk and Vulnerability Assessment (CRVA); and 2. Activities must demonstrate the provision of transport security for consumers, considering potential future climate-related disruptions. The following examples may be considered relevant in this context: a) Operation of equipment that has been constructed or upgraded to be more capable of operating in floods, storms, or higher temperature conditions; or b) Operation of monitoring and control equipment, or related IT systems, to manage or maintain equipment during floods, storms, or higher temperature conditions; or c) Operation of facilities or equipment for support, storage, or training related to the operation, maintenance, or repair of equipment in scenarios involving floods, storms, or higher temperatures.	• ATSF version 3
Transition	N/A	
EO3: Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	

Classification	Technical Screening Criteria (TSC)	References
Transition	N/A	
EO4: Resource Resilience and the Transition to a Circular Economy		
Green	N/A	
Transition	N/A	

8. Infrastructure for rail transport

KBLI 2017	Description
H	Transportation and storage
52	Storage and transportation enabling activities
522	Transportation enabling activities
5221	Land transportation enabling activities
52212	Railway station activities This group includes railway station business activities, such as providing parking services, scheduling train departures, and facilitating passenger boarding and alighting.
5229	Other transportation enabling activities
52292	Rail cargo expedition and land transportation expedition activities This group includes businesses that deliver and/or package goods in large volumes, whether transported by rail or land transportation.

Classification	Technical Screening Criteria (TSC)	References
EO1: Climate Change Mitigation		
Green	1. The activity complies with one of the following criteria: a. The infrastructure is either: i. electrified trackside infrastructure and associated subsystems, including on-train infrastructure, energy, on-board control command and signaling, and trackside control-command and signaling 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 siding or where the infrastructure will be fit for use by zero tailpipe CO₂ emissions trains within 10 years from the beginning of activity; or	• ATSF version 3 • Decree of the Minister of Transportation No. KM 8 of 2023 concerning the Determination of Climate Change Mitigation Actions in the Transportation Sector for Achieving Nationally Determined Contribution Targets. • National Railway Masterplan (RIPNAS 2030).

Classification	Technical Screening Criteria (TSC)	References
	b. The infrastructure and installations are dedicated to transshipping freight between the modes, including terminal infrastructure and superstructure for loading and unloading transshipment of goods; or c. The infrastructure and installations are dedicated to the transfer of passengers from rail to rail or from other modes to rail; and 2. If the activity uses energy and/or energy sources ≥ 500 Ton of Oil Equivalent (TOE) per year, it must have evidence of the implementation of energy management in accordance with Government Regulation of the Republic of Indonesia Number 33 of 2023 concerning Energy Conservation; and 3. The infrastructure is not dedicated to the transport and storage of fossil fuels.	
Transition	N/A	
Some of the following terms as per section C. Definitions related to the terminology used in the TSC:		
	• "Zero direct tailpipe emissions" • "Dedicated to the transportation of fossil fuels"	
E02: Climate Change Adaptation		
Green	1. The activity has implemented both physical and non-physical solutions ('adaptation solutions') that substantially reduce the key physical climate risks that are material to the activity, as demonstrated by a Climate Risk and Vulnerability Assessment (CRVA); and 2. Activities must demonstrate the provision of transport security for consumers, considering potential future climate-related disruptions. The following examples may be considered relevant in this context a) Operation of equipment that has been constructed or upgraded to be more capable of operating in floods, storms, or higher temperature conditions; or b) Operation of monitoring and control equipment, or related IT systems, to manage or maintain equipment during floods, storms, or higher temperature conditions; or	• ATSF version 3

Classification	Technical Screening Criteria (TSC)	References
	c) Operation of facilities or equipment for support, storage, or training related to the operation, maintenance, or repair of equipment in scenarios involving floods, storms, or higher temperatures.	
Transition	N/A	
EO3: Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	
Transition	N/A	
EO4: Resource Resilience and the Transition to a Circular Economy		
Green	N/A	
Transition	N/A	

9. Sea and coastal passenger water transport

KBLI 2017	Description
H	Transportation and storage
50	Water transportation
501	Sea transportation
5011	Passenger Domestic sea transport
50111	Passenger Domestic Sea Transport Liner This group includes passenger transportation by sea using ships operating between domestic ports, offering regular and scheduled sea transportation services, with specified ports of call. It also includes passenger ship operations by PELNI and other private companies, as well as sea transportation rental businesses and their operators.
50112	Passenger Domestic Sea Transport Trampler This group also encompasses passenger transport by sea using ships operating between domestic ports on irregular, non-fixed routes or tramp services, as well as sea transport rental businesses and their operators.
50113	Domestic Sea Transport For Tourism This group includes sea transportation businesses for tourism or recreation, including marine tourism, with the primary activity being recreational fishing at sea using fishing vessels. It also covers sea transport rental businesses and their operators.
50114	Passengers Pioneer domestic sea transport This group includes sea transportation businesses for passengers that connect remote and undeveloped areas to more developed regions, and which are not yet profitable for commercial operation. Pioneer sea transportation activities are designated by the director general, operating on fixed and regular routes (liners), with vessel placements aimed at promoting the development of remote areas.

KBLI 2017	Description
	These activities are funded by the state budget (APBN) and managed through the budget implementation document (DIP) in each fiscal year. It also includes sea transportation rental businesses and their operators.
5012	Passengers International Sea Transport
50121	Passengers International Sea Transport Liner This group includes sea transportation businesses for passengers, using ships that operate between ports in Indonesia and international ports, following fixed and regular routes (liners). It also includes sea transportation rental businesses and their operators.
50122	Passengers International Sea Transport Trampler This group includes sea transportation businesses for passengers, using ships that operate between ports in Indonesia and international ports, following irregular and non-fixed routes (trampers). It also includes sea transportation rental businesses and their operators.
50123	International Sea Transport For Tourism This group includes sea transportation businesses for passengers, using ships that operate between ports in Indonesia and international ports, following irregular routes or trampler services. It also includes sea transportation rental businesses and their operators.
5021	Passengers River, Lake And Ferry Transportation
50214	Passenger Inter-Province Ferry Transport This group includes passenger transport businesses that operate ferry services between provinces, following designated routes.
50215	Passenger Pioneer Inter-Province Ferry Transport This group includes ferry transportation businesses for passengers on seas, lakes, straits, and inter-provincial bays, connecting remote areas and regions that are not yet developed or profitable for commercial sailing, to areas that have been developed. This also includes ferry transportation rental businesses and their operators.
50216	Passenger Inter-County/City Ferry Transport This group includes ferry transportation businesses for passengers on seas, lakes, straits, and bays between ports and inter-district/city crossings, functioning as a moving bridge connecting two specific locations as an extension of the highway and/or railway network. This also includes ferry transportation rental businesses and their operators.
50217	Passenger Pioneer Inter-County/City Ferry Transport This group includes ferry transportation businesses for passengers on seas, lakes, straits, and bays between districts/cities, connecting remote areas and regions that are not yet developed or commercially viable, to areas that have been developed. This also includes ferry transportation rental businesses and their operators.
50218	Intra-County/City Passenger Ferry Transport This group includes ferry transportation businesses for passengers on seas, lakes, straits, and bays, operating between ferry ports in districts/cities as a moving bridge connecting two specific locations, serving as an extension of the highway and/or railway network. This also includes ferry transportation rental businesses and their operators.
50219	Other Passenger Ferry Transport, Including International Ferry Transport

KBLI 2017	Description	
	This group includes sea, strait, and bay ferry transportation businesses operating between ferry ports in Indonesia and ports abroad, functioning as a moving bridge connecting two specific locations and serving as an extension of the highway and/or railway network. This also includes ferry transportation rental businesses and their operators.	
Classification	Technical Screening Criteria (TSC)	References
Green	EO1: Climate Change Mitigation If the sea or coastal transportation activity carries passengers: - The activity complies with one or more of the following criteria: - The vessels have zero direct (tailpipe) CO₂ emissions; or - If it is technologically and economically not possible/feasible to fulfil the criteria in point (a), by 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 operations at sea and in port; or - If it is technologically and economically not possible/feasible to comply with the criteria in point (a), until December 31, 2027, the vessels have an attained EEDI/EEEXI value 10% below the EEDI/EEEXI requirements applicable on January 1, 2023, if the vessels are able to run on <i>zero direct tailpipe CO₂ emissions fuels</i> or with <i>alternative fuels</i>; and - The vessels are not dedicated to the transport of the fossil fuels. If the activity involves retrofitting of sea and coastal transportation for passengers: - The activity complies with one or more of the following criteria - By 31 December 2027, the retrofit activity reduces the vessel's fuel consumption by at least 10% of fuel tonnes per deadweight tons per nautical mile and equivalent EEEXI track, as demonstrated by computational fluid dynamics (CFD), tank tests, or similar engineering calculations, from pre-retrofit conditions; or - By 31 December 2027, the retrofit activity reduces the vessel's fuel consumption by at least 13% below the AER trajectory of IMO2023, expressed in grams of fuel per deadweight tons per nautical mile. - Retrofitted vessels are not dedicated to transport of the fossil fuels	• ATSF version 3 • IMO Standard • Presidential Regulation (PERPRES) No. 29 of 2012 concerning the Ratification of Annex III, Annex IV, Annex V, and Annex VI of the International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol of 1978 related thereto (Annex III, Annex IV, Annex V, and Annex VI of the 1973 International Convention on the Prevention of Pollution from Ships, as amended by the 1978 Protocol). • Regulation of the Minister of Transportation No. 29 of 2014 concerning the Prevention of Maritime Environmental Pollution. • Circular Letter of the Director General of Sea Transportation No. UM.003/93/14/DJPL-18, dated 30 October 2018, concerning Limits of Sulphur Content in Fuel and Obligations to Submit Fuel Consumption on Ships.

Classification	Technical Screening Criteria (TSC)	References
Transition	If the sea or coastal transportation activity carries passengers: - The activity complies with one or more of the following criteria: - The vessels use at least 50% of their energy from alternative fuels, and after 1 January 2030, the vessels will use zero direct tailpipe CO2 emissions; or - By 31 December 2030, the vessel meets the same TSC as green criteria 1.b. or criterion 1.c; and - The vessels are not dedicated to transport of the fossil fuels If the activity involves retrofitting of sea and coastal transportation for passengers: - The activity must comply with one or more of the following criteria: Until 31 December 2030, the ship must comply with the same TSC as 'green' criterion 1.a. or criterion 1.b. for retrofits; and - Retrofitted vessels are not dedicated to transporting fossil fuels.	
Notes: EEDI: <i>Energy Efficiency Design Index</i>; EEXI: <i>Energy Efficiency Existing Ship Index</i>; AER: <i>Annual Efficiency Ratio</i> AER: Annual Efficiency Ratio (The AER trajectory is a benchmark set by the IMO under the CII regulations. It measures the carbon intensity of a ship's operations by calculating CO2 emissions relative to its transportation work). Some of the following terms as per section C. Definitions related to the terminology used in the TSC: "zero direct tailpipe emissions " "Technologically and economically infeasible" "Dedicated to the transportation of fossil fuels" "<i>Alternative fuels</i>" "Until [date]"		
EO2: Climate Change Adaptation		
Green	If the sea or coastal transportation activity carries passengers; and if it includes retrofitting of sea and coastal passenger transport: The activity complies with one or more of the following criteria:	- ATSF version 3 - Regulation of the Minister of Transportation No. 29 of 2014 concerning the Prevention of Maritime

Classification	Technical Screening Criteria (TSC)	References
	1. The activity has implemented both physical and non-physical solutions ('adaptation solutions') that substantially reduce the key physical climate risks relevant to the activity, as demonstrated by a Climate Risk and Vulnerability Assessment (CRVA); and 2. Activities must demonstrate the provision of transport security for consumers, considering potential future climate-related disruptions. The following examples may be considered relevant in this context: a. Operation of equipment that has been constructed or upgraded to be more capable of operating in floods, storms, or higher temperature conditions; or b. Operation of monitoring and control equipment, or related IT systems, to operate or maintain equipment during floods, storms, or higher temperature conditions; or c. Operation of facilities or equipment for support, storage, or training related to the operation, maintenance, or repair of equipment in scenarios involving floods, storms, or higher temperatures.	Environmental Pollution change with Regulation of the Minister of Transportation No. 24 of 2022
Transition	N/A	
EO3: Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	
Transition	N/A	
EO4: Resource Resilience and the Transition to a Circular Economy		
Green	N/A	
Transition	N/A	

10. Freight Sea and Coastal Water Transport and Retrofitting

KBLI 2017	Description
H	Transportation and storage
50	Water transportation
501	Sea transportation
5013	Freight Domestic Sea Transport
50131	Freight Domestic Sea Liner Transport

KBLI 2017	Description
	This group includes businesses that transport general goods by sea using ships between domestic ports that operate on fixed and regular routes (liners). This also includes sea transportation rental businesses and their operators.
50132	Freight Domestic Sea Trumper Transport This group includes businesses that transport general goods by sea using ships between domestic ports that operate on irregular and non-fixed routes (trampers). This also includes sea transportation rental businesses and their operators.
50133	Domestic Sea Transport For Special Goods This group includes businesses that transport goods using ships specifically designed for a certain type of cargo. It also includes sea transportation rental businesses and their operators.
50134	Freight Pioneer Domestic Sea Transport This group also includes businesses that transport goods using ships specifically designed for a certain type of cargo. It also includes sea transportation rental businesses and their operators.
50135	Domestic Traditional Shipping This group includes sea transportation businesses which transport goods and/or animals using sailing ships, traditional motor vessels, and motorized ships of specific sizes. Traditional shipping companies are firms that are Indonesian legal entities, authorized and legalized by the Head of the Regional Office of the Department of Transportation. This also includes sea transportation rental businesses and their operators.
5014	Freight International sea transport
50141	Freight International sea liner transport This group includes businesses that transport goods by sea between Indonesian ports and international ports, operating on fixed and regular routes (liners). It also encompasses sea transportation rental businesses and their operators.
50142	Freight International sea trumper transport This group also includes businesses that transport goods by sea between Indonesian ports and international ports, operating on irregular routes (trampers). This includes sea transportation rental businesses and their operators.
50143	International sea transport for special goods This group includes international sea transportation businesses specifically for goods using Indonesian-flagged ships. The ships' conditions and requirements are tailored to the type of primary business activity and serve irregular routes or tramp between ports in Indonesia and ports abroad. This also includes sea transportation rental businesses and their operators.
50144	International traditional shipping

Classification	Technical Screening Criteria (TSC)	References
	EO1: Climate Change Mitigation	
Green	If the activity is Freight Sea and Coastal Water Transportation: The activity complies with one or more of the following criteria:	• ATSF version 3 • IMO Standard

Classification	Technical Screening Criteria (TSC)	References
	a. The vessels with zero direct (tailpipe) CO₂ emissions; or b. By 31 December 2027, hybrid and dual-fuel vessels must obtain at least 25% of their energy from zero direct (tailpipe) CO₂ emission fuels or plug-in power for regular operations at sea and in port; or c. Where technologically and economically not feasible to comply with the criterion in (a), by 31 December 2027, and if it can be demonstrated that the vessel operates exclusively for coastal and short sea services transitioning from current land-based transport to sea, the vessel have direct (tailpipe) CO₂ emissions that are 13% below the AER trajectory of IMO 2023; or d. Where technologically and economically not feasible to meet the criteria in (a), until December 31, 2027, the vessels have an EEDI/EEEXI value 10% below the EEDI/EEEXI requirements applicable on January 1, 2023, if the vessels can operate with zero <i>direct tailpipe</i> CO₂ emissions or with <i>alternative fuels</i>; and 2. The vessels are not dedicated to the transport of the fossil fuel. If the activity involves Retrofitting of Sea and Coastal Freight Transportation: 1. The activity complies with one or more of the following criteria a. By 31 December 2027, the retrofit activity reduces the vessel's fuel consumption by at least 10% of fuel tonnes per deadweight tons per nautical mile and equivalent EEEXI track, as demonstrated by computational fluid dynamics (CFD), tank tests, or similar engineering calculations, from pre-retrofit conditions; or b. By 31 December 2027, the retrofit activity reduces the vessel's fuel consumption by at least 13% below the AER trajectory of IMO2023, expressed in grams of fuel per deadweight tons per nautical mile; and 2. Retrofitted vessels are not dedicated to the transport of the fossil fuels	• Presidential Regulation (PERPRES) No. 29 of 2012 concerning the Ratification of Annex III, Annex IV, Annex V, and Annex VI of the International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol of 1978 related thereto (Annex III, Annex IV, Annex V, and Annex VI of the 1973 International Convention on the Prevention of Pollution from Ships, as amended by the 1978 Protocol). • Regulation of the Minister of Transportation No. 29 of 2014 concerning the Prevention of Maritime Environmental Pollution • Circular Letter of the Director General of Sea Transportation No. UM.003/93/14/DJPL-18, dated 30 October 2018, concerning Limits of Sulphur Content in Fuel and Obligations to Submit Fuel Consumption on Ships.
Transition	If the activity is Freight Sea and Coastal Water Transportation: 1. The activity complies with one or more of the following criteria:	

Classification	Technical Screening Criteria (TSC)	References
	a. The vessels use at least 50% of their energy from alternative fuels, and after 1 January 2030, the vessels will use zero direct tailpipe CO2 emissions; or b. By 31 December 2030, the vessel meets the same TSC as the 'green' criterion 1.b. or criterion 1.c. and 2. The vessels are not dedicated to the transport of the fossil fuels. If the activity involves Retrofitting of Sea and Coastal Freight Transportation The activity complies with the following criteria: 1. Until 31 December 2030, the vessels must comply with the same TSC as the 'green' criteria; and 2. The retrofitted vessels are not dedicated to the transport of the fossil fuels.	
Notes: EEDI: <i>Energy Efficiency Design Index</i>; EEXI: <i>Energy Efficiency Existing Ship Index</i>; AER: <i>Annual Efficiency Ratio</i> AER: Annual Efficiency Ratio (The AER trajectory is a benchmark set by the IMO under the CII regulations. It measures the carbon intensity of a ship's operations by calculating CO2 emissions relative to its transportation work). Some of the following terms as per section C. Definitions related to the terminology used in the TSC: • “zero direct tailpipe emissions” • “Technologically and economically infeasible/feasible” • “Dedicated to the transportation of fossil fuels” • “Alternative fuels” • “Until [date]”		
EO2: Climate Change Adaptation		
Green	1. The activity has implemented both physical and non-physical solutions ('adaptation solutions') that substantially reduce the key physical climate risks relevant to the activity, as demonstrated by a Climate Risk and Vulnerability Assessment (CRVA); and	• ATSF version 3

Classification	Technical Screening Criteria (TSC)	References
	2. Activities must demonstrate the provision of transport security for consumers, considering potential future climate-related disruptions. The following examples may be considered relevant in this context: a. Operation of equipment that has been constructed or upgraded to be more capable of operating in floods, storms, or higher temperature conditions; or b. Operation of monitoring and control equipment, or related IT systems, to manage or maintain equipment during floods, storms, or higher temperature conditions; or c. Operation of facilities or equipment for support, storage, or training related to the operation, maintenance, or repair of equipment in scenarios involving floods, storms, or higher temperatures.	
Transition	N/A	
EO3: Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	
Transition	N/A	
EO4: Resource Resilience and the Transition to a Circular Economy		
Green	N/A	
Transition	N/A	

11. Passenger Inland Water Transport

KBLI 2017	Description
H	Transportation and Storage
50	Water Transportation
502	River, Lake and Ferry Transportation
5021	Passengers River, Lake and Ferry Transportation
50211	Passengers River and Lake Liner Transport (Fixed and Regular Routes) This group includes passenger transportation businesses on rivers and lakes operating within a fixed and regular route network, with set schedules. The services are categorized into intra-district/city transportation, inter-district/city transportation within a province, and cross-border services between countries and provinces.
50212	Passengers River and Lake Tramp Transport (Non-Fixed and Irregular Routes)

	This group includes passenger transport businesses on rivers and lakes that operate on irregular and unscheduled routes, excluding tourism-related services.	
50213	River and Lake Transport for Tourism and related thereto This group includes passenger transportation businesses on rivers and lakes for tourism or other non-route purposes, such as family and social gatherings. Examples include ships operating on the Musi and Barito Rivers, and traditional Bali-Flores vessels.	
Classification	Technical Screening Criteria (TSC)	Referensi
	EO1 – Climate Change Mitigation	
Hijau	If river, lake and ferry passengers transportation activities : Activities complies with the following criteria: 1. Ship zero direct tailpipe CO2 emissions; or 2. Until December 31, 2027, hybrid and dual-fuel vessels obtain at least 50% of their energy from zero direct tailpipe CO2 emission fuel or plug-in electricity for their normal operation.; and 3. The vessels are not dedicated to the transport of the fossil fuels. If the river, lake and ferry transportation activity retrofits for passengers: The activity complies with one or more of the following criteria: 1. By December 31, 2030, the retrofit activity reduces the vessel's fuel consumption by at least 13% below the AER trajectory from IMO2023, expressed in grams of fuel per deadweight tons per nautical mile; and 2. The retrofitted vessels are not dedicated to the transport of fossil fuels.	• ATSF version 3 • IMO Standard • Presidential Regulation (PERPRES) No. 29 of 2012 concerning the Ratification of Annex III, Annex IV, Annex V, and Annex VI of the International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol of 1978 related thereto (Annex III, Annex IV, Annex V, and Annex VI of the 1973 International Convention on the Prevention of Pollution from Ships, as amended by the 1978 Protocol). • Regulation of the Minister of Transportation No. 29 of 2014 concerning the Prevention of Maritime Environmental Pollution
Transisi	If river, lake and ferry passengers transportation activities : 1. The vessels use at least 50% of their energy from alternative fuels, and after 1 January 2030, the vessels will use zero direct tailpipe CO2 emissions; and 2. The vessels are not dedicated to the transport of the fossil fuels. If retrofitting for the river, lake and ferry passenger transportation activity:	

	The activity complies with the following criteria: 1. By December 31, 2030, the vessel meets the same TSC as the criteria in retrofit "Green" classification; 2. The retrofitted vessels are not dedicated to the transport of the fossil fuels and	
• "zero direct tailpipe emissions" • "Technologically and economically infeasible/feasible" • "Dedicated to the transportation of fossil fuels" • "Alternative fuels" • "Until [date]"	Some of the following terms as per section C. Definitions related to the terminology used in the TSC: • "zero direct tailpipe emissions" • "Technologically and economically infeasible/feasible" • "Dedicated to the transportation of fossil fuels" • "Alternative fuels" • "Until [date]"	
	EO2: Climate Change Adaptation If the activity is river, lake, and ferry transportation for passengers: 1. The activities have implemented physical and non-physical solutions ("adaptation solutions") that substantially reduce the most critical and material physical climate risks for the activity, as demonstrated through a Climate Risk and Vulnerability Assessment (CRVA); and 2. The activity must demonstrate that it is necessary for ensuring transportation security for consumers, taking into account potential future climate-related disruptions. In this context, the following examples can be considered relevant: a. Operation of equipment that has been built or upgraded to be more capable of functioning under conditions of flooding, storms, or higher temperatures; or b. Operation of monitoring and control equipment or related IT systems to operate or maintain equipment during floods, storms, or higher temperatures; or c. Operation of facilities or equipment to provide support, storage, or training related to the operation, maintenance, or repair of equipment under scenarios involving floods, storms, or higher temperatures.	• ATSF version 3 • Regulation of the Minister of Transportation No. 29 of 2014 concerning the Prevention of Maritime Environmental Pollution as amended by Regulation of the Minister of Transportation Number 24 of 2022
Transisi	N/A	
	EO3: Protection of Healthy Ecosystems and Biodiversity	

Hijau	N/A	
Transisi	N/A	
EO4: Resource Resilience and the Transition to a Circular Economy		
Hijau	N/A	
Transisi	N/A	

12. Freight Inland Water Transport And Retrofitting

KBLI 2017	Deskripsi	
502	River, Lake and Ferry Transportation	
5022	Freight River, Lake and Ferry Transportation	
50221	River and lake transport for general goods and/or animals This group also covers river and lake freight transportation businesses for various types of goods, except for hazardous materials, special goods, or heavy equipment.	
50222	River and lake transport for special goods This group includes freight transports on rivers and lakes using specially modified ships or freight. These ships meet technical and seaworthiness requirements in accordance with the specific goods being transported. They are classified into categories such as transporting logs, pipes/iron/rails, bulk goods, liquid goods, goods requiring refrigeration, live plants and animals, containers, heavy equipment, and other special goods	
50223	River and lake transport for dangerous goods This group includes freight transport businesses on rivers and lakes that specialize in the transportation of hazardous materials, from the loading site to the final unloading destination. This includes the transport of hazardous and toxic waste, fuel oil, petroleum, processed products, LPG, LNG, and CNG.	
50224	Freight General interprovincial ferry transport This group also includes freight transport businesses operating between provinces using ferry ships that follow designated routes.	
50225	Freight Pioneer interprovincial ferry transport This group includes sea, lake, strait, and bay ferry transportation businesses for goods between provinces, aimed at connecting remote areas and regions that are underdeveloped and not yet commercially viable, with more developed areas. This also includes ferry transportation rental businesses and their operators.	
50226	Freight General cross-county/city ferry transport This group also covers sea, lake, strait, and bay ferry transportation businesses that operate between ports and districts/cities, which function as a moving bridge that links two specific locations, serving as an extension of the highway and/or railway network. This includes ferry transportation rental businesses and their operators.	

50227	Freight Pioneer cross-county/city ferry transport This group includes ferry transportation services across seas, lakes, straits, and bays, connecting ferry ports between regencies/cities, functioning as movable bridges for goods linking specific locations, remote areas, and regions that are extensions of highway and/or railway networks. It also covers potential but underdeveloped and commercially non-viable routes to developed areas. This category includes the rental of ferry transportation services along with their operators.	
50228	Freight Intra Regency/City Public Crossing Transportation This group includes ferry transportation services across seas, lakes, straits, and bays, connecting ferry ports within regencies/cities as movable bridges linking specific locations, which serve as extensions of highway and/or railway networks. It also includes the rental of ferry transportation services along with their operators.	
50229	Other Freight Crossing Transportation Including Interstate Crossings This group includes ferry transportation services across seas, straits, and bays, connecting ferry ports in Indonesia with ports abroad as movable bridges linking specific locations, serving as extensions of highway and/or railway networks. It also covers port water transportation for passengers, other than sea transportation, as well as the rental of ferry transportation services along with their operators	
Classification	Technical Screening Criteria (TSC)	References
Green	EO1: Climate Change Mitigation If the river, lake and ferry freight transportation activity: - The activity complies with one or more of the following criteria: - The vessels with zero direct (tailpipe) CO₂ emissions; or - If it is not technologically and economically feasible to meet the criteria in (a), until December 31, 2027, have direct tailpipe CO₂ emissions <21 gCO₂e/t-km; and - The vessels are not specifically dedicated to the transport of the fossil fuel If the retrofitting for river, lake and ferry freight transportation activity: The activity complies with one or more of the following criteria: - By December 31, 2030, the retrofit activity reduces the vessel's fuel consumption by at least 13% below the AER trajectory from IMO2023, expressed in grams of fuel per deadweight tons per nautical mile; and - The retrofitted or upgraded vessels are not dedicated to the transport of the fossil fuels.	• ATSF version 3 • IMO Standard • Presidential Regulation (PERPRES) No. 29 of 2012 concerning the Ratification of Annex III, Annex IV, Annex V, and Annex VI of the International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol of 1978 related thereto (Annex III, Annex IV, Annex V, and Annex VI of the 1973 International Convention on the Prevention of Pollution from Ships, as amended by the 1978 Protocol). • Regulation of the Minister of Transportation No. 29 of 2014 concerning the Prevention of Maritime Environmental Pollution • Circular Letter of the Director General of Sea Transportation No. UM.003/93/14/DJPL-18, dated 30 October 2018, concerning Limits of Sulphur Content
Transition	If the river, lake and ferry freight transportation activity:	

Classification	Technical Screening Criteria (TSC)	References
	- By 1 January 2030, the vessel achieves zero direct (tailpipe) CO₂ emissions < 42 gCO₂e/t-km, and after 1 January 2031 onwards <21 gCO₂e/t-km; and - The vessels are not dedicated to the transport of the fossil fuels. If the retrofitting activity for river, lake and ferry freight transportation: The activity complies with the following criteria: - Until 31 December 2030, the vessel must comply with the same TSC as the 'green' criteria number 1; and - The retrofitted or upgraded vessels are not dedicated to the transport of the fossil fuels.	in Fuel and Obligations to Submit Fuel Consumption on Ships.
Notes: EEDI: <i>Energy Efficiency Design Index</i> ; EEXI: <i>Energy Efficiency Existing Ship Index</i> ; AER: <i>Annual Efficiency Ratio</i> Some of the following terms as per section C. Definitions related to the terminology used in the TSC: "zero direct tailpipe emissions" "Technologically and economically infeasible/feasible" "Dedicated to the transportation of fossil fuels" "Until [date]"		
EO2: Climate Change Adaptation		
Green	- The activity has implemented both physical and non-physical solutions ('adaptation solutions') that substantially reduce the key physical climate risks relevant to the activity, as demonstrated by a Climate Risk and Vulnerability Assessment (CRVA); and - Activities must demonstrate that it is necessary to provide transport security for consumers, considering potential future climate-related disruptions. The following examples may be considered relevant in this context:	ATSF version 3

Classification	Technical Screening Criteria (TSC)	References
	a. Operation of equipment that has been constructed or upgraded to more capable of functioning under conditions of floods, storms, or higher temperature conditions; or b. Operation of monitoring and control equipment, or related IT systems, to manage or maintain equipment during floods, storms, or higher temperature conditions; or c. Operation of facilities or equipment for support, storage, or training related to the operation, maintenance, or repair of equipment in scenarios involving floods, storms, or higher temperatures.	
Transition	N/A	
EO3: Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	
Transition	N/A	
EO4: Resource Resilience and the Transition to a Circular Economy		
Green	N/A	
Transition	N/A	

13. Infrastructure for water transportation, including infrastructure to enable low-carbon water transport

KBLI 2017	Description
H	Transportation and Storage
52	Storage and Supporting Activities for Transportation
522	Supporting Activities for Transportation
5222	Supporting Activities for Water Transportation
52221	Sea Port Service Activities This group includes seaport service business activities related to water transportation for passengers, animals, or goods, such as operating terminal facilities (e.g., ports and docks), waterway locking operations, navigation, shipping and anchoring activities, as well as mooring and pilotage services.
52222	River and Lake Port Service Activities This group includes river and lake port service business activities related to water transportation for passengers, animals, or goods, such as operating terminal facilities (e.g., ports and docks), waterway locking operations, navigation, shipping and anchoring activities, as well as mooring and pilotage services.

52223	Ferry Port Service Activities This group includes the business activities of managing ferry ports. It encompasses operations related to water transportation for passengers, animals, or goods, such as operating terminal facilities (e.g., ports and docks), waterway locking operations, navigation, shipping and anchoring activities, as well as mooring and pilotage services.	
52225	Ship Management Activities This group includes ship management services in technical fields, covering maintenance, docking preparation, provision of spare parts, supplies, manning, insurance management, and marine certification management.	
52229	Other Water Transportation Enabling Activities It also encompasses navigation, shipping and anchoring activities, lighterage services, salvage/underwater work (PBA), lighthouse operations, and other water transportation support services.	
5229	Other Transportation Enabling Activities	
52293	Activities related to the expedition or freight forwarding of goods by sea (EMKL) This group involves the shipping and/or packing of goods in large volumes transported via sea route.	
Classification	Technical Screening Criteria (TSC)	References
EO1 – Climate Change Mitigation		
Green	1. The activity complies with one or more of the following criteria: a. The infrastructure is dedicated to the operations of vessels with zero direct CO2 emissions (tailpipe), including electric charging and hydrogen refuelling facilities; or b. The infrastructure is dedicated for providing shore power to vessels at berth; or c. The infrastructure is supported by the use of renewable energy sources; or d. The infrastructure is dedicated to the performance of the port operations with zero direct CO2 emissions (tailpipe); or e. infrastructure and installations dedicated to intermodal freight shipping, including terminal infrastructure and superstructures for loading and unloading; and 2. If the activity uses energy sources and/or energy ≥500 Tonnes of Oil Equivalent (TOE) per year, then it must have proof of energy management implementation in accordance with Government Regulation of the <td> • ATSF version 3 • Presidential Regulation of the Republic of Indonesia Number 22 of 2017 concerning the National Energy General Plan (Appendix II) • Regulation of the Minister of Transportation Number PM 59 of 2021 concerning the Implementation of Services Related to Transportation in Waters • Decree of the Minister of Transportation Number KM 8 of 2023 Regarding the Determination of Climate Change Mitigation Actions in the Transportation Sector for Achieving the Nationally Determined Contribution Target </td>	• ATSF version 3 • Presidential Regulation of the Republic of Indonesia Number 22 of 2017 concerning the National Energy General Plan (Appendix II) • Regulation of the Minister of Transportation Number PM 59 of 2021 concerning the Implementation of Services Related to Transportation in Waters • Decree of the Minister of Transportation Number KM 8 of 2023 Regarding the Determination of Climate Change Mitigation Actions in the Transportation Sector for Achieving the Nationally Determined Contribution Target

Classification	Technical Screening Criteria (TSC)	References
	Republic of Indonesia Number 33 of 2023 concerning Energy Conservation; and 3. The infrastructures are not dedicated to the transport or storage of the fossil fuels.	
Transition	N/A	
Some of the following terms as per section C. Definitions related to the terminology used in the TSC:		
	“zero direct tailpipe emissions” “Dedicated to the transportation of fossil fuels”	
EO2: Climate Change Adaptation		
Green	1. The activity has implemented both physical and non-physical solutions ('adaptation solutions') that substantially reduce the key physical climate risks relevant to the activity, as demonstrated by a Climate Risk and Vulnerability Assessment (CRVA); and 2. Activities must demonstrate that it is necessary to provide transport security for consumers, considering potential future climate-related disruptions. The following examples may be considered relevant in this context: a. Operation of equipment that has been constructed or upgraded to be more capable of operating in floods, storms, or higher temperature conditions; or b. Operation of monitoring and control equipment, or related IT systems, to manage or maintain equipment during floods, storms, or higher temperature conditions; or c. Operation of facilities or equipment for support, storage, or training related to the operation, maintenance, or repair of equipment in scenarios involving floods, storms, or higher temperatures.	ATSF version 3
Transition	N/A	
EO3: Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	
Transition	N/A	

Classification	Technical Screening Criteria (TSC)	References
	EO4: Resource Resilience and the Transition to a Circular Economy	
Green	N/A	
Transition	N/A	

14. Air Transport for Freight and Passenger

KBLI 2017	Description
H	Transportation and Storage
51	Air Transportation
511	Passenger Air Transportation
5110	Passengers Air Transportation
51101	Passengers General Domestic Scheduled Air Transportation This group includes passenger air transportation businesses operating on specific routes and schedules to destinations within cities or provinces across the country. It also includes air transportation rental businesses and their operators.
51102	Passengers Scheduled Domestic Pioneer Air Transportation This group includes passenger air transportation businesses operating on specific routes and schedules for domestic flights. These services aim to connect remote or interior areas (where other transportation modes are unavailable and/or insufficient to meet demand), promote regional growth and development, and maintain national defence and security stability. This group also includes air transportation rental businesses and their operators.
51103	Passengers Scheduled International Air Transportation This group includes passenger air transportation businesses operating on specific routes and schedules to destinations within cities across the country. It also includes air transportation rental businesses and their operators.
51104	Passengers Non-Scheduled Domestic Air Transportation This group includes passenger air transportation businesses operating on specific routes and schedules to destinations within cities across the country. It also includes air transportation rental businesses and their operators.
51105	Passengers Non-Scheduled Domestic Pioneer Air Transportation This group includes passenger air transportation businesses operating on non-scheduled commercial flights within the country to connect inland areas where other transportation modes are unavailable. It also includes air transportation rental businesses and their operators.
51106	Air Transportation for Sports This group includes air transportation businesses for sports-related purposes, as well as air transportation rental businesses and their operators.
51107	Air Transport for Tourism

	This group also includes tourism transportation by airplane, based on non-scheduled commercial flights within the country. It covers tourist flight activities that connect remote areas without existing transportation modes, such as those operated by Pelita Air Service. It also includes air transportation rental businesses and their operators.
51109	Other Passengers Air Transportation This group includes air transportation businesses for passengers not classified elsewhere, including air transportation rental businesses with their operators.
512	Freight Air Transport
5120	Freight Air Transport
51201	Freight Scheduled Domestic General Air Transportation This group also covers the transportation of goods, cargo, and mail by aircraft based on specific routes and schedules to cities or provinces within the country.
51202	Freight Scheduled Domestic Pioneer Air Transportation This group includes businesses that transport goods, cargo, and mail by air on specific routes and schedules for domestic flights, aimed at connecting remote or interior areas where other transportation modes do not exist or where capacity is insufficient to meet demand. It also supports regional growth and development and contributes to national defence and security stability. This group also includes air transportation rental businesses with their operators.
51203	Freight International Scheduled Commercial Air Transportation This group includes businesses that transport goods, cargo, and mail by air based on specific routes and schedules to international destinations.
51204	Freight Non-Scheduled Domestic General Air Transportation This group also encompasses businesses that transport goods, cargo, and mail by air on non-scheduled domestic flights operated commercially.
51205	Freight Non-Scheduled Domestic Pioneer Air Transportation This group covers businesses that transport goods, cargo, and mail by air on non-scheduled domestic flights connecting inland areas where other transportation modes are unavailable.

Classification	Technical Screening Criteria (TSC)	References
Green	EO1: Climate Change Mitigation 1. The activity complies with the following criteria: - The aircraft operates with zero direct tailpipe CO2 emissions; or - The aircraft is operated using Sustainable Aviation Fuel (SAF)*, adhering to a credible, science-based pathway aligned with the 1.5°C target, which is currently under development by the International Civil Aviation Organization (ICAO);	- International Civil Aviation Organization (ICAO) - Roadmap for Sustainable Aviation Fuel (SAF) - Industry Development of the Government of the Republic of Indonesia

Classification	Technical Screening Criteria (TSC)	References
	and 2. Comply with aviation safety, environmental and operating standards for aviation under ICAO; and 3. The aircraft are not dedicated to the transport of fossil fuels.	
Transition	1. The activity complies with the following criteria: Aircraft operated using Sustainable Aviation Fuel (SAF)* based on Indonesia's SAF Roadmap: 1% in 2027, 2.5% in 2030, 5% in 2035, 12.5% in 2040, 20% in 2045, 30% in 2050, 40% in 2055, and 50% in 2060); and 2. Comply with aviation safety, environment, and operations standard for aviation under ICAO; and 3. The aircrafts are not dedicated to the transport of the fossil fuels.	
*) Safeguard: SAF raw materials must comply with the sustainable certification applicable in the AFOLU sector.		
Notes:		
• SAF usage requirements are calculated by reference to the total aviation fuel used by eligible aircraft and SAF used at fleet level. Operators calculate compliance as the ratio of the quantity (expressed in tonnes) of SAF purchased at fleet level divided by the total aviation fuel used by aircraft multiplied by 100. SAF is regulated to ensure a level playing field for sustainable air transport. Some of the following terms as per section C. Definitions related to the terminology used in the TSC: • “zero direct tailpipe emissions” • “Dedicated to the transportation of fossil fuels”		
EO2: Climate Change Adaptation		
Green	N/A	
Transition	N/A	
EO3: Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	
Transition	N/A	

Classification	Technical Screening Criteria (TSC)		References
	EO4: Resource Resilience and the Transition to a Circular Economy		
Green	N/A		
Transition	N/A		

15. Airport Infrastructure, Including Low-Carbon Assets And Facilities

KBLI 2017	Description
H	Transportation and Storage
52	Storage and Transportation Enabling Activities
522	Transportation Enabling Activities
5223	Airport Operations and Aviation Navigation Services
52230	Airport Operations KBLI 2020: 52231- Airport Operations This group includes activities or business services related to aircraft and passenger services, comprising: • The provision of aircraft landing, take off, maneuvering, parking, and storage services (PJP4U), including all facilities on the runway, taxiway, apron, as well as aircraft accident handling and fire extinguishing services. • Terminal facilities for passenger transportation services (PJP2U), which include aviobridge and check-in counter services. • Related service activities or businesses that support aircraft operations at airports, such as aircraft hangar provision, aircraft workshops, technical ground handling services, passenger and baggage services, cargo/container inspections using ionizing radiation sources (radioactive substances and ionizing radiation generators), and aircraft fuelling depots (DPPU). 52232- Aviation Navigation Services This group includes activities or businesses related to Air Traffic Services (ATS), encompassing: • Air traffic guidance services, flight information, and alert services. • Aeronautical Telecommunication Services (COM), such as fixed and mobile aeronautical services, and aeronautical radio navigation. • Aeronautical Information Services (AIS), including flight information services, aeronautical charts, issuance and dissemination of NOTAMs (Notice to Airmen), and airport aeronautical information services. • Aeronautical Meteorological Services (MET) and Search and Rescue (SAR) information services. • Services for operational and supporting buildings for air traffic activities, such as control towers, equipment storage facilities, and briefing offices for coordination related to air traffic.

KBLI 2017	Description	
	Air navigation telecommunications construction, equipment installation, and provision of flight-related information, such as the operation of air navigation facilities, aeronautical information, air meteorological information, and search and rescue information. It includes mechanical, electrical, electronic, and information technology systems supporting these operations.	
52294	Air Cargo Expedition Activities (EMPU) This group involves the shipping and/or packing of goods in large volumes transported via air route.	
Classification	Technical Screening Criteria (TSC)	
	EO1 – Climate Change Mitigation	
Green	1. The activity complies with one or more of the following criteria: - The infrastructure is dedicated to the operations of aircraft with zero direct CO₂ emissions (tailpipe), including electric charging, green hydrogen refueling, or SAF refueling; or - The infrastructure is dedicated to providing stationary electricity supply for mobile assets (vehicles and equipment), and preconditioned air to stationary aircraft; or - The infrastructure is dedicated for supporting zero tailpipe CO₂ emission performance in airport operations or associated ground operations, including equipment and vehicles for ground handling services, such as electric charging stations, power connectivity upgrades, and hydrogen refueling infrastructure; or - The infrastructure is dedicated to facilitating freight transportation by rail or waterborne modes, including infrastructure and superstructure dedicated to cargo handling; and 2. If the activity uses energy sources and/or energy ≥500 Tonnes of Oil Equivalent (TOE) per year, then it must have proof of energy management implementation in accordance with Government Regulation of the Republic of Indonesia Number 33 of 2023 concerning Energy Conservation; and 3. The infrastructures are not dedicated to the transport or storage of the fossil fuels.	
	References	
	- ATSF version 3 - Presidential Regulation of the Republic of Indonesia Number 22 of 2017 concerning the National Energy General Plan (Appendix II) - Regulation of the Minister of Transportation Number PM 59 of 2021 concerning the Implementation of Services Related to Transportation in Waters - Decree of the Minister of Transportation Number KM 8 of 2023 Regarding the Determination of Climate Change Mitigation Actions in the Transportation Sector for Achieving the Nationally Determined Contribution Target	

KBLI 2017	Description
Transition	1. An activity is classified as Transition if it meets one or more of the following criteria: a. The infrastructure supports the handling or refueling of aircraft with low lifecycle CO₂ emission fuels, such as SAF; or b. The infrastructure is dedicated to the operation of ground assets or facilities that use renewable diesel or biodiesel blends ranging from 5% to 100%; and 2. The infrastructures are not dedicated to the transport or storage of the fossil fuels.
Some of the following terms as per section C. Definitions related to the terminology used in the TSC: • “zero direct tailpipe emissions” • “Dedicated to the transportation of fossil fuels”	
Green	EO2: Climate Change Adaptation 1. The activity has implemented both physical and non-physical solutions ('adaptation solutions') that substantially reduce the key physical climate risks relevant to the activity, as demonstrated by a Climate Risk and Vulnerability Assessment (CRVA); and 2. Activities must demonstrate that it is necessary to provide transport security for consumers, considering potential future climate-related disruptions. The following examples may be considered relevant in this context: a. Operation of equipment that has been constructed or upgraded to be more capable of operating in floods, storms, or higher temperature conditions; or b. Operation of monitoring and control equipment, or related IT systems, to manage or maintain equipment during floods, storms, or higher temperature conditions; or c. Operation of facilities or equipment for support, storage, or training related to the operation, maintenance, or repair of equipment in scenarios involving floods, storms, or higher temperatures.
Transition	N/A
	EO3: Protection of Healthy Ecosystems and Biodiversity

KBLI 2017	Description
Green	N/A
Transition	N/A
EO4: Resource Resilience and the Transition to a Circular Economy	
Green	N/A
Transition	N/A

16. Enabling Activities

Transportation and storage activities that support sustainable land, sea, and air transportation.

a. Land, sea and air transport enabling services

KBLI 2017	Description
H	Transportation and storage
52	Storage and transportation enabling activities
522	Supporting activities for transportation
5224	Cargo handling
52240	Cargo handling (loading and unloading of goods) This group comprises loading and unloading of cargo from land, road or water transportation, and transportation based on fees or contracts. Activities cover loading and unloading cargo regardless of the type of transportation used, cargo terminal activities and supporting facilities, ship loading and unloading activities, as well as vehicle loading and unloading activities involving freight trains.
5229	Other transport enabling services
52291	Transportation management services This group covers the business of shipping and/or packing goods in large volumes via rail, land, sea, and air transportation.
52299	Other transportation support activities not otherwise classified This group includes other large-volume goods delivery and/or packing services, beyond those specified in groups 52291 to 52298, such as delivery and/or packing services for valuables from sunken ship cargo and other cultural objects. Packing services based on fees or contracts that are not related to transportation activities fall under packing services (82920).

Classification	Technical Screening Criteria (TSC)	References
EO1: Climate Change Mitigation		
Green	1. The activity complies with one or more of the following criteria:	

Classification	Technical Screening Criteria (TSC)	References
	- The activities dedicated to supporting land, sea, and air transport to achieve zero direct (tailpipe) CO₂ emissions; or - The activities powered by the use of renewable energy; or - The infrastructure and installations dedicated to intermodal freight, facilitating loading, unloading, and freight operations that support land, sea, and air transport; or - The infrastructure for operating facilities with the use of renewable diesel or biodiesel blends; or - Provide additional services that enhance sustainability, such as freight consolidation services that reduce the number of trips and minimize emissions. and - The activity is not dedicated to the transport or storage of the fossil fuels.	- Presidential Regulation of the Republic of Indonesia Number 22 of 2017 concerning the National Energy General Plan (Annex II) - Regulation of the Minister of Transportation of the Republic of Indonesia No. PM 59 of 2021 concerning the Implementation of Services Business Related to Transportation in Waters. - Decree of the Minister of Transportation No. KM 8 of 2023 concerning the Determination of Climate Change Mitigation Actions in the Transportation Sector for Achieving Nationally Determined Contribution Targets.
Transition	N/A	
Some of the following terms as per section C. Definitions related to the terminology used in the TSC:		
	"Dedicated to the transportation of fossil fuels"	
EO2: Climate Change Adaptation		
Green	The activity complies with one or more of the following criteria: - The activity has implemented both physical and non-physical solutions ('adaptation solutions') that substantially reduce the key physical climate risks relevant to the activity, as demonstrated by a Climate Risk and Vulnerability Assessment (CRVA); and - Activities must demonstrate the provision of transport security for consumers, considering potential future climate-related disruptions. The following examples may be considered relevant in this context: - Operation of equipment that has been constructed or upgraded to be more capable of operating in floods, storms, or higher temperature conditions; or - Operation of monitoring and control equipment, or related IT systems, to manage or maintain equipment during floods, storms, or higher temperature conditions; or	ATSF version 3

Classification	Technical Screening Criteria (TSC)	References
	c. Operation of facilities or equipment for support, storage, or training related to the operation, maintenance, or repair of equipment in scenarios involving floods, storms, or higher temperatures.	
Transition	N/A	
EO3: Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	
Transition	N/A	
EO4: Resource Resilience and the Transition to a Circular Economy		
Green	N/A	
Transition	N/A	

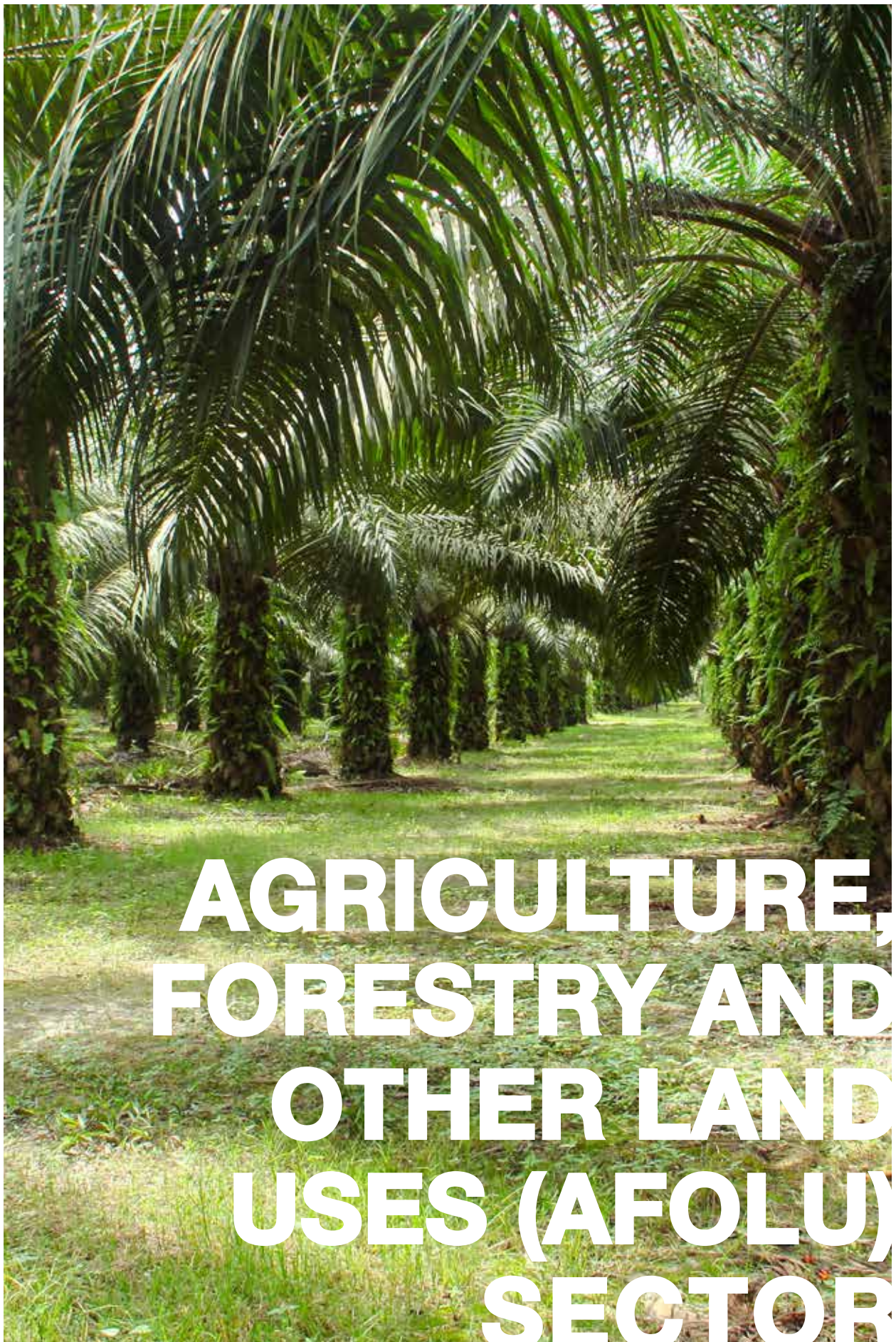
b. Multimodal transportation

KBLI 2017	Description
H	Transportation and storage
52	Storage and transportation enabling activities
522	Transportation enabling activities
5224	Cargo handling (loading and unloading of goods)
52295	Multimodal transportation This group includes freight transportation that utilizes at least two different modes of transportation under a single contract, documented as a multimodal transportation agreement. The transportation process begins at the point of receipt by the multimodal transportation provider and continues to the designated delivery location for the recipient. In addition to transporting goods from origin to destination, the multimodal transportation provider also offers additional services, such as transportation management (freight forwarding), warehousing, cargo consolidation, space provision, and customs management for both international and domestic multimodal transportation.

Classification	Technical Screening Criteria (TSC)	References
	EO1: Climate change mitigation	
Green	The TSC must align with the specific activities of multimodal transportation: 1. If the activity is part of land transportation, it comply with the 'green' TSC classification according to the related KBLI; and/or	Government Regulation (PP) No. 8/2011 on Multimodal Transportation.

Classification	Technical Screening Criteria (TSC)	References
	2. If the activity is part of water transportation (sea, river, lake), it comply with the 'green' TSC classification according to the related KBLI; and/or 3. If the activity is part of air transportation, it comply with the 'green' TSC classification according to the related KBLI; and/or 4. If the activity involves services or supporting infrastructure for land, sea, and air transportation, it comply with one or more of the following criteria: a. involve activities dedicated to supporting land, sea, and air transport that achieve zero direct (tailpipe) CO₂ emissions; or b. involve activities powered by renewable energy; or c. have infrastructure and installations dedicated to intermodal freight, facilitating loading, unloading, and freight operations that support land, sea, and air transport; or d. have infrastructure for operating facilities with renewable diesel or biodiesel blends; or have additional services that enhance sustainability, such as freight consolidation services that reduce the number of trips and minimize emissions. and 5. The activity should not be dedicated to the transport or storage of fossil fuels.	- Minister of Transportation Regulation No. 8/2012 on the Implementation and Operation of Multimodal Transportation. - Decree of the Minister of Transportation No. KM 8 of 2023 concerning the Determination of Climate Change Mitigation Actions in the Transportation Sector for Achieving Nationally Determined Contribution Targets
Transition	N/A	
Some of the following terms as per section C: Definitions related to the terminology used in the TSC:		
	"zero direct tailpipe emissions" "Dedicated to the transportation of fossil fuels"	
EO2: Climate Change Adaptation		
Green	1. The activity has implemented both physical and non-physical solutions ('adaptation solutions') that substantially reduce the key physical climate risks relevant to the activity, as demonstrated by a Climate Risk and Vulnerability Assessment (CRVA); and 2. Activities must demonstrate that it is necessary to provide transport security for consumers, considering potential future climate-related	ATSF version 3

Classification	Technical Screening Criteria (TSC)	References
	disruptions. The following examples may be considered relevant in this context: a. Operation of equipment that has been constructed or upgraded to be more capable of operating in floods, storms, or higher temperature conditions; or b. Operation of monitoring and control equipment, or related IT systems, to manage or maintain equipment during floods, storms, or higher temperature conditions; or c. Operation of facilities or equipment for support, storage, or training related to the operation, maintenance, or repair of equipment in scenarios involving floods, storms, or higher temperatures.	
Transition	N/A	
EO3: Protection of Healthy Ecosystems and Biodiversity		
Green	N/A	
Transition	N/A	
EO4: Resource Resilience and the Transition to a Circular Economy		
Green	N/A	
Transition	N/A	



AGRICULTURE, FORESTRY AND OTHER LAND USES (AFOLU) SECTOR

Agriculture, Forestry and Other Land Uses (AFOLU) Sector

A. Background context

According to the Intergovernmental Panel on Climate Change (IPCC, 2022)²⁹, the Agriculture, Forestry and Other Land-Use (AFOLU) sector was responsible for 13–21% of global anthropogenic greenhouse gas (GHG) emissions during the period 2010–2019, primarily due to deforestation, agricultural practices and land use changes. Similarly, ClimateWatch data³⁰ indicates that the AFOLU sector accounted for 14.7% of total global GHG emissions in 2021, with 12% originating from agricultural activities and 2.7% from forestry and land use. In terms of global GHG emissions, the AFOLU sectors of Brazil and India are the two largest contributors, while Indonesia's AFOLU sector accounted for 8.8% of the total.

Since 2020, the AFOLU sector has been the second-largest contributor of GHG emissions in Indonesia, having previously been the largest contributor. According to the Ministry of Environment and Forestry's *Inventory report (2024)*³¹, Indonesia's GHG emissions by sector in 2022 were distributed as follows: the energy sector accounts for 59%, the AFOLU sector represents 25%, the waste sector account for 11%, and the Industrial Processes and Product Use sector represents 5%. Of the 25% contribution from the AFOLU sector, 18% was derived from forestry, land use and peat, while 7% from agriculture. The primary source of emissions in the FOLU sector is peat decomposition, while rice cultivation is responsible for the majority of GHG emissions in the agricultural sector. The inventory report also emphasizes that the state forests category, which denotes forest landscapes that have not undergone land conversion, exhibits negative GHG emissions. This underscores the critical role of forests as carbon sequestration/absorption systems.

The AFOLU sector is one of Indonesia's primary objectives for medium and long-term climate change mitigation strategy. The National Long-Term Development Plan 2024–2045 (RPJPN), stipulated in the Law No. 59/2024³², is a commitment to the implementation of a low-carbon development pathway. The RPJPN 2024–2045 policy direction entails the following actions: expanding forest and land rehabilitation, curbing the rate of deforestation, restoring peatlands and mangroves, and achieving zero forest and land-fires. The Indonesia's *Enhanced Nationally Determined Contribution (2022)*³³ aims to reduce the GHG emissions from the agriculture and FOLU sectors by 0.3% and 17.4%, respectively by 2030, from business-as-usual (BaU) conditions through its own efforts and by 0.4% and 25.4% respectively with international support. Meanwhile, the Low Carbon Scenario Compatible with the Paris Agreement targets (LCCP), as outlined in Indonesia's *Long-term strategy for low carbon and climate resilience (LTS-LCCR) 2050* document³⁴, aims for GHG emissions from the AFOLU sector to continue declining from the 2010 base year until they reach a net sink condition by 2030³⁵. Mitigation actions in the AFOLU sector have the potential to generate economic growth on a large scale, in addition to providing ecological benefits to society.

The AFOLU sector decarbonization can contribute 20–30% of the global mitigation needed to achieve the 1.5°C or well below 2°C target by 2050 (IPCC, 2022). Table 1 summarizes the broad categories into which climate change mitigation strategies in the AFOLU sector can be classified. Sustainable

²⁹ IPCC (2022), *Climate change 2022: mitigation of climate change*. Available online at: [Climate change 2022: Mitigation of climate change \(ipcc.ch\)](https://www.climatechange.org/ghg-emissions)

³⁰ World Resources Institute (2022), *Climate Watch historical GHG emissions*. Available online at: <https://www.climatewatchdata.org/ghg-emissions>

³¹ Ministry of Forestry and Environment (2023), *Greenhouse gas (GHG) inventory report and monitoring, reporting, verification (Laporan Inventarisasi gas rumah kaca (GRK) dan monitoring, pelaporan, verifikasi (MRV)) 2023* Law Number 59 of 2024 on Indonesia's *National long-term development plan 2024–2045*.

³² The Government of Indonesia (2022), *Enhanced Nationally Determined Contribution Republic of Indonesia*. Available at: unfccc.int/sites/default/files/NDC/2022-09/23_09_2022_Enhanced_NDC_Indonesia.pdf

³³ The Government of Indonesia (2021), *Long-term strategy for low carbon and climate resilience 2050 (Indonesia LTS-LCCR 2050)*. Available at: [Long-term strategy for low carbon and climate resilience 2050 \(Indonesia LTS-LCCR 2050\)](https://unfccc.int/sites/default/files/NDC/2022-09/23_09_2022_Enhanced_NDC_Indonesia.pdf)

³⁴ Based on Long-term strategy for low carbon and climate resilience 2050, net sink refers to a condition where forests, land, or other natural ecosystems absorb more greenhouse gases (GHG) from the atmosphere than they emit.

certification is often employed as a policy instrument by policymakers to ensure that business actors consistently implement various intervention options, including low-carbon and environmentally friendly production or distribution processes.

Table 1. Climate change mitigation intervention options in the AFOLU sector³⁶

AGRICULTURE SECTOR			FORESTRY AND OTHER LAND USE (FOLU) SECTOR	
1) Carbon sequestration			1) Protect	
Strategy Options	on-farm soil carbon management	- agroforestry practices - biochar application	Strategy Options	reduction or elimination of forest conversion, and peatland degradation, coastal and grassland areas
2) Reduction of CH ₄ and N ₂ O emissions			2) Restore	
Strategy Options	- enteric fermentation reduction - manure management	- plant nutrient management - improved rice cultivation management	Strategy Options	- afforestation - reforestation
			3) Manage	
			Strategy Options	- sustainable forest management - forest and land fire prevention

The Indonesian Government has implemented numerous initiatives to effectively reduce GHG emissions from the AFOLU sector. These include the following: reducing deforestation to its lowest point in 2021–2022, with only 104,000 hectares affected; rehabilitating approximately 1.88 million hectares of forest and land between 2015 and 2023; reducing forest and land fires by 30.8% in 2023 compared with 2019; managing peatlands; imposing a moratorium on permits for new oil palm permits (as outlined in Presidential Instruction No. 8 of 2018); moratorium on new permits for primary natural forests and peatlands located in conservation forests, protected forests and production forests in accordance with Presidential Instruction No. 5 of 2019; and mandating the adoption of Indonesia Sustainable Palm Oil (ISPO) certification.

The Indonesian Government has also established a medium-term national agenda – FOLU Net Sink 2030 – to regulate GHG emissions throughout the national development. The agenda's projected target is a net sink of 140 million tons CO₂eq by 2030, with a maximum allowable degradation of primary forests capped at 2.28 million hectares. Fifteen mitigation actions outlined the Indonesia's FOLU Net Sink 2030 agenda, including:

³⁶Nabuurs et al in IPCC (2022). *Climate change 2022: Mitigation of climate change*. Available online at: [Climate Change 2022: Mitigation of Climate Change \(ipcc.ch\)](https://www.ipcc.ch/).

- | | |
|---|---|
| 1. Reducing deforestation rate on dry land forest ecosystems (mineral soil forests) | 9. Restoring peatlands and improving peat water management |
| 2. Reducing deforestation rate on peatland and mangrove ecosystems | 10. Implementing mangrove rehabilitation and afforestation within post-mining areas |
| 3. Reducing degradation rate on dry land forest ecosystems | 11. Implementing biodiversity conservation |
| 4. Reducing degradation rate on peatland and mangrove ecosystems | 12. Developing social forestry |
| 5. Establishing plantation forests | 13. Introducing replication of ecosystems, urban green spaces, and eco riparian |
| 6. Sustainable forest management | 14. Enhancing supervision and law enforcement to support forest protection |
| 7. Rehabilitating degraded land with rotation | 15. Establishing and enhancing adat/customary forests |
| 8. Rehabilitating degraded land without rotation | |

According to the LTS-LCCR 2050 document, the Indonesian Government has implemented various policies to prevent deforestation in accordance with the principles of climate change mitigation in the AFOLU sector (Table 1). These policies include:

1. Government Regulation Number 104 of 2015 on the Procedures to Change the Designation and Function of Forest Areas as revoked by Government Regulation Number 23 of 2021 on Forestry Management;
2. Presidential Instruction Number 5 of 2019 on the Termination of Granting of New Permits and Improving Governance of Primary Natural Forests and Peatlands; and
3. Government Regulation Number 46 of 2016 on the Procedure for the Implementation of Strategic Environmental Assessment (KLHS), which provides guidance on a series of systematic, comprehensive, and participatory analyses to ensure that the principles of Sustainable Development have become the basis and are integrated in the development of an area and/or Policy, Plan, and/or Program.

In addition, the 2020-2024 National Medium Term Development Plan (RPJMN) stated that forest areas that need to be protected based on the value of forest environmental services are expanded from 51.8 million hectares to 65.3 million hectares, located inside and outside forest areas.

In the agricultural sector, rice cultivation and livestock are two significant sources of GHG emissions³⁷. Nevertheless, the strategic role of palm oil as Indonesia's primary commodity is such that the role of palm plantations in climate change mitigation cannot be disregarded. In 2023³⁸, palm oil plantations

³⁷ Based on the 2023 Greenhouse Gas (GHG) Inventory Report and Monitoring, Reporting, Verification (MRV) data

³⁸ Central Bureau of Statistics of Indonesia. (May 2, 2024). Plantation Crop Production. Accessed on December 16, 2024, from <https://www.bps.go.id/id/statistics-table/2/MTMyIzI%3D/produksi-tanamanperkebunan.html>.

accounted for 83% of the total production volume of the plantation sector, with an average annual production increase of 14%. In addition, Indonesia is the world's largest producer and exporter of crude palm oil, accounting for 59% of global production³⁹, while no other country surpasses 25% of global production. As a result, Indonesia contributes 56% of global export volume. GHG emissions from oil palm plantations are primarily the result of the use of fossil fuels for transportation, fertilization, and changes in carbon sequestration during the development of new plantations. The implementation of sustainable palm oil certifications – such as ISPO, the Roundtable on Sustainable Palm Oil (RSPO) International Sustainability and Carbon Certification (ISCC), are key initiatives to ensure that palm-based products are consistent with low-carbon development objectives. A study by Schmidt and De Rosa (2020) found that GHG emissions from sustainably certified oil palm plantations were 35% lower than those from non-certified plantations.

B. General principles for determining Technical Screening Criteria (TSC) in the AFOLU sector

The general principles that should be taken into account when determining the criteria and conducting Technical Screening Criteria (TSC) assessments for each classification in the AFOLU sector are discussed in this section. The TSC for the AFOLU sector within the ASEAN Taxonomy for Sustainable Finance (ATSF) had not yet been developed at the time this document was drafted. Therefore, it is reasonable to apply modifications in the future that are consistent with the ATSF, such as the potential expansion to additional relevant EOs, including EO2, EO3, and/or EO4. Currently, only EO1s are being taken into account.

Table 2. Principles in determining the TSC Environmental Objective 1 (EO1) for the AFOLU sector

Principles for applying TSC EO1: Climate Change Mitigation	
Classification	Description
Green	- Activities adhering with AFOLU's sustainable standards and/or best practices and activities that are capable of achieving the highest level of credible international or national certification. - Activities to avoid deforestation and are consistent with Indonesia's 2030 FOLU Net Sink targets, as determined by applicable laws and regulations.⁴⁰
Transition	Activities that facilitate the transition to green within a certain timeframe: - Activities that are currently making efforts to adhere to sustainable AFOLU regulation and/or best practice; - Contributing to an EO that is at least equivalent to the lowest carbon-emitting technology that is technically and economically feasible at present; or

³⁹ United States Department of Agriculture. (n.d.). Production: Commodity - 4243000. Foreign Agricultural Service. Accessed on December 16, 2024, from <https://fas.usda.gov/data/production/commodity/4243000>.

⁴⁰ Deforestation is the permanent conversion of forested areas into non-forested land. (Article 1, Paragraph 2 of the Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.70/MENLHK/SETJEN/KUM.1/12/2017 on Implementation Procedures for Reducing Emissions from Deforestation and Forest Degradation, Role of Conservation, Sustainable Management of Forest and Enhancement of Forest Carbon Stocks)

	3. Promoting the sustainability or 'green transformation' of other activities without violating the sustainable principles of the AFOLU sector.
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C. Rationale for TSC activities of AFOLU sector:

The TSC developed for activities in the AFOLU sector was guided by relevant rules and regulations in Indonesia as well as concepts from a variety of taxonomies and global standards/best practices, such as the Climate Bonds Initiative's (CBI) The Forestry Criteria for the Climate Bonds Standard & Certification Scheme. The latest TKBI currently includes a variety of activities in the forestry sector and palm oil plantations as part of AFOLU sector. Other AFOLU activities will be developed at a later stage, taking into account developments in the ATSF.

Forestry Sector

In the forestry sector, the primary principle for ensuring sustainability is the certification of Sustainable Forest Management (SFM).

The SFM approach aims to preserve and improve the economic, social and environmental value of forest resources for the benefit of both current present and future generations.⁴¹ This concept is comprehensively applied to all economic activities that are conducted within forest areas. SFM has been implemented as the foundation for landscape-based forestry governance⁴² through the Timber Legality and Sustainability Verification System (*Sistem Verifikasi Legalitas dan Kelestarian/SVLK*). The SVLK certification ensures the credibility/legality, and traceability of forest products, as well as the sustainability of forest management.⁴³ The SVLK also incorporates a variety of indicators in its assessment, such as those that can guarantee the preservation of sustainability, conservation value, and the execution of activities that support reproduction/regeneration/rehabilitation/recovery in every forestry business activity. Table 3 summarizes several SFM certificates applicable at national and international levels.

Table 3. Comparison of Sustainable Forest Management Certifications

	Timber Legality and Sustainability Verification System (SVLK)	Indonesian Forest Certification Cooperation (IFCC)	Forest Stewardship Council (FSC)
Issuer	Independent assessment and verification institutions accredited by the Minister to issue certifications	IFCC (non-profit organization in Indonesia)	FSC GmbH (German non-profit organization)

⁴¹ Forest Management Unit (KPH), KLHK (2018). Cited from [Knowledge Management Information System \(menlhk.go.id\)](https://menlhk.go.id)

⁴² Following the enactment of Law No. 11/2020 and its derivative regulations, including Government Regulation No. 23/2021 on the Implementation of Forestry and Minister of Environment and Forestry Regulation No. 8/2021 on Forest Management, Forest Management Plan Preparation, and Forest Utilization in Protected and Production Forests.

⁴³ The SVLK Implementation Standards and Guidelines are regulated under the Decree of the Minister of Environment and Forestry No. SK 9895/2022, which is a derivative of the Regulation of the Minister of Environment and Forestry No. 8/2021. Prior to the issuance of Decree SK 9895/2022, the SVLK implementation guidelines were based on the Regulation of the Minister of Forestry No. 42/2013, where SVLK stood for the Timber Legality Verification System and functioned solely as a system for tracking the legality of timber sources.

	Timber Legality and Sustainability Verification System (SVLK)	Indonesian Forest Certification Cooperation (IFCC)	Forest Stewardship Council (FSC)
	Forest product owners for independent forest product declarations		
Enforcement	- Mandatory for the holder of Timber Processing Business License (<i>Perizinan Berusaha Pemanfaatan Hutan/PBPH</i>) or Forest Managing Right holder - Voluntary, for Community Forests and importers In accordance with Minister of Environment and Forestry Regulation No. 8 of 2021 on Forest Management, Forest Plan Development, and Forest Utilization in Protected and Production Forests.	Voluntary	Voluntary
International recognition	- Requirements for obtaining a Forest Law Enforcement, Governance and Trade (FLEGT) license, which serves as a green license for wood products in the European Union market. - Currently, the SVLK has been expanded to cover non-timber forestry products, in accordance with the Minister of Environment and Forestry Regulation No. 8 of 2021 on Forest Management, Forest Plan Development, and Forest Utilization in Protected and Production Forests.	Part of the <i>Programme for the Endorsement of Forest Certification</i> (PEFC) alliance	Recognized by the international community since 1994

	Timber Legality and Sustainability Verification System (SVLK)	Indonesian Forest Certification Cooperation (IFCC)	Forest Stewardship Council (FSC)
Object	Upstream forest activities: • Timber Processing Business License (<i>Perizinan Berusaha Pemanfaatan Hutan</i>/PBPH) • Forest Management Rights • Social forestry management approval • Non-Forestry Activity Timber Utilization (PKKNK) • Forests subject to rights (Hutan Hak) Downstream forest activities: • PBPHH • Registered Log Pond (TPT-KB) determined by Head of the Regional Forestry Agency upon formal request from a company/individual • Exporters • Importers	Applies to all business actors at every level of production ▪ upstream forestry industry ▪ downstream forestry industry	Applies to all business actors at every level of production ▪ upstream forestry industry ▪ downstream forestry industry
Type of legality assurance/ certificate	▪ Sustainable Forest Management certificate (S-PHL), with good and medium ratings ▪ Legality certificate (S-Legality) ▪ Independent Forest Product Declaration	▪ Forest Management Certification ▪ Chain of Custody Certification	▪ Forest Management Standard ▪ Controlled Wood Standard

	Timber Legality and Sustainability Verification System (SVLK)	Indonesian Forest Certification Cooperation (IFCC)	Forest Stewardship Council (FSC)
Validity period	1–9 years, depending on the type of auditee, as applicable for SVLK	5 years	5 years
Relevance to climate change mitigation	As stipulated in the indicators and verifiers in the appendix of Minister Decree No SK. 9895/MenLHK-PHL/BPPHH/PL. 3/12/2022 on Standards and Guidelines for Implementing the Timber Legality and Sustainability Verification System	- SVLK is included as one of the certification requirements. - The IFCC Sustainable Forest Management Standard is aligned with ISO 14001: Environmental Management Systems. - GHG emission reduction and resource use efficiency are mandatory for certificate holders	The FSC standard ensures that: - certified forests are managed sustainably - certified forests are not associated with deforestation or environmental degradation
Third-party Verification	Yes	Yes	Yes
Includes non-timber forestry products (HHBK)	No (not currently, but will include HHBK in the future)	Yes	Yes

In its preparation, TKBI also considered various relevant regulations, including the Minister of Environment and Forestry Regulation No. 7 of 2021 on Forestry Planning, Changes in the Designation and Function of Forest Areas, and the Use of Forest Areas (Permen LHK 7/2021). This regulation defines a forest as a unified ecosystem in the form of a land area containing biological natural resources dominated by trees in a natural environment, which is interconnected and inseparable from one another. Meanwhile, a forest area is defined as a specific area designated by the government to maintain its existence as a permanent forest.

Forests, based on their status, can be categorized into State Forests Forests subject to rights, and customary forests (*hutan adat*). As per Minister of Environment and Forestry Regulation No. 32 of 2015 concerning Forests Subject to Rights, the following definitions are applicable:

- A state forest is a forest that is situated on land that is not subject to land rights.

- Forests Subject to Rights (*Hutan Hak*) is a forest that is situated on land that is subject to land rights. *Hutan Hak* is composed of two distinct types of forest: a) Customary Forest and b) Individual/legal entity Forest.
- Customary forests (*hutan adat*) are forests that are situated within the jurisdiction of communities that adhere to customary law.

Three categories of forest areas in Indonesia are classified according to their function: conservation forests, protected forests, and production forests. Conservation forests are forests that possess specific characteristics and are primarily designed to preserve biodiversity, including the diversity of plant and animal species, along with their ecosystems. The primary objectives of protected forests is to safeguard systems that support life. They help regulate water management, prevent flooding, control erosion, prevent seawater intrusion, and maintain soil fertility. Production forests are primarily intended for the sustainable production of forest products, including timber and non-timber resources.

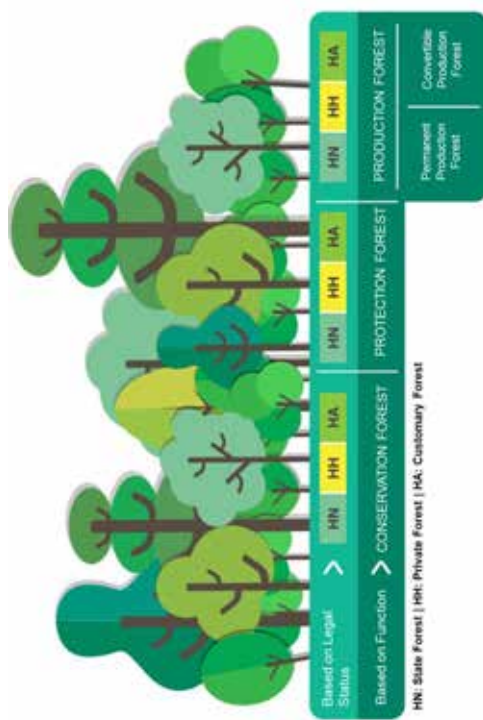


Chart 1. Three types of Forest based on function and status

The Indonesian Government has implemented the 'social forestry' program as part of its efforts to enhance the welfare of communities residing in close proximity to forests and establish a successful forest conservation model. According to Minister of Environment and Forestry Regulation No 7 of 2021 on Forestry Planning, Changes in Forest Area Designation and Function, and Use of Forest Area, social forestry is a sustainable forest management system applied in State Forest areas or Forest Subject to Rights or Customary Forests, where local communities or customary law communities are the primary actors. The goal is to improve community welfare, the environmental equilibrium, and socio-cultural dynamics. Social forestry takes the form of village forests, community forests, community plantation forests, customary forests, and forestry partnerships. Village forests are state

forests managed by villages and utilized for the welfare of the village. Community forests are state forests primarily aimed at community empowerment. Community Plantation Forests (*Hutan Tanaman Rakyat*) are plantation forests in production forest areas, established by community groups to improve the potential and quality of production forests through silviculture practices⁴⁴, ensuring the sustainability of forest resources. Forestry Partnerships is defined as partnership between local communities and forest managers, holders of forest utilization/forest service business permits, forest area borrowing permits, or forest primary product industry business permits.

The utilization of forest areas in Indonesia requires a permit from the Ministry of Environment and Forestry. Holders of Timber Processing Business License (*Perizinan Berusaha Pemanfaatan Hutan/PBPH*) in protected forests can engage in forestry multi-businesses, which include area utilization, environmental service utilization, and/or the extraction of non-timber forestry products. Meanwhile, PBPH holders in production forests can engage the same activities, as well as timber forestry product utilization and extraction.

The majority of TSC initiatives lead to sustainable certification at the forest management system level, which is widely recognized by both domestic and international stakeholders.

The ranking of certificate recipients can only be identified in some certification systems, such as PHL certificates via SVLK. The Green classification will be assigned to the business entity that possesses the sustainability certification, which serves as a reference that the relevant entity has implemented sustainable forest management practices. The absence of sustainability certification for some Activities will be replaced by government regulation, internal documents of business entities, or external reports of business entities that can directly mitigate, or even eliminate, the possibility of forest area conversion by Activity actors. The protection measures of the existence of forest areas is consistent with the “Protect” rule in the IPCC version of the AFOLU sector climate change mitigation strategy.

For instance, Geothermal Environmental Service Utilization Activities during both the exploration and the exploitation/utilization phases in conservation areas, as well as Water Environmental Service Utilization in conservation areas and other similar activities, rely on supervision reports issued by the relevant governing authorities. These reports serve as instruments to evaluate the sustainability measures undertaken by the business entities involved.

Moreover, the Utilization of Water and Geothermal Energy Environmental Services in conservation areas forms part of TKBI activities in the AFOLU sector, in accordance with the Minister of Environment and Forestry Regulation Number 3 of 2021 on Business Activity Standards for Risk-Based Business Licensing in the Environment and Forestry Sector. The assessment criteria approach for these activities referring to the assessment criteria in the Energy Sector with additional AFOLU criteria to meet the principle of sustainable forest management.

⁴⁴ As stipulated in Government Regulation of the Republic of Indonesia Number 23 of 2021 concerning the Implementation of Forestry, Silviculture is a forest cultivation system or a system of techniques for cultivating forest plants starting from selecting seeds or seedlings, seeding, planting, plant maintenance, pest and disease protection and harvesting.

Agriculture/Plantations

Table 4 presents a comparison of numerous sustainable palm oil certifications that have been recognized on domestic and international scale:

Table 4 Comparison of sustainable palm oil certifications

	Indonesia Sustainable Palm Oil (ISPO)	Roundtable on Sustainable Palm Oil (RSPO)	International Sustainability and Carbon Certification (ISCC)
Issuer	ISPO certification body	RSPO (a union of producers, food industry stakeholders, distributors, NGOs and consumers)	ISCC System GmbH (German based)
Enforcement	Mandatory, in accordance with Presidential Decree Number 44 of 2020 concerning the Indonesian Sustainable Palm Oil Plantation Certification System	Voluntary	Voluntary
Validity period	5 years	5 years	1 year
Principle and criteria	1) Compliance with plantation business legality 2) Implementation of good agricultural practices 3) Management of environment, natural resources, and biodiversity 4) Responsibility for labor	1) Transparency and ethical conduct 2) Operating legally and respecting rights 3) Optimization of productivity, efficiency, positive impact, and resilience 4) Respect for communities, human rights, and creation of social benefits	1) Conservation of natural areas characterized by high biodiversity or significant carbon storage 2) Implementation of good agricultural practices 3) Ensuring safe working conditions 4) Respect for human rights and responsible working conditions

	Indonesia Sustainable Palm Oil (ISPO)	Roundtable on Sustainable Palm Oil (RSPO)	International Sustainability and Carbon Certification (ISCC)
	5) Social responsibility and community economic empowerment 6) Implementation of transparency 7) Sustainable business improvement	5) Support for independent smallholders 6) Respect for workers' rights and working conditions 7) Protection, conservation, and enhancement of ecosystems and the environment	5) Compliance with applicable laws and regulations 6) Adherence to good management practices
Assessment of High Conservation Value (HCV) and High Carbon Stock (HCS)	Assessment of High Conservation Value (HCV) areas, GHG inventory, and management plan for forest and peatland area.	Contained in RSPO Principle 7	Included in Principle 1: "Protection of Land with High Biodiversity Value or High Carbon Stock"
Relevance to climate change mitigation	Outlined in criteria (2) and (3)	Outlined in principle (7)	Outlined in principle (1) and (2)
Third-party verification	Available	Available	Available
GHG Measurement	Conducted during the validity period of the certificate	Conducted during the validity period of the certificate	Conducted during the validity period of the certificate
Frequency of periodic assessments	Annually, throughout the validity period of the certificate	Annually, throughout the validity period of the certificate	

The Forestry and Other Land Use (FOLU) subsector in the TKBI includes all forest product utilization and business activities conducted in State Forests and Forests Subject to Right/Right Forest (including Community Forests, Individual Forests, and Legal Entity Forests). The TKBI also includes forest utilization and business activities in Protected Forests and Production Forests. The criteria in the Agriculture sector only covers these oil palm plantation subsector apply to community, private and state plantations.

Table 5. List of AFOLU sector activities

KBLI 2015 (2017)		KBLI 2020		Description*
KBLI Level 5	Activities	KBLI Level 5	Activities	
1. Sustainable Forest Management				
Commercial utilization of timber resources that naturally grow in production forests and consistently maintain or improve the economic, social, and environmental value of the forest for the benefit of present and future generations.				
A. Utilization of Naturally Grown Timber Forest Products /Pemanfaatan Hasil Hutan Kayu yang Tumbuh Alami				
02120	Business of natural forests	02121	Utilization of natural forest wood	This activity is referred to as "Natural Forest Business" in the 2017 KBLI. Meanwhile, in the Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 8 of 2021 on Forest Management and Preparation of Forest Management Plans, as well as Forest Utilization in Protected Forests and Production Forests, this activity is coined as "Naturally Grown Timber Forest Products (Natural Forests)". EO1: Green and Transition
		02122	Utilization of wood from ecosystem restoration in natural forests	
B. Wood Harvesting				
02201	Wood Harvesting	02201	Wood Harvesting	EO1: Green and Transition
2. Plantation Forestry				
Commercial utilization of timber resources, cultivated in production forests, that consistently maintains or enhances the economic, social, and environmental value of the forest for the benefit of present and future generations				
A. Utilization of wood forest products of plant cultivation				
02111	Business of Teak Forests	02111 02112	• Utilization of Plantation Forest Wood in Production Forests • Utilization of Rehabilitated Plantation Forest Wood in Production Forests	In the 2017 KBLI, this activity is referred to as "Plantation Forest Business". Meanwhile, in the Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 8 of 2021 concerning Forest Management and Preparation of Forest Management Plans, as well as Forest Utilization in Protected Forests and Production Forests, this activity
02112	Business of Pine Forests			
02113	Business of Mahogany Forests			
02114	Business of Sonokeling (Indian Rosewood or <i>Dalbergia latifolia</i>) forests			

KBLI 2015 (2017)		KBLI 2020		Description*
KBLI Level 5	Activities	KBLI Level 5	Activities	
02115	Business of <i>Sengon</i> (<i>Albasia</i> or <i>Jeunjing</i> in different regions, or <i>Paraserianthes falcataria</i>) forests	02113	- Utilization of Community Plantation Forest Wood - Utilization of Other Plantation Forest Wood	is termed "Utilization of Plant Cultivation Timber Forest Products (Plantation Forest)". EO1: Green and Transition
02116	Business of Sandalwood Forests	02119		
02117	Business of Acacia Forests			
02118	Business of Eucalyptus Forests			
02119	Business of other forest types			
B. Wood Harvesting				
02201	Wood Harvesting	02201	Wood Harvesting	EO1: Green and Transition
3. Produk Hutan Selain Kayu (<i>Non-timber forestry product</i>)				
Utilization of non-timber forestry products and environmental services, both tangible and intangible, from forest areas that do not contribute to forest conversion and apply environmentally sound technology or governance.				
A. Utilization of non-timber forestry products				
02131	Business of rattan	02130	Utilization of non-timber forestry products	In the 2017 KBLI, this activity is referred to as "Non-timber forestry product Business". Meanwhile, in the 2020 KBLI and the Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 8 of 2021 on Forest Management and Preparation of Forest Management Plans, as well as Forest Utilization in Protected Forests and Production Forests, this activity is termed as "Utilization of Non-timber forestry products". EO1: Green and Transition
02132	Business of pine resin			
02133	Business of eucalyptus leaves			
02134	Business of bamboo			
02135	Business of damar resin			
02136	Business of agar wood			
02139	Other non-timber forestry business			
B. Extraction of non-timber forestry product				
02301	Extraction of rubber latex	02301	Extraction of rubber latex	EO1: Green and Transition

KBLI 2015 (2017)		KBLI 2020		Description*
KBLI Level 5	Activities	KBLI Level 5	Activities	
02302	Gathering of rattan	02302	Gathering of rattan	
02303	Extraction of pine resin	02303	Extraction of pine resin	
02304	Gathering of eucalyptus leaves	02304	Gathering of eucalyptus leaves	
02305	Gathering of silkworm cocoons	02305	Gathering of silkworm cocoons	
02306	Extraction of damar resin	02306	Extraction of damar resin	
02307	Extraction of honey	02307	Extraction of honey	
02308	Gathering of bamboo	02308	Gathering of bamboo	
02309	Extraction of other non-timber products	02309	Extraction of other non-timber products	
C. Other forestry businesses				
02209	Other forestry business	02209	Other forestry business	- Utilization of Geothermal Environmental Services in Conservation Areas (Exploration Stage) - Utilization of Geothermal Environmental Services in Conservation Areas (Exploitation and Utilization Stage) - Utilization of Water Environmental Services in Conservation Areas (including micro, small, medium, and large scales) - Utilization of Water Energy Environmental Services in Conservation Areas (including micro, small, medium, and large scales) - Nature Tourism Environmental Service Facilities Business in Conservation Areas - Utilization of Areas in Production Forests and Protected Forests

KBLI 2015 (2017)		KBLI 2020		Description*
KBLI Level 5	Activities	KBLI Level 5	Activities	
				Carbon Storage and Sequestration in Production Forests and Protected Forests EO1: Green and Transition
4. Forestry Supply Chain (Rantai Nilai Tambah Kehutanan)				
Activities supporting the value-added chain of forest products that do not contribute to increased GHG emissions and are climate resilient.				
Forestry Product Nursery Business				
02141	Teak Plant Nursery Business	02140	Forestry Plant Nursery Business	EO1: Green and Transition
02142	Pine Plant Nursery Business			
02143	Mahogany Plant Nursery Business			
02144	Sonokeling Plant Nursery Business			
02145	Segon/Albasia/Jeunjing Plant Nursery Business			
02146	Jabon Plant Nursery Business			
02147	Acacia Plant Nursery Business			
02148	Eucalyptus Plant Nursery Business			
02149	Other Forestry Plant Nursery Business			
5. Crops: Whole Production Unit (Tanaman: Keseluruhan Unit Produksi)				
Initiation, expansion, and operational activities for plant cultivation units in non-forest areas that maintain low GHG emissions and are climate resilient.				
A. Oil Palm Plantation				
01262	Oil Palm Fruit Plantation	01262	Oil Palm Fruit Plantation	EO1: Green and Transition

D. TSC for AFOLU sector activities

This section outlines the TSC for EO1. The TSC for EO2, EO3 and EO4 will be developed at a later stage, and will be aligned with ATSF version 4. The list of KBLI Level 5 activities in each AFOLU sector is as follows:

1. Sustainable Forest Management (*Pengelolaan Hutan Lestari*)

KBLI 2017	Description
A	Agriculture, forestry and fisheries
02	Forestry and harvesting of timber and non-timber forestry products
021	Forestry business
0212	Natural Forest Business
02120	Natural Forests Business This group is engaged in an integrated business venture that involves which harvesting timber (with diameter limits), processing, marketing, replanting and maintaining natural species such as meranti, kruing, blackboard, ramin, ironwood, ebony and ulin. It also includes timber transportation which these businesses carry out themselves.
022	Wood Harvesting and Gathering
0220	Wood Harvesting and Gathering
02201	Wood Harvesting This group includes the activities of producing logs for processing industries, as well as logs used in unprocessed forms, such as pit-props, fence posts, and electricity or telephone poles.

Classification	Technical Screening Criteria (TSC)	References /alignment
EO1 – Climate Change Mitigation		
Green	Activities in the form of a Timber Processing Business License (<i>Perizinan Berusaha Pemanfaatan Hutan/PBPH</i>) or Management Rights that conduct Utilization of Natural Growth Timber Forest Products in Production Forests and Timber Harvesting should: 1. Obtained a Sustainable Forest Management certificate (S-PHL) under the Timber Legality and Sustainability Verification System (SVLK), or	Government Regulation of the Republic of Indonesia Number 23 of 2021 concerning the

Classification	Technical Screening Criteria (TSC)	References /alignment
	2. Obtained a nationally and internationally recognized Sustainable Forest Management certificate, such as the Indonesian Forest Certification Cooperation (IFCC) or the Forest Stewardship Council (FSC).	Implementation of Forestry Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 8 of 2021 concerning Forestry Planning and Preparation of Forest Management Plans, and Forest Utilization in Protected and Production Forests
Transition	Activities is in the form of a Timber Processing Business License (<i>Perizinan Berusaha Pemanfaatan Hutan/PBPH</i>) or Management Rights that conduct Utilization of Natural Growth Timber Forest Products in Production Forests and Timber Harvesting, should: Obtained S-Legalitas through the Timber Legality and Sustainability Verification System (SVLK) and must obtained S-PHL within 3 years of obtaining S-Legality. If the activity is Timber Harvesting in the form of Non-Forestry Activities Timber Utilisation (PKKNK), it should: Obtained S-Legality through the Timber Legality and Sustainability Verification System (SVLK). (all Transition criteria only apply until 2030)	- Decree of the Minister of Environment and Forestry Number SK.9895/MenLHK-PHL/BPPHH/HPL.3/12/2022 concerning Standard Guidelines for Implementing the Legality and Sustainability Verification System. - Long-Term Strategy for Low Carbon and Climate Resilience 2050 (LTS-LCCR 2050) - Climate Bonds Initiative (2018). The

Classification	Technical Screening Criteria (TSC)	References /alignment
		Forestry Criteria for the Climate Bonds Standard & Certification Scheme

2. Hutan Tanaman (Plantation Forestry)

KBLI 2017	Description
A	Agriculture, forestry and fisheries
02	Forestry and harvesting of timber and non-timber forestry products
021	Forestry business
0211	Plantation Forestry business
02111	Business of teak forest This group consists of businesses which propagate, nurseries, planting, maintain, harvest, process, and market teak plants species.
02112	Business of pine forest This group consists of businesses which propagate, nurseries, planting, maintain, harvest, process, and market pine plants species.
02113	Business of mahogany forest This group consists of businesses which propagate, nurseries, planting, maintain, harvest, process, and market mahogany plants species.
02114	Business of sonokeling plants forest This group consists of businesses which propagate, nurseries, planting, maintain, harvest, process, and market sonokeling plants species.
02115	Business of sengon/albasia/jeunjing forest This group consists of businesses which propagate, nurseries, planting, maintain, harvest, process, and market sengon/albasia/jeunjing species plant species.
02116	Business of sandalwood forest

KBLI 2017	Description
	This group consists of businesses which propagate, nurseries, planting, maintain, harvest, process, and market sandalwood plants species.
02117	Business of Acacia Forest This group consists of businesses which propagate, nurseries, planting, maintain, harvest, process, and market acacia plants species
02118	Business of Eucalyptus Forest This group consists of businesses which propagate, nurseries, planting, maintain, harvest, process, and market eucalyptus plants species
02119	Other forestry businesses This group includes other wood-related businesses not classified in groups 02111 to 02118, such as <i>gmelina</i> , <i>jabon</i> , <i>gerunggang</i> , <i>rasamala</i> , <i>nyamplung</i> , and shrub plantation businesses.
022	Wood Harvesting and Gathering
0220	Wood Harvesting and Gathering
02201	Wood Harvesting This group includes the activities of producing logs for processing industries, as well as logs used in unprocessed forms, such as pit-props, fence posts, and electricity or telephone poles.

Classification	Technical Screening Criteria (TSC)	References
	EO1 – Climate Change Mitigation	
Green	Activities in the form of a Timber Processing Business License (<i>Perizinan Berusaha Pemanfaatan Hutan/PBPH</i>) or Management Rights that carry out the Utilization of Wood Forest Products for Plant Cultivation in Production Forests as well as Timber Harvesting should: 1. Obtained a Sustainable Forest Management certificate (S-PHL) under the Timber Legality and Sustainability Verification System (SVLK), - or 2. Obtained a nationally and internationally recognized Sustainable Forest Management certificate, such as the Indonesian Forest Certification Cooperation (IFCC) or the Forest Stewardship Council (FSC).	• Government Regulation of the Republic of Indonesia Number 23 of 2021 concerning the Implementation of Forestry • Regulation of the Minister of Environment and

Classification	Technical Screening Criteria (TSC)	References
Transition	Activities in the form of a Timber Processing Business License (<i>Perizinan Berusaha Pemanfaatan Hutan/PBPH</i>) or Management Rights that carry out the Utilization of Wood Forest Products for Plant Cultivation in Production Forests as well as Timber Harvesting should: Obtained S-Legalitas through the Timber Legality and Sustainability Verification System (SVLK) and must obtained S-PHL within 3 years of obtaining S-Legality. If the activity is Timber Harvesting in the form of Non-Forestry Activities Timber Utilisation (PKKNK), it should: Obtained S-Legality through the Timber Legality and Sustainability Verification System (SVLK). (all Transition criteria only apply until 2030)	Forestry of the Republic of Indonesia Number 8 of 2021 concerning Forestry Planning and Preparation of Forest Management Plans, and Forest Utilization in Protected and Production Forests - Decree of the Minister of Environment and Forestry Number SK.9895/MenLHK-PHL/BPPHH/HPL.3/12/2022 concerning Standard Guidelines for Implementing the Legality and Sustainability Verification System. - Long-Term Strategy for Low Carbon and Climate Resilience 2050 (LTS-LCCR 2050) - Climate Bonds Initiative (2018). The Forestry Criteria for the Climate Bonds Standard & Certification Scheme

3. Non-timber Forest Product (*Produk Hutan Selain Kayu*)

KBLI 2017	Description
A	Agriculture, forestry and fisheries
02	Forestry and harvesting of timber and non-timber forest product
021	Forestry Business
0213	Non-timber forestry product business
02131	Rattan business This group consists of businesses which propagate, nurse, planting, maintain, harvest, process, and market rattan plants species
02132	Pine resin business This group consists of businesses which propagate, nurse, planting, maintain, harvest, process, and market pine resin
02133	Eucalyptus leave business This group consists of businesses which propagate, nurse, planting, maintain, harvest, process, and market eucalyptus leaves
02134	Bamboo business This group consists of businesses which propagate, nurse, planting, maintain, harvest, process, and market bamboo forestry products
02135	Resin business This group consists of businesses which propagate, nurse, planting, maintain, harvest, process, and market resin
02136	Agarwood business This group consists of businesses which nurse, plant/enrich, maintain, harvest, process, and market agarwood
02139	Non-timber forestry products business This group includes business which propagate/nurse, planting, maintain, harvest, process, and market of other non-timber forest products—for example, jernang (dragon's blood resin), tengkawang (illipe nuts), sap, shellac, fruit, and other non-timber items.
023	Gathering of non-wood forest products
0230	Gathering of non-wood forest products
02301	Gathering of rubber sap

	This group includes the business of gathering rubber sap from rubber plants and other rubber-producing plants, such as collecting rubber sap from forest rubber plants, perca sap, jelutung and frankincense (<i>kemenyan</i>)
02302	Gathering of rattan This group consists of businesses which gather, process and market rattan plant species.
02303	Gathering of pine resin This group consists of businesses which gather, process and market pine resin.
02304	Gathering of eucalyptus leaves This group consists of businesses which gather, process and market eucalyptus leaves.
02305	Gathering of Silkworms Cocoon This group consists of businesses which extract, process and market silkworms cocoon.
02306	Gathering of Resin This group consists of businesses which extract, process and market resin.
02307	Gathering of Honey This group consists of businesses which extract, process and market honey.
02308	Gathering of Bamboo This group consists of businesses which extract, process and market bamboo.
02309	Gathering of other non-timber forestry products This group includes non-timber product gathering businesses not covered in groups 02301 to 02308, which are separate from non-timber forest product businesses. Examples include the collection of shellac lumps, <i>jernang</i> , eucalyptus leaves, star anise and cinnamon bark, ylang-ylang, sandalwood leaves/bark/twigs, copal, <i>pandan</i> , <i>purun</i> , mushrooms, berries, moss, and other similar products.

Classification	Technical Screening Criteria (TSC)	References
EO1 – Climate Change Mitigation		

Classification	Technical Screening Criteria (TSC)	References
Green	Activities in the form of a Timber Processing Business License (<i>Perizinan Berusaha Pemanfaatan Hutan/PBPH</i>) or Management Rights that carry out Forestry Multi-Business activities that include the Utilization of Non-Timber Forest Products in Production Forests or the Collection of Non-Timber Forest Products in Protected Forests should: 1. Obtained a Sustainable Forest Management certificate (S-PHL) under the Timber Legality and Sustainability Verification System (SVLK), or 2. Obtained a nationally and internationally recognized Sustainable Forest Management certificate, such as the Indonesian Forest Certification Cooperation (IFCC) or the Forest Stewardship Council (FSC).	• Government Regulation of the Republic of Indonesia Number 23 of 2021 concerning the Implementation of Forestry • Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 8 of 2021 concerning Forestry Planning and Preparation of Forest Management Plans, and Forest Utilization in Protected and Production Forests • Decree of the Minister of Environment and Forestry Number SK.9895/MenLHK-PHL/BPPHH/HPL.3/12/2022 concerning Standard Guidelines for Implementing the Legality and Sustainability Verification System. • Long-Term Strategy for Low Carbon and Climate Resilience 2050 (LTS-LCCR 2050)
Transition	Activities in the form of a Timber Processing Business License (<i>Perizinan Berusaha Pemanfaatan Hutan/PBPH</i>) or Management Rights that carry out Forestry Multi-Business activities that include the Utilization of Non-Timber Forest Products in Production Forests or the Collection of Non-Timber Forest Products in Protected Forests should: Obtained S-Legalitas through the Timber Legality and Sustainability Verification System (SVLK) and must obtained S-PHL within 3 years of obtaining S-Legality. (all Transition criteria only apply until 2030)	

Classification	Technical Screening Criteria (TSC)	References
		Climate Bonds Initiative (2018). The Forestry Criteria for the Climate Bonds Standard & Certification Scheme

4. Other Forestry Businesses

KBLI 2017	Description
A	Agriculture, Forestry and Fisheries
02	Forestry and harvesting of timber and non-timber forestry products
022	Wood Harvesting and Gathering
0220	Wood Harvesting and Gathering
02209	Other forestry business
	This group includes forestry businesses not covered in other categories, such as traditional charcoal production in forests.
Additional Information: In the context of TKBI TSC EO1, it encompasses only the following activities: - Utilization of Geothermal Environmental Services during the Exploration Stage in Conservation Areas - Utilization of Geothermal Environmental Services during the Exploitation and Utilization Stage in Conservation Areas - Utilization of Water Environmental Services in Conservation Areas (including Micro, Small, Medium, and Large scales) - Utilization of Hydro Power Environmental Services in Conservation Areas (including Micro, Small, Medium, and Large scales) - Nature Tourism Environmental Service Facilities Business in Conservation Areas - Area Utilization in Production Forests and Protected Forests - Carbon Storage and Sequestration in Production Forests and Protected Forests	

KBLI 2017	Description
	For activities related to the domestic/overseas movement of wild animal and plant species, captivity, conservation institutions for public interest, and hunting facilities and infrastructure businesses, as well as hunting activities, these activities focus on biodiversity and have the potential to be included in EO3 – Protection of Healthy Ecosystems and Biodiversity. This will be further developed by considering the relevant taxonomy in the region.

Classification	Technical Screening Criteria (TSC)	References
	EO1 – Climate Change Mitigation	
Green	Activities included in the Utilization of Geothermal Energy Environmental Services at the Exploration Stage and the Exploitation Stage in Conservation Areas should: 1. Meet the "Green" criteria of the TSC (Technical Screening Criteria) for power generation activities from geothermal energy in the Energy Sector. - and 2. Obtain the highest predicate* based on the results of periodic monitoring or evaluation conducted by the relevant authorities. Activities included in the Utilization of Water Environmental Services in Conservation Areas should: Achieve the highest predicate* based on the results of periodic monitoring or evaluation conducted by the relevant authorities. Activities included in the Utilization of Hydro Power Environmental Services in Conservation Areas should: 1. Meet the TSC (Technical Screening Criteria) for power generation activities from water power in the Energy Sector under the "Green" criteria. - and 2. Achieve the highest predicate* based on the results of periodic monitoring or evaluation conducted by the relevant authorities	• Law of the Republic of Indonesia Number 5 of 1990 concerning Conservation of Biological Natural Resources and their Ecosystems • Law of the Republic of Indonesia Number 32 of 2024 concerning Amendments to Law Number 5 of 1990 concerning Conservation of Biological Natural Resources and their Ecosystems • Government Regulation of the Republic of Indonesia Number 5 of 2021 concerning the Implementation of Risk-Based Business Licensing • Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 3 of 2021 concerning Business Activity Standards in the

Classification	Technical Screening Criteria (TSC)	References
	Activities included in the Nature Tourism Environmental Service Facilities Business in Conservation Areas should: Achieve the highest predicate* based on the results of periodic monitoring or evaluation conducted by the relevant authorities. Activities in the form of a Timber Processing Business License (<i>Perizinan Berusaha Pemanfaatan Hutan/PBPH</i>) or Management Rights that carry out the Area Utilization activities as well as activities utilizing Environmental Services for Carbon Storage and Sequestration in Production Forests and Protected Forests should: 1. Obtained a Sustainable Forest Management certificate (S-PHL) under the Timber Legality and Sustainability Verification System (SVLK), or 2. Obtained a nationally and internationally recognized Sustainable Forest Management certificate, such as the Indonesian Forest Certification Cooperation (IFCC) or the Forest Stewardship Council (FSC).	Implementation of Risk-Based Business Licensing in the Environmental and Forestry Sector • Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 8 of 2021 concerning Forest Management and Preparation of Forest Management Plans, as well as Forest Utilization in Protected Forests and Production Forests • Regulation of the Director General of Forest Protection and Nature Conservation Number P.22/IV-SET/2014 concerning Implementation of Supervision, Evaluation and Guidance of Water and Water Energy Utilization in Wildlife Sanctuaries, National Parks, Grand Forest Parks and Nature Tourism Parks • Regulation of the Director General of Natural Resources and Ecosystem Conservation Number P.03/KSDAE/SET/KSA.3/8/2019 concerning Guidelines for Control, Monitoring and Evaluation of Nature Tourism Business in Wildlife Sanctuaries, National Parks, Grand Forest Parks and Nature Tourism Parks
Transition	Activities included in the Utilization of Geothermal Energy Environmental Services at the Exploration Stage and the Exploitation Stage in Conservation Areas should: 1. Meet the "Transition" criteria of the TSC for power generation activities from geothermal energy in the Energy Sector. and 2. Obtain a 'Menengah' (Medium)** rating based on the results of periodic monitoring or evaluation conducted by the relevant authorities. Activities included in the Utilization of Water Environmental Services in Conservation Areas should: Obtain a 'Menengah' (Medium)** rating based on the results of periodic monitoring or evaluation conducted by the relevant authorities Activities included in the Utilization of Hydro Power Environmental Services in Conservation Areas should:	

Classification	Technical Screening Criteria (TSC)	References
	1. Meet the TSC for power generation activities from hydropower under the "Transition" criteria. and 2. Obtain a 'Menengah' (Medium)** rating based on the results of periodic monitoring or evaluation conducted by the relevant authorities. Activities included in the Nature Tourism Environmental Service Facilities Business in Conservation Areas should: Obtain a 'Menengah' (Medium)** rating based on the results of periodic monitoring or evaluation conducted by the relevant authorities. Activities in the form of a Timber Processing Business License (<i>Perizinan Berusaha Pemanfaatan Hutan/PBPH</i>) or Management Rights that carry out the Area Utilization activities as well as activities utilizing Environmental Services for Carbon Storage and Sequestration in Production Forests and Protected Forests should: Having S-Legalitas and required to obtain S-PHL within 3 years after receiving S-Legalitas. (All these criteria for transitions are valid only until 2030)	- Regulation of the Director General of Natural Resources and Ecosystem Conservation Number P.5/KSDAE/SET/KUM.1/12/2019 concerning Guidelines for Guidance, Supervision and Evaluation of Geothermal Environmental Services Utilization in National Park Areas, Grand Forest Parks and Nature Tourism Parks - Long-Term Strategy for Low Carbon and Climate Resilience 2050 (LTS-LCCR 2050)
	<i>*The highest rating is determined in accordance with the provisions set by the competent authority through the Regulation of the Director General of Forest Protection and Nature Conservation and the Regulation of the Director General of Natural Resources and Ecosystem Conservation, or any amendments thereof. At the time this TKBI was drafted, the current highest rating in effect is "Good."</i> <i>**The medium rating is determined in accordance with the provisions set by the competent authority through the Regulation of the Director General of Forest Protection and Nature Conservation and the Regulation of the Director General of Natural Resources and Ecosystem Conservation, or any amendments thereof. At the time this TKBI was drafted, the current medium rating in effect is "Sedang" (Medium).</i>	

5. Forestry Crops Nursery Business

KBLI 2017		Description
A		Agriculture, Forestry and Fisheries

KBLI 2017	Description
02	Forestry And Harvesting Of Timber And Non-Timber Forestry Products
021	Forestry Business
0214	Forestry Crops Nursery Business
02141	Teak Tree Nursery Business This sub-group consists of businesses which propagate and maintain teak trees until they reach a suitable age for commercial planting.
02142	Pine Plant Nursery Business This sub-group consists of businesses which propagate and maintain pine trees until they reach a suitable age for commercial planting.
02143	Mahogany Plant Nursery Business This sub-group consists of businesses which propagate and maintain mahogany trees until they reach a suitable age for commercial planting.
02144	Sonokeling Plant Nursery Business This sub-group consists of businesses which propagate and maintain sonokeling trees until they reach a suitable age for commercial planting.
02145	Sengon/Albazia/Jeungjing (<i>Paraserianthes Falcataria</i>) Plant Nursery Business This sub-group consists of businesses which propagate and maintain sengon/albazia/jeungjing trees until they reach a suitable age for commercial planting.
02146	Jabon Plant Nursery Business This sub-group consists of businesses which propagate and maintain jabon trees until they reach a suitable age for commercial planting.
02147	Acacia Plant Nursery Business This sub-group consists of businesses which propagate and maintain acacia trees until they reach a suitable age for commercial planting.
02148	Eucalyptus Plant Nursery Business

KBLI 2017	Description
	This sub-group consists of businesses which propagate and maintain eucalyptus trees until they reach a suitable age for commercial planting.
02149	Other Forestry Plant Nursery Business This sub-group consists of businesses which propagate and maintain other forestry plants, such as sandalwood, until they reach a suitable age for commercial planting.

Classification	Technical Screening Criteria (TSC)	References
Green	EO1 – Climate Change Mitigation Activities included in the Cultivating Forestry Seedlings in Production Forests, Protected Forests, and Conservation Forests should: 1. Meet the following criteria: a. Obtaining a rating of “Eligible”** based on periodic monitoring or evaluation conducted by the competent authority. - and b. Providing self-reported evidence that the Activity does not involve chemicals specified in the Stockholm Convention 1a, nor Class 1b pesticides (as per The WHO Recommended Classification of Pesticides by Hazard), nor chemicals that are not in accordance with the Rotterdam Convention. - or 2. Should meet the following criteria: a. Having the certificates of: 1. Certificate of Seed Source (<i>Sertifikat Sumber Benih</i>) and Certificate of Seed Quality (<i>Sertifikat Mutu Benih</i>), if the procurement and distribution of forest plant seeds or seedlings is intended for the domestic market. - or 2. Certificate of Origin (COO) and Certificate of Quality (COQ), if the procurement and distribution of forest plant seeds or seedlings is intended for the international market. - and	• Regulation of the Minister of the Environment and Forestry of the Republic of Indonesia Number P.3/MENLHK/S ETJEN/KUM.1/1/2020 concerning the Implementation of Forest Plant Seeds • Climate Bonds Initiative (2018). <i>The Forestry Criteria for the Climate Bonds Standard & Certification Scheme</i>

Classification	Technical Screening Criteria (TSC)	References
	b. Forestry plant seeds are produced from forest areas that hold credible sustainable forest management certifications recognized at both national and international levels, such as the Sustainable Forest Management certificate from the Indonesian Forest Certification Cooperation (IFCC) or the SFM certificate from the Forest Stewardship Council (FSC).	
Transition	Activities include Cultivating Forestry Seedlings in Production Forests, Protected Forests, and Conservation Forests should: 1. Should provide self-reported evidence that the Activity actor does not use chemicals listed in the Stockholm Convention 1a, nor Class 1b pesticides (as per The WHO Recommended Classification of Pesticides by Hazard), nor chemicals deemed incompatible with the Rotterdam Convention. or 2. Obtain Certificate of Seed Source (<i>Sertifikat Sumber Benih</i>) and Certificate of Seed Quality (<i>Sertifikat Mutu Benih</i>), if the procurement and distribution of forest plant seeds or seedlings is intended for the domestic market. or 3. Obtain Certificate of Origin (COO) and Certificate of Quality (COQ), if the procurement and distribution of forest plant seeds or seedlings is intended for the international market. All these criteria for transitions are valid only until 2030	

6. Palm oil plantation

A	Agriculture, Forestry and Fisheries
01	Crop Farming, Livestock Farming, Hunting and Related Activities
012	Perennial Plants Farming
0126	Oil-producing fruit plantations (<i>Oleaginous</i>)
01262	Oil palm fruit plantations This group consists of plantation businesses involved in the entire process of oil palm cultivation; commencing with land preparation, propagation, plantation, maintenance, and harvesting the palms.

Classification	Technical Screening Criteria (TSC)		References/Alignment
	EO1 – Climate Change Mitigation		
Green	Activities included in the Oil Palm Plantations Not Cultivated in Forest Areas should : Has one of the credible and recognized sustainable palm oil certifications at the national or international level, such as: Indonesian Sustainable Palm Oil (ISPO), Roundtable on Sustainable Palm Oil (RSPO), International Sustainability and Carbon Certification (ISCC), Malaysian Sustainable Palm Oil (MSPO), The Palm Oil Innovation Group (POIG), or RSB Certification. These certifications require the assessment of High Conservation Value Areas (HCV Areas), GHG inventories, as well as forest and peatland management plans as certification criteria.		• Presidential Regulation of the Republic of Indonesia Number 44 of 2020 Concerning the Indonesian Sustainable Palm Oil Plantation Certification System.
Transition	Activities involve Oil Palm Plantations Not Cultivated In Forest Areas should : 1. Maintain Standard Operating Procedures (SOPs) for GHG emissions mitigation and SOP for preserving protected and high-conservation areas, along with documentation confirming that new plantation development does not encroach upon natural forests or peatlands in accordance with relevant laws and regulations. and 2. Meet one of the following criteria: a. Disclose/explicitly declare the realization of climate change mitigation efforts and/or achievements in the Sustainability Report, Annual Report, or climate change mitigation report submitted to the authorized entity; or b. Possess a Sustainability Policy or Environmental Policy document that has been formally adopted/endorsed by a representative of the authorized entity. (All these criteria for transitions are valid only until 2030)		• Regulation of the Minister of Agriculture of the Republic of Indonesia Number 38 of 2020 Concerning the Implementation of the Indonesian Sustainable Palm Oil Plantation Certification. • Climate Bonds Initiative (2021). <i>Agriculture Criteria Climate Bonds Standard and Certification Scheme</i>
* Directorate General of Climate Change Control (PPI) at the Ministry of Environment and Forestry of the Republic of Indonesia			

ANNEX

Guiding Questions for Sector-agnostic Decision Tree (SDT) Assessment



SDT assessments are used for economic activities that fall within the scope of TKBI. The assessment is conducted by answering guiding questions according to the selected EO. These guiding questions are principle-based. In applying the guiding questions for EO and EC, adjustments can be made according to user needs and local conditions.

A. EO1-Climate Change Mitigation

List of Guiding Questions
Does the activity prevent or reduce GHG emissions or enable stakeholders and/or other Activities to mitigate climate change?
Fulfills question 1 or 2:
1. Does the Activity prevent or help in reducing emissions? (e.g., saving electricity, using renewable energy); or
2. Does the Activity enable other stakeholders (including the community) and/or other Activities to mitigate climate change? (e.g., green building).

B. EO2-Climate Change Adaptation

List of Guiding Questions
Does the Activity implement measures to increase the resilience of business entities to climate change or enable stakeholders and/or other Activities to increase resilience to climate change?
Fulfills question 1 or 2 or 3:
1. Do the business entity's policies and business strategies generally not conflict with or hinder alignment with EO2 principles?
2. How do these Activities contribute to the business entity's resilience to the current and future adverse physical impacts of climate change? (e.g., infrastructure improvements for resilience to the impacts of sea-level rise and flood protection).
3. Does the Activity enable other stakeholders (including the community) and/or other Activities in reducing/managing physical risks*? (e.g., providing waste disposal facilities around business locations to support climate change adaptation, installing irrigation systems and land drainage measures)
<i>*) Physical risks refer to potential risks stemming from climate-related events such as floods, typhoons, heatwaves, fires, sea level rise, and others, leading to economic losses and financial impacts. These risks affect both physical and non-building assets and encompass changes in environmental conditions.</i>

C. EO3-Protection of Healthy Ecosystems and Biodiversity

List of Guiding Questions
Does the Activity contribute to protecting, preserving, restoring, minimizing negative effects on ecosystems and biodiversity, or enable other stakeholders and/or Activities to protect ecosystems and biodiversity?
Fulfills question 1 or 2
1. Does the activity contribute to one of the EO3 principles (as outlined in Chapter 2.B.1)?
2. Does the Activity enable other stakeholders (including the community) and/or other Activities in protecting ecosystems and biodiversity?

D. EO4-Resource Resilience and the Transition to a Circular Economy

List of Guiding Questions
Fulfills question 1 or 2 or 3:
1. Activities that apply circular economy principles in the use of resources:
a. Does the Activity extend the use of a product through reuse and repurposing, repair, remanufacturing, disassembly, upgrades and repair, and/or sharing of products?
b. Does the Activity increase resource efficiency, e.g., by recycling raw materials?
c. Is the Activity available as a product-as-a-service to reduce demand for new products and their raw materials? (e.g., leasing, pay-per-use, subscription schemes, or deposit return schemes); or
d. Does the Activity involve the use of products, assets, or technologies designed and manufactured based on circular economy principles? (e.g., long-life product design, resource efficiency, durability, functionality, upgradability, ease of repair, and use of recyclable or biodegradable materials).
2. Activities using effective waste management processes:
a. Does the Activity use an effective waste management process?
b. Does the Activity apply the waste hierarchy of priority orders in the prevention and management of waste material?
• Prevention
• Prepare for reuse
• Recycling
• Other forms of recovery (e.g., energy recovery)
• Disposal
or
c. Does the Activity prevent a significant increase in the generation, incineration or disposal of waste?
3. Activities to enable stakeholders and/or other Activities to achieve resource security and transition to a circular economy:
a. Does the Activity help other stakeholders (including the community) and/or other Activities to build resource resilience and transition to a circular economy?; or
b. Does it promote cross-sector collaborations for resource resilience and circular economy transitions without negatively affecting other sectors?

ANNEX

Do No Significant Harm (DNSH)



This Annex is intended as a general guide to assess the DNSH of an Activity. Any Activity classified under TKBI must not cause significant harm or DNSH to any other EOs (other than the primary EO associated with the Activity). In TKBI, the baseline scenario for assessing DNSH follows the general guidance of the ATSF and must be in accordance with the applicable policies, laws and regulations in Indonesia.

A. Significant Harm in TKBI

1. Definition

The definition of 'Significant Harm' in the TKBI context is crucial because users must have a consistent understanding and avoid subjective interpretations. With reference to the respective EO, an Activity is considered to cause significant harm when:

EO	Principle of Significant Harm	Consideration in the General Guidelines
EO1	Activity leads to significant greenhouse gas (GHG) emissions	- ATSF - Enhanced NDC Indonesia - Presidential Regulation of the Republic of Indonesia Number 98 of 2021 concerning the Implementation of Economic Value of Carbon to Achieve Nationally Determined Contribution Targets and Control of Greenhouse Gas Emissions in National Development
EO2	a. Activity leads to greater adverse impacts of the current and expected future climate on the Activity itself, people, nature, or other assets; or b. Activity fails to adequately assess, consider and manage key climate risks affecting the Activity.	- ATSF - Enhanced NDC Indonesia - Applicable laws and regulations including: 1) Presidential Regulation of the Republic of Indonesia Number 98 of 2021 concerning the Implementation of the Economic Value of Carbon to Achieve Nationally Determined Contribution Targets and Control of Greenhouse Gas Emissions in National Development. 2) Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.33/Menlhk/Setjen/Kum.1/3/2016 concerning Guidelines for Preparing Climate Change Adaptation Actions.
EO3	a. Activity is significantly detrimental to the good condition and resilience of ecosystems; b. Activity encroaches upon ecosystems; or c. Activity is detrimental to the conservation status of habitats and species.	- ATSF - Applicable laws and regulations including: 1) Republic of Indonesia Government Regulation Number 22 of 2021 concerning the Implementation of Environmental Protection and Management (PP 22/2021). 2) Presidential Instruction of the Republic of Indonesia Number 1 of 2023 concerning Mainstreaming Biodiversity Conservation in Sustainable Development.
EO4	a. Activity leads to significant inefficiencies in the use of	- ATSF

EO	Principle of Significant Harm	Consideration in the General Guidelines
	materials or the direct or indirect use of natural resources compared to what is technically and economically feasible in that industry; or b. Activity significantly increases the generation, incineration, or disposal of waste, or if waste disposal may cause significant and/or long-term environmental harm.	- Applicable policies including: 1) SNI ISO 14040:2016 and SNI ISO 14044:2017 concerning Environmental management - Life cycle assessment. 2) Guidelines for Preparing Life Cycle Assessment Reports (LCA) published by the Ministry of Environment and Forestry (KLHK) in 2021.

2. Carbon Lock-in

For an Activity seeking classification under any EO, it must be shown that the Activity does not result in "Carbon Lock-in". Lock-in refers to an Activity that, while supporting an EO, does not support a sustainable solution over the medium to long term or may limit or inhibit resource availability (capital, technology, etc.) for longer-term sustainable alternatives. Carbon Lock-in can also be interpreted as a barrier to transitioning to cleaner and more sustainable energy sources because the existing infrastructure and economic system are dependent on carbon-based fuels.

Examples of carbon lock-in are, but not limited to:

1. Sustainable Activities (e.g., renewable electricity), solely dedicated to supporting the extraction, storage, transport, or manufacture of fossil fuels;
2. Climate change adaptation activities intended to serve other high-carbon-emitting activities (e.g., expansion of road construction intended to transport coal to power plants).

B. DNSH General Guidelines

1. EO1-Climate Change Mitigation

General Guidelines of DNSH EO1
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: 1. Identification of Scope 1 and Scope 2 Emissions related to the Activity; 2. Identification of the potential risks to other people or assets to directly increase their GHG emissions; or 3. Plans for the management and reduction of emissions related to the Activity.

If an Activity is found to cause harm to EO1, then the activity must take action and provide the following evidence as part of the assessment:

1. A plan to manage and reduce emissions, including at least Scope 1 and Scope 2 emissions related to the Activity; and
2. Evidence that the remediation plans have been implemented and are ongoing.

2. EO2-Climate Change Adaptation

General Guidelines of DNSH EO2
Principle 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.

General Guidelines of DNSH EO2	
- Activities should integrate both physical and non-physical measures aimed at reducing all identified material risks as determined through Comprehensive Risk and Vulnerability Assessment (CRVA). This integration should follow these guidelines: - 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. - The CRVA mentioned above should possess the following characteristics: - It should take into account current weather variability and potential future climate change, including associated uncertainties; - It should be based on a robust analysis of available climate data and projections across various future scenarios; and - It should be consistent with the estimated time period of the Activity.	
Principle 2: Adaptation of Support Systems Adaptation activities and measures should not negatively impact adaptation efforts concerning humans, nature, and/or other assets. - Adaptation activities and measures should not increase the risk of adverse climate impacts on people, nature, and other assets, nor should they hinder adaptation efforts elsewhere. - Activities should align with sectoral, regional, and/or national adaptation efforts.	

3. EO3-Protection Of Healthy Ecosystems And Biodiversity

General Guidelines of DNSH EO3	
Objective	Condition Causing Significant Harm
Sustainable use and protection of water and marine resources	The activity that harms ecology, water bodies, including surface water and groundwater, or marine waters should be addressed through appropriate measures;
Pollution prevention and control	The activity results in increased emissions into the air, water, or land compared to conditions prior to its commencement;
Protection of healthy ecosystems	The activity that significantly harms the condition and resilience of ecosystems or the conservation status of habitats and species, including community interests, should be carefully assessed and addressed.

The DNSH assessment for EO3 is divided into two distinct parts: firstly, considering the Environmental Impact Assessment (EIA) or Environmental and Social Impact Assessment (ESIA); and secondly, addressing other aspects that have the potential to cause significant losses:

Impact on water resources	- Ensure that environmental approvals/Environmental Impact Assessment (EIA)/AMDAL/UKL-UPL/SPPL are obtained in accordance with applicable regulations; - Identify and manage environmentally detrimental risks related to water quality and/or water consumption; - Ensure all relevant management plans, such as water quality protection and conservation management plans, are developed
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	in consultation with stakeholders and implemented for potentially impacted water bodies. The management plan should also include a genuine commitment to minimizing environmental impacts through appropriate water management throughout the activity life cycle; and - Monitor compliance with and effectiveness of mitigation measures that have been established as project commitments.
Impact on air quality	- Ensure that environmental approvals/Environmental Impact Assessment (EIA)/AMDAL/UKL-UPL/SPPL are obtained in accordance with applicable regulations; - Avoid hindering the achievement of air quality targets as per applicable regulations; - Identify and manage adverse environmental risks related to air quality at specified levels; - Ensure all relevant management plans, such as air quality management plans, are developed in consultation with stakeholders and implemented for potentially impacted areas; and - Monitor compliance with and effectiveness of mitigation measures established as project commitments.
Impact on soil quality	- Ensure that environmental approvals/Environmental Impact Assessment (EIA)/AMDAL/UKL-UPL/SPPL are obtained in accordance with applicable regulations; - Identify and manage environmentally detrimental risks related to soil quality; - Ensure all relevant management plans, such as Soil Erosion and Sediment Control Plans, are developed in consultation with stakeholders and implemented for potentially impacted areas; and - Monitor compliance with and effectiveness of mitigation measures established as project commitments.
Impact on noise	- Ensure that environmental approvals/Environmental Impact Assessment (EIA)/AMDAL/UKL-UPL/SPPL are obtained in accordance with applicable regulations. - Identify and manage environmental risks related to noise; - Develop all relevant management plans, such as noise management plans, in consultation with stakeholders and ensure implementation for potentially impacted areas; and - Monitor compliance with and effectiveness of mitigation measures established as project commitments..
Impact on peatlands	- Ensure that environmental approvals/Environmental Impact Assessment (EIA)/AMDAL/UKL-UPL/SPPL are obtained in accordance with applicable regulations;

	- Identify and manage environmentally detrimental risks associated with peatlands; - Develop all relevant management plans, such as Peatland Control Plans, in consultation with stakeholders and ensure implementation for potentially impacted areas; and - Monitor compliance with and effectiveness of mitigation measures established as project commitments.
Impact on biodiversity	- Ensure that environmental approvals/Environmental Impact Assessment (EIA)/AMDAL/UKL-UPL/SPPL are obtained in accordance with applicable regulations; - Identify and manage environmentally detrimental risks associated with biodiversity; - Develop all relevant management plans, such as biodiversity management plans, in consultation with stakeholders and ensure implementation for potentially impacted areas, particularly water bodies. The management plan should demonstrate a genuine commitment to minimizing environmental impacts through appropriate water management throughout the activity life cycle; and - Monitor compliance with and effectiveness of mitigation measures established as project commitments. Common examples of protected land or areas with high biodiversity conservation value include: - Nature reserves; - Natural monuments; - Ramsar sites; - Resource management areas; - World Heritage Sites; - Lands with conservation deeds; - Marine protected areas with mangrove forests or forest components; - Areas protected by Indigenous Peoples and local communities, including Community Conservation Areas; - Areas covered by community-based resource management agreements; - Forests recognized as regionally significant at the bioregion scale or larger scale in officially recognized reports; - Ridge-to-Reef ecosystems, including but not limited to those containing mangrove, freshwater swamp, and freshwater stream components.

Radioactive release	- Ensure that environmental approvals/Environmental Impact Assessment (EIA)/AMDAL/UKL-UPL/SPPL are obtained in accordance with applicable regulations; - Identify and manage environmental risks associated with radioactive releases; - Monitor compliance with and effectiveness of mitigation measures established as project commitments; and - Implement efforts to control environmental radioactivity.
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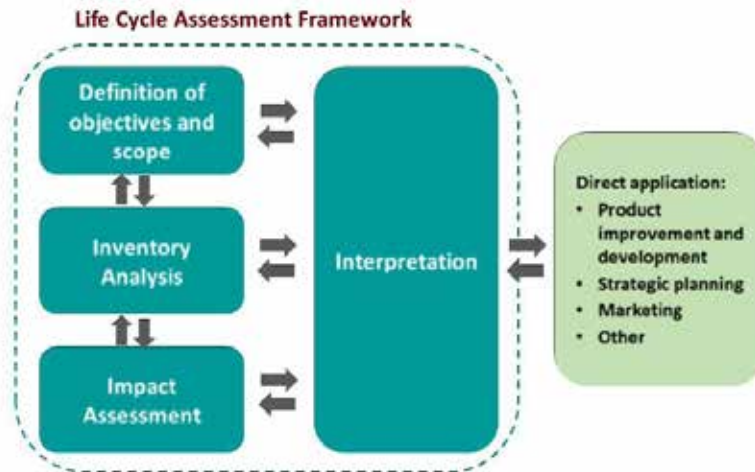
4. EO4-Resource Resilience and The Transition to A Circular Economy

General Guidelines of DNSH EO4	
Objective	Condition Causing Significant Harm
The circular economy includes waste prevention and recycling	- The Activity causes significant inefficiencies in the direct or indirect use of materials and natural resources such as non-renewable energy sources, raw materials, water, and land in one or more stages of the product life cycle, including aspects related to durability, repairability, upgradability, reusability, and recyclability; or - The Activity results in a significant increase in waste generation, incineration, or disposal, with the exception of non-recyclable hazardous waste incineration, or in cases where long-term waste disposal may cause significant and long-term harm to the environment.

An Activity must demonstrate that it will not pose a significant harm to EO4 by conducting a Life Cycle Assessment (LCA) on products, materials, processes, or other measurable activities involved. The LCA is carried out in accordance with SNI ISO 14040:2016 (Environmental Management - Life Cycle Assessment - Principles and Framework) and SNI ISO 14044:2017 (Environmental Management - Life Cycle Assessment - Requirements and Guidelines), which compile and evaluate input, output, and potential environmental impacts of a product system throughout its life cycle. The LCA assesses the environmental impact of a product system from upstream to downstream.

By conducting a Life Cycle Assessment, decision-makers can base their decisions on data and facts. LCA is used product design, developing better production processes, product and process innovation, improving environmental management systems, selecting products or processes, selecting suppliers, communicating environmental information for company-produced products, determining company strategy, and making policy decisions in government.

LCA is a quantitative measurement tool for sustainable development, guided by seven fundamental principles: life cycle perspective, environmental focus, relative approach and functional units, iterative approach, transparency, comprehensiveness, and priority scientific approach. LCA can be applied to various proponent needs. In this case, the reporting guidelines are expected to accommodate the preparation of reports for PROPER reporting, aligning with the objectives set by the organization or initiator of the LCA study. The Life Cycle Assessment framework consists of four stages: Determining Goals and Scope, Life Cycle Inventory, Life Cycle Impact Assessment, and Interpretation.



- a. **Determining the objectives and scope** is crucial to ensuring consistency in the environmental impact assessment of products/services.
- b. **Life cycle inventory.** At this stage, the compilation and quantification of inputs and outputs of the product throughout its life cycle are conducted. Inputs include raw materials, supporting materials, water, energy, and transportation entering the process. Outputs consist of products, by-products, co-products, air emissions, emissions to water, and land. The emissions referred to here are compounds released into the environment, whether into the air, water bodies, or ground. The model, data types, and calculation processes are transparently explained in the life cycle inventory stage.
- c. **Life cycle impact assessment,** all inputs and outputs from the life cycle inventory stage are linked to potential environmental impacts to evaluate the magnitude and significance of the potential environmental impacts of the product system throughout its life cycle. LCA assesses environmental impacts across various environmental impact categories, including both midpoint and endpoint. Each environmental impact category has its own category indicators.
- d. **Interpretation.** At this stage, discussions regarding the analysis of results, analysis of causes of impacts, identification of important issues, drawing conclusions, explanation of study limitations, recommendations, and evaluations are carried out transparently.

The LCA assessment is a part of the Green and Gold PROPER requirements. Besides PROPER purposes, LCA is essential for improving the performance of the company's business aspects. Increasing consumer awareness in considering various factors before deciding to use a product or service is one such factor. LCA can be an important method that producers must understand to produce goods and services of the best quality. Further LCA guidelines can be accessed on the website of the Ministry of Environment and Forestry of the Republic of Indonesia:

(https://proper.menlhk.go.id/propercms/uploads/magazine/docs/buku/magazinePedoman_Penyusunan_Laporan_Penilaian_Daur_Hidup_2021.pdf)

If an entity does not conduct an LCA assessment within the PROPER framework to meet the criteria of DNSH EO4 - Resource Resilience and the Transition to a Circular Economy, then the entity can conduct an independent assessment using the following template:

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?	

Step	Item	Description	Explanation	Status
2A	Inputs and outputs throughout Activity lifecycle	Initial infrastructure / equipment	High level view of main equipment items	
2B		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 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		

Source: ASEAN Taxonomy for Sustainable Finance Version 3, 2024

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.

LCA Checklist Worked Example

Assumption that supporting evidence documents exist in other documents (e.g., EIA/ESIA/AMDAL/UKL/UPL/SPPL).

Step	Item	Description	Explanation	Status
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.

Step	Item	Description	Explanation	Status
2E		Emissions	What emissions does the Activity make?	Activity results in no emissions.
2F		Waste Streams	What forms of waste will the Activity generate in its lifetime?	Activity will result in small volumes of waste resulting 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 the impacts 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?	<i>Engineering, Procurement, and Construction/ Operation and Maintenance (EPC/O&M)</i> 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'

C. DNSH Criteria for TSC Assessment

Do No Significant Harm for Technical Criteria	
EO1	1. Having a documented plan to manage and minimize at least Scope 1 and Scope 2 emissions associated with the Activity; and/or 2. Implement other mitigation plans that, in principle, do not adversely impact EO1.
EO2	Conducting a Climate Risk and Vulnerability Assessment (CRVA) involves the following steps: 1. Gather data pertaining to historical extreme climate events, climate change projections, and vulnerability conditions (including exposure, sensitivity, and adaptive capacity), and perform risk assessments. Data sources may include the Vulnerability Index Data Information System (SIDIK) application owned by the Ministry of Environment and Forestry of the Republic of Indonesia, or other relevant sources. <i>Documents include Feasibility Studies, UKL-UPL, AMDAL, or similar environmental study documents;</i> and 2. Develop and implement adaptation actions, incorporating additional criteria (For example: constructing drainage systems, utilizing non-asphalt roads, and implementing waste processing methods) <i>Documents include an adaptation action plan and ensure periodic monitoring of implementation progress.</i>
EO3	Must either possess a Blue PROPER Certification or meet the following criteria: 1. Have EIA/ESIA This approval can be in the form of an AMDAL (Environmental Impact Analysis), UKL/UPL (Environmental Management Efforts and Environmental Monitoring Efforts), or SPPL (Statement of Environmental Management and Monitoring Capability) document; and at least one of points 2 to 8 2. If the project poses risks to water resources, it must manage these risks to maintain water quality and quantity. This involves consuming water at a reasonable level and implementing a water use and conservation management plan in accordance with relevant regulations. 3. If the project negatively affects air quality, it must implement a risk management plan to mitigate air quality degradation in compliance with applicable regulations. 4. If the project could impact soil quality adversely, it must implement a risk management plan to safeguard soil quality in accordance with relevant regulations. 5. If the project has the potential to harm biodiversity, it must implement a biodiversity risk management plan in compliance with applicable regulations. 6. If the project could generate significant noise, it must implement a noise risk management plan in accordance with relevant regulations. 7. If the project is situated on peatland, it must conduct an inventory of the Peat Ecosystem's characteristics and develop a Peat Ecosystem restoration document. 8. If the project has the potential for radioactive releases, it must undertake efforts to control environmental radioactivity.
EO4	An Activity must either possess a Green PROPER Certification or have a plan in place to implement circular economy principles for products, materials, processes, or other related Activities. This plan can be documented in the form of a Life Cycle Assessment (LCA) or similar documentation.

D. Guiding Questions on DNSH for SDT Assessment

Do No Significant Harm for Sector-agnostic Decision Tree	
E01	Does the Activity make efforts to support GHG emission reduction? e.g., saving electricity usage or utilizing renewable energy
E02	Does the Activity contribute to enhancing human and natural resilience to the impacts of climate change? e.g., infrastructure improvements for resilience against sea-level rise and flood protection.
E03	- Does the Activity possess Environmental Approval, at minimum in the form of SPPL? and - Does the Activity contribute to maintaining the condition and resilience of the surrounding ecosystem? e.g., planting trees or engaging in reforestation efforts.
E04	Does the Activity implement the basic principles of a circular economy, including efficient production and consumption, reducing environmental impact, minimizing waste of products and materials, and engaging in waste processing?

ANNEX

Remedial Measures to Transition



Fulfilment of the essential criteria for RMT for both the TSC and SDT assessment approaches can be achieved using the following guiding questions or by employing alternative approaches as long as all the main principles are fulfilled.

No	List of Guiding Questions
1	Main Principle: RMT have been implemented at the time of the assessment. Guiding Questions: 1. Does the economic activity remediate negative impacts through measures such as compliance with environmental regulations/policies, adherence to relevant internal policies and processes, and/or implementing additional measures to reduce negative impacts? 2. Do these measures contribute to remediation efforts, (e.g., preventing or minimizing harm/negative impacts)? 3. If the economic activity is new and has not started yet, is there a remediation plan in place to address potential future losses/negative impacts?
2	Main Principle: No significant losses/negative impacts are caused to other EOs at the time of assessment. Guiding Question: Does the economic activity no longer cause significant losses/negative impacts (residual losses/negative impacts) to other EOs at the time of the assessment? - Residual negative losses/impacts refer to any losses that persist even after various measures have been taken such as compliance with environmental regulations/policies, compliance with relevant internal policies and processes, and/or implementing additional measures beyond what is required by the regulations.
3	Main Principle: If no remedial measures have been taken or if the activity is still detrimental/negative to other EOs, a concrete remedial plan should be established to address the residual harm/negative impact within a certain period of time (e.g. within 5 years). Guiding Questions: 1. Are there planned remedial measures that align with the specified timeframe? 2. Are the remedial efforts and assessments appropriate/proportional based on the scale of business operations and industry standards? 3. Who are the stakeholders directly involved in the supply chain of the economic activity? What actions have been proposed and how do they contribute to the remediation effort (e.g., preventing or minimizing harm/ negative impacts)?

ANNEX

Social Aspects

Note: The fulfillment of the criteria refers to the applicable provisions as stated in **Annex 11**.

A. Social Aspect Criteria for Corporations/Non-MSMEs

No	Social Aspect	General Principle	Criteria
1	Protection and Respect for Human Rights	The entity has policies or guidelines that uphold human rights in the workplace.	Fulfillment of fundamental workers' rights in accordance with ILO Conventions and/or statutory regulations includes: 1) Ensuring freedom of association and effective recognition of the right to collective bargaining. 2) Eliminating all forms of forced or compulsory labor.* 3) Effectively eradicating child labor.* 4) Eliminating discrimination in employment and occupation.* 5) Providing a safe, secure, and healthy working environment.* <i>*) Additional criteria are covered under the social aspects of employment as stated in number 2.</i>
2	Employment includes decent work, prevention of forced labor, protection of women and child labor, as well as human resource development	a. The entity implements practices to maintain occupational health and safety. b. The entity provides equal employment opportunities without discrimination. c. The entity ensures protection of women workers and does not employ underage children.	1) Compliance with Occupational Safety and Health (K3) norms and/or implementation of the Occupational Safety and Health Management System (SMK3). 2) Provision of adequate healthcare services for every worker affected by a Work Accident (KK) or Occupational Disease (PAK), or other illnesses, in accordance with relevant regulations. 3) Ensuring that every worker affected by KK or PAK receives compensation in the form of healthcare services and other forms of compensation in accordance with relevant regulations. Providing protection against discrimination. Providing protection for women workers and child labor.

No	Social Aspect	General Principle	Criteria
		d. The entity maintains a clear and transparent policy outlining the measures taken to prevent and eradicate all forms of exploitation, human trafficking, violence, and harassment across its supply chain activities.	Every worker has the right to be free from exploitation, human trafficking, violence and harassment in the workplace.
		e. The entity ensures fair and decent wages for employees.	Fulfillment is ensured by adhering to the minimum wage.
		f. The entity has policies to safeguard workers' rights, including provisions for social security, healthcare, the right to work, rest, and leave.	1) Every worker/laborer is entitled to employment and health social security. 2) Employers are required to enroll their workers in the Social Security program. 3) Workers/laborers have the right to work, rest, and take leave.
		g. The entity ensures fair treatment for migrant and outsourced workers.	Ensuring fair treatment for migrant workers and outsourced labor (if applicable).
		h. The entity implements a human resource development program including training, skill improvement, and other initiatives.	Providing human resources development programs, including training, skill enhancement, and more.
		The entity has conducted Free, Prior, and Informed Consent (FPIC). FPIC is a principle that grants communities the right to approve or disapprove proposed projects that may affect the land they customarily own, occupy, or use.	1) All potential workplace hazards are managed in accordance with regulations and standards. 2) The company has conducted FPIC and documented the process.
		a. The entity provides employment opportunities to the surrounding community.	Creating employment opportunities for local communities.
		b. The entity implements community and environmental empowerment	Implementing a community and environmental empowerment program around the investment project to support poverty
3	Impact on people living close to the investment projects, including job creation, poverty alleviation, and support for economic growth		

No	Social Aspect	General Principle	Criteria
		programs in connection with its investment projects.	alleviation and economic equality.

Specifically for early retirement of CFPP activities, in addition to fulfilling the three social aspects mentioned above, it must also meet the following criteria:

Have a just transition plan that considers the impacts on stakeholders, ensuring affordability, accessibility, reliability, and feasibility within a reasonable timeframe. The just transition plan includes: 1) Providing advance notice of the CFPP closure agenda at least 1 year in advance or as required by relevant regulations; 2) Engaging in consultations and dialogues with key stakeholders; 3) Committing to conduct environmental and social impact assessment of the CFPP closure on direct supply chain workers, communities, and ecosystems; 4) Reporting and developing plans to minimize the impact of the CFPP closure on the community; 5) Developing a worker transition plan to support assistance and reskilling for affected workers; 6) Considering energy affordability and accessibility aspects in the early stages of decommissioning; and 7) Implementing remediation and reclamation efforts.

B. Social Aspect Criteria for MSMEs

No	Social Aspect	General Principle	Criteria
1	Protection and Respect for Human Rights	The entity has policies or guidelines that uphold human rights in the workplace.	Fulfillment of fundamental workers' rights in accordance with ILO Conventions and/or statutory regulation includes: 1) Ensuring freedom of association and effective recognition of the right to collective bargaining. 2) Eliminating all forms of forced or compulsory labor.* 3) Effectively eradicating child labor.* 4) Eliminating discrimination in employment and occupation.* 5) Providing a safe, secure, and healthy working environment.* *) <i>Additional criteria are covered under the social aspects of employment as number 2.</i>
2	Employment includes decent work, prevention of forced labor, protection of women and child labor, as well as human resource development	a. The entity implements practices to maintain occupational health and safety work. b. The entity provides equal employment opportunities without discrimination. c. The entity ensures protection of women workers and does not employ underage children.	1) Compliance with Occupational Safety and Health (K3) norms and/or implementation of the Occupational Safety and Health Management System (SMK3). 2) Provision of adequate healthcare services for every worker affected by a Work Accident (KK) or Occupational Disease (PAK), or other illnesses, in accordance with relevant regulations. 3) Ensuring that every worker affected by KK or PAK receives compensation in the form of healthcare services and other forms of compensation in accordance with relevant regulations. Providing protection against discrimination. Providing protection for women workers and child labor.

No	Social Aspect	General Principle	Criteria
		d. The entity maintains a clear and transparent policy outlining the measures taken to prevent and eradicate all forms of exploitation, human trafficking, violence, and harassment across its supply chain activities.	Every worker/laborer has the right to be free from exploitation, human trafficking, violence and harassment in the workplace.
		e. The entity ensures fair and decent wages for employees.	The entity ensures decent wages for MSMEs in accordance with the latest Job Creation Law or its amendments, employing two approaches: a minimum of 50% of the province's average consumption and at least 25% above the provincial poverty line.
		f. The entity has policies to safeguard workers' rights, including provisions for social security, healthcare, the right to work, rest, and leave.	1) Every worker/laborer is entitled to employment and health social security. 2) Employers are required to enroll their workers in the Social Security program. 3) Workers/laborers have the right to work, rest, and take leave.
		g. The entity ensures fair treatment for migrant and outsourced workers.	Ensuring fair treatment for migrant workers and outsourced labor (if applicable).
		h. The entity implements a human resource development program encompassing training, skill improvement, and other initiatives.	Providing human resources development programs, including training, skill enhancement, and more.
		a. The entity offers employment opportunities to the surrounding community.	Creating employment opportunities for local communities.
		b. The entity implements community and environmental empowerment programs in relation to investment projects.	Implementing a community and environmental empowerment program around the investment project to support poverty alleviation and economic equality.
3	Impact on people living close to the investment projects, including job creation, poverty alleviation, and support for economic growth		

ANNEX

Use Cases of Indonesia
Taxonomy for Sustainable Finance



A. Use Cases of TSC-Corporation/Non-MSMEs

Electric Power Generation Activities

Context: PT. A is engaged in run-off-river type hydropower generation (PLTA) business activities and intends to seek additional financing for the year of 2024. PT. A uses the TKBI methodology with the TSC approach to assess its hydropower activities.

Example 1:

Step	Company/ Assesor	Assessment Status
1	PT. A has selected an assessment using the TSC approach for EO1–Climate Change Mitigation.	Follow the criteria outlined in the TKBI.
2	TSC for “Green” EO1 TKBI regarding hydropower activities: Generation plant meets criteria 1 and 3, or 2 and 3: 1. The electricity generation facility is a run-of-river; or 2. The electricity generation facility uses a reservoir with a power density >4 W/m²; and 3. Lifecycle emissions from the entire electricity generation facility <100gCO₂e/kWh.	The hydropower activity is a run-of-river type, with lifecycle emissions of 95 gCO₂e/KWh. At this juncture, the activity is classified as “Green” as it meets EO1 criteria.
3	DNSH assessment for the PLTA activity	Based on the assessment results, there is potential for significant harm to EO3, despite the existence of a comprehensive remediation action plan. Meanwhile, there is no potential for significant harm to EO2 and EO4. These hydropower activities may be classified as “Transition” or “Unqualified”, pending remediation action within 5 years
4	The Company provides supporting documentation regarding potential significant losses that will be repaired within 3.5 years from the time of assessment (i.e. must be repaired before 2027).	As the potential for significant losses will be remedied in less than 5 years (the maximum allowed time period for repairing losses), the Activity can now be classified as “Transition”.
5	Social Aspect assessment for the PLTA activity	The assessment results align with the Social Aspect criteria, leading to the interim assessment of the Activity as “Transition”.
Interim Classification		Transition

Step	Company/ Assesor	Assessment Status
6	Within 3.5 years of the initial assessment, the potential harm is assessed as having been remediated.	Therefore, the final assessment of the Activity is classified as “Green”.
Final Classification		Hijau

Example 2:

Step	Company/ Assesor	Assessment Status
1	PT. A has selected an assessment using the technical criteria approach for EO1 – Climate Change Mitigation.	Follow the criteria outlined in TKBI.
2	TSC for “Green” EO1 TKBI regarding hydropower activities: Generation plant meets criteria 1 and 3, or 2 and 3: 1. The electricity generation facility is a run-of-river; or 2. The electricity generation facility is using a reservoir with a power density >4 W/m²; and 3. Lifecycle emissions from the entire electricity generation facility <100gCO₂e/kWh.	The hydropower activity is a run-of-river type and Lifecycle emission of 250 gCO₂e/KWh. At this juncture, the activity is classified as “Transition”.
3	DNSH assessment for the PLTA	Based on the assessment results, there is significant potential harm to EO3, although there is a comprehensive remediation action plan. Meanwhile, there is no potential significant losses to EO2 and EO4. This hydropower activity can be classified as “Transition” or “Unqualified Classification”, pending remediation action within 5 years.
4	The Company provides supporting documentation regarding potential significant losses that being repaired within 3.5 years from the time of assessment (i.e. must be repaired before 2027).	As the potential for significant losses will be remedied in less than 5 years (the maximum allowed time period for repairing losses), the Activity can now be classified as “Transition”.
5	Social Aspect assessment for the PLTA	The assessment results meet the criteria for Social Aspects Social. As a result, the interim assessment of the Activity is “Transition”.
Interim Classification		Transition

Step	Company/ Assesor	Assessment Status
6	Within 3.5 years of the initial assessment, the potential loss is considered to have been overcome	As a result, the final assessment of the activity is "Transition."
Final Classification		Transition

Example 3:

Step	Company/ Assesor	Assessment Status
1	PT. A has selected an assessment using the technical criteria approach for EO1 – Climate Change Mitigation.	Follow the criteria outlined in the TKBI.
2	TSC for "Green" EO1 TKBI regarding hydropower activities: Generation plant meets criteria 1 and 3, or 2 and 3: 1. The electricity generation facility is a run-of-river; or 2. The electricity generation facility is using a reservoir with a power density >4 W/m²; and 3. Lifecycle GHG emissions from the generation of electricity by the entire facilities.	The hydropower activity is a run-of-river type, with lifecycle emissions of 95 gCO₂e/KWh. At this juncture, the activity is classified as "Green" as it meets EO1 criteria.
3	DNSH assessment for the PLTA	Based on the assessment results, there is no potential for significant losses to other EOs. Hence, the Activity Classification at this point is "Green" (DNSH compliant).
4	Social Aspect assessment for the PLTA	The assessment results indicate a violation of one of the Social Aspects. Hence, the final assessment of the Activity is " Unqualified "
Interim Classification		Unqualified

Mining and Quarrying Activities

Context: PT. B operates mining of nickel ores and aims to expand its operations; hence the company needs financing. PT. B uses TKBI with the TSC approach to assess its activities.

Example 1:

Step	Company/ Assesor	Assessment Status
1	PT. B has selected an assessment using the TSC approach for EO1 – Climate Change Mitigation	Follow the criteria outlined in TKBI.
2	TKBI EO1 “Transition” TSC for mining of nickel ores activities includes: - Has a verified/validated emissions reduction roadmap and reduces GHG emissions (lifecycle emissions) by at least 12.5% of Business as Usual by 2030 or based on government regulations; - The Activity meets either of the following criteria: - Reclamation guarantee; - Post-mining guarantee as determined; - Reclamation implementation; and - Reclamation implementation report; - Obtain a minimum Green PROPER rating or fulfill aspects of pollution control, environmental damage, hazardous (<i>Limbah B3</i>) waste management and non-hazardous (<i>Limbah Non-B3</i>) waste management in accordance with the requirements of the Green PROPER criteria; - If the activity uses energy sources and/or energy ≥ 4000 Tons of Oil Equivalent (TOE) per year, it must have evidence of the implementation of energy management in accordance with the regulation of Government Regulation of the Republic of Indonesia No. 33 of 2023 concerning Energy Conservation; and - Receive an award for Achievement in the Implementation of Good Mining Practices or have evidence of Good Mining Practices implementation.	Mining of Nickel ores activities have meet TSC 2, 3, 4, and 5. However, for criteria 1, the emission reduction target set by PT B in the roadmap is 10%. Therefore, the Activity Classification at this point is “Unqualified”.
	Interim Classification	Unqualified

Step	Company/ Assesor	Assessment Status
3	Within 4 years, a reassessment is conducted, yielding the following results: - PT B has reassessed the emission reduction target and revised the emission reduction roadmap (lifecycle emissions) to achieve a reduction of 12.5% from Business as Usual by 2030. The revision has been verified/validated by an independent party. - Within 4 years of the initial assessment, the Activity has complied with DNSH. - The assessment results meet the Social Aspect criteria.	As a result, the final assessment of the Activity is upgraded to "Transition" .
Final Classification		Transition

Example 2:

Step	Company/ Assesor	Assessment Status
1	PT. B has selected an assessment using the TSC approach for EO1 – Climate Change Mitigation.	Follow the criteria outlined in TKBI.
2	TKBI EO1 "Transition" TSC for mining of nickel ores activities includes: 1. Has a verified/validated emissions reduction roadmap and reduces GHG emissions (lifecycle emissions) by at least 12.5% of Business as Usual by 2030 or based on government regulations; 2. The Activity meets either of the following criteria: a. Reclamation guarantee; b. Post-mining guarantee as determined; c. Reclamation implementation; and d. Reclamation implementation report; 3. Obtain a minimum Green PROPER rating or fulfill aspects of pollution control, environmental damage, hazardous (<i>Limbah B3</i>) waste management and non-hazardous (<i>Limbah Non-B3</i>) waste	Mining of nickel ores activities have met TSC 1, 2, 3, 4, and 5. Therefore, the Activity Classification at this point is "Transition".

Step	Company/ Assesor	Assessment Status
	management in accordance with the requirements of the Green PROPER criteria; 4. If the activity uses energy sources and/or energy ≥ 4000 Tons of Oil Equivalent (TOE) per year, it must have evidence of the implementation of energy management in accordance with the regulation of Government Regulation of the Republic of Indonesia No. 33 of 2023 concerning Energy Conservation; and 5. Receive an award for Achievement in the Implementation of Good Mining Practices or have evidence of Good Mining Practices implementation.	
3	DNSH assessment for the mining of nickel ores	Berdasarkan hasil penilaian, tidak Based on the assessment results, there is no potential for significant losses that could affect other EOs. Hence, the Activity Classification at this point is “Transition” (DNSH compliant).
4	Social Aspect assessment for the mining of nickel ores	The assessment results indicate a violation of one of the Social Aspects. Hence, the final assessment of the Activity is “Unqualified”.
	Final Classification	Unqualified

B. Example of Sector-agnostic Decision Tree (SDT) in MSMEs

Company Description	PT C is categorized as a “Medium Enterprise” based on Government Regulation of the Republic of Indonesia No. 7 of 2021 concerning the Ease, Protection, and Empowerment of Cooperatives and Micro, Small and Medium Enterprises. PT C provides Microhydro Power Plant (PLTMH) business that produces <100W power in rural areas to be supplied to the State Electricity Company.
Context	PT C aims to expand its business to other village. For this reason, PT C will apply for new project financing to enhance the capacity of its Microhydro Power Plant (PLTMH).
Sustainability Effort	Implement efforts aligned with Indonesia's Nationally Determined Contributions (NDC) target to achieve Net Zero Emissions (NZE).

	- Identify and address potential environmental impacts associated with the Activity. - Conduct comprehensive due diligence covering technical, management, legal, financial, social, and environmental aspects. - Empower local communities through job creation and implement programs to maintain sedimentation around rivers.. - Establish policies related to occupational safety and health, social security for workers, as well as the protection of human rights and workers' rights.	
User entry point	Which EO is the nature of the Activity most relevant to?	This Activity is related to EO1 because business and operations are involved in the provision of renewable energy (PLTMH), which facilitates the reduction of carbon emissions and contributes to mitigating climate change.
	Which EO(s) is most aligned to the company's strategic focus?	Given the company's target to achieve NZE and focus on the business sector of providing clean energy, this activity is most relevant to EO1.
	EO1 (Climate Change Mitigation) is the primary EO	
SDT EO1 Assessment	Does the activity prevent emissions or help in reducing emissions?	
	<i>Note: To address this question, suggest to develop your own helpful inquiries tailored to your specific requirements, such as the following:</i>	
	How does the Activity avoid or help reduce emissions?	PLTMH exhibits lower greenhouse gas emissions per kWh compared to power plants utilizing fossil fuels.
	Does the Activity avoid locking in high-carbon activity?	Yes. Expanding and enhancing the capacity of PLTMH plays a significant role in combating climate change by serving as a renewable energy source with minimal emissions. The company is committed to achieving NZE through a comprehensive roadmap, which entails reducing GHG emissions across its supply chain and infrastructure in the medium and long term. This strategy involves selecting low-carbon materials and suppliers, as well as integrating new technologies characterized by high efficiency and low emissions.
	Ya, the Activity avoids/reduces GHG emissions.	
DNSH Assessment	Does the Activity avoid causing potential significant harm to other EO(s)? Based on the assessment results, there is potential for significant loss that could impact EO3, while there is no such potential for EO2 and EO4.	
	<i>Note: To answer this question, additional guiding questions may be developed as needed, for example:</i>	
	(EO3) Has the company	Yes

	identified the potential environmental impact associated with EO3?	
	What are the outcomes of the identification of potential environmental impacts?	The identification results indicate negative impacts on habitat and biodiversity in the vicinity of the PLTMH area, attributed to changes in land use
	(EO3) Does this Activity sustain the condition and resilience of the surrounding ecosystem?	The expansion of the PLTMH will involve opening up land along rivers, potentially increasing the risk of soil erosion and disturbing aquatic biota and vegetation.
	No. The activity causes harm to EO3.	
RMT Assessment	Have corrective actions been initiated at the time of the assessment?	Yes, to mitigate this negative impact, PT C has initiated several programs, including: - Land clearing is carried out in stages and limited to the activity site as needed and prevents further land expansion. - The results of land clearing in the form of biomass are placed on the low periphery of the area which functions as an erosion control/retainer to inhibit surface flow carrying eroded soil particles. - Creating temporary settling ponds and drainage channels or catchment channels that match the volume of runoff water. - Conducting reforestation in areas previously cleared for land use that require replanting and in the surrounding areas. - Implementing and optimizing community development and empowerment programs.
	At the time of assessment, does the activity no longer cause significant harm to other EOs?	Yes. Harm has been mitigated. Remedial efforts have been made and will be monitored regularly.
Social Aspect Assessment	Does the Company meet minimum national standards relating to human rights, forced labor, child labor and impact on people living close to investments?	Yes, PT C has adhered to minimum national standards concerning human rights, forced labor, child labor, and its impact on communities residing around its investments. PT C's operational activities comply with the following minimum national standards/regulations: - Respect for human rights (as stipulated in the 1945 Constitution of the Republic of Indonesia). - Prevention of forced labor and child labor (as outlined in the Labor Law of 2003, as amended

		by Law Number 11 of 2020 concerning Job Creation). - Provision of decent wages for workers (as mandated for MSMEs by Law Number 11 of 2020 concerning Job Creation). - Implementation of measures and policies to ensure occupational health and safety practices within the workplace. - Implementation of community and environmental empowerment programs in the vicinity of investment locations.
	Final Classification	Green

C. Use of Proceeds for Consumptive Purposes

Background Context

In a global context, the taxonomy of sustainable finance can be used by any relevant parties to identify and classify economic activities based on their impact on sustainability measures. Therefore, TKBI also applies to various uses of consumptive proceeds, including consumer credit/financing, insurance for consumer products, and similar financial instruments.

Based on data from the Indonesian Banking Surveillance Report for the Third Quarter of 2024⁴⁵, as of Q3 2024, Commercial Bank Credit, categorized by its type of use, was dominated by productive credit (72.53%). This consisted of working capital credit (KMK) at 45.30% and investment credit (KI) at 27.23%, while consumer credit (KK) accounted for 27.47%. Given this share, consumer credit can also contribute to sustainability efforts if directed toward goals aligned with the principles of a sustainable economy. Some ways in which consumer credit/financing, insurance for consumer products can support sustainability initiatives include:

- Promoting sustainable consumption:** consumer credit/financing, insurance for consumer products can be leveraged to encourage the purchase of environmentally friendly products, such as:
 - Electric vehicles: Facilitates the purchase and insurance of low-emission vehicles, helping to reduce pollution and support the transition to clean energy.
 - Sustainable home financing: Supports housing loans (*Kredit Kepemilikan Rumah/KPR*), Home Construction Loan (*Kredit Pembangunan Rumah/KBR*), and Home Renovation Loan (*Kredit Renovasi Rumah/KRR*), as well as related home insurance, to promote eco-friendly housing.
 - Environmentally friendly products: Enables the purchase of energy-efficient household products and green technology, such as solar panels, high-efficiency appliances, and renewable energy-based heating/cooling systems.
- Financial inclusion and local economy reinforcement:** Well-managed consumer credit/financing, insurance for consumer products contributes to financial inclusivity by providing communities with access to resources that support sustainable efforts. Consumer credit/financing used for purchasing local goods and services can promote more sustainable local economic growth. By increasing the consumption of locally produced goods, communities help reduce the carbon footprint associated with transporting products from other regions or abroad.
- Financial literacy improvement:** consumer loan/financing, insurance for consumer products can raise awareness about the importance of choosing environmentally friendly and sustainable

⁴⁵<https://ojk.go.id/id/kanal/perbankan/data-dan-statistik/laporan-profil-industri-perbankan/Documents/Laporan%20Surveillance%20Perbankan%20Indonesia%20-%20Triwulan%20III%202024.pdf>

products. Over time, this shift in consumer preferences can influence the market, encouraging companies to prioritize sustainability in the production of goods and services.

TKBI facilitates the assessment of consumer credit/financing, insurance for consumer products and similar financial activities, by evaluating the sustainability aspects of the “purchased product”:

- If the product meets the criteria for “Green” or “Transition” Environmental Objectives (EO), it can be categorized accordingly.
- However, the Essential Criteria (EC) assessment at the entity level is not conducted, as the loan is intended for individual or non-individual activities for consumptive purposes.

This approach differs from the TKBI assessment for the productive use of proceeds, where EO is assessed at the activity level, and EC is assessed at both the Activity and entity levels.

Point of View of TKBI Assessment Approach for Loan/Financing/Insurance for Consumptive Products

Perspective of Consumer Loan/Financing	EO-related assessment	EC Assessment	Description
Financial Services Institutions	√ Assessment is only from the “product” side, without looking at the type of debtor (individual/non-individual)	N/A No EC assessment performed	“Green” or “Transition” Portfolio

The application of the consumptive segment can currently be applied to, among others, loan/financing/insurance or similar financial products for housing, motor vehicles, and the installation of renewable energy devices (e.g., rooftop solar power systems/PLTS). Moving forward, this application is expected to expand in line with growing awareness of climate change and the increasing drive to allocate funds toward sustainable projects and consumption.

Example of TSC-Corporate for Consumer Credit/Financing

A. Housing Loan (*Kredit Kepemilikan Rumah/KPR*)

Context:

- Bank XYZ has a consumer credit/financing portfolio for Home Ownership Loan (KPR) provided to Debtor Mr. A.
- It was confirmed that Debtor A purchased a house in a residential area certified as a Green Building with a “*Utama*” rating, in accordance with the Regulation of the Minister of Public Works and Housing Number 21 of 2021 on Green Building Performance Assessment. Additionally, the property is equipped with Building Plan Approval (PBG) and Function-Worthy Certificate (SLF).



Figure 1 Illustration of Consumer Loan/Financing

Steps	Company/Assessor	Assessment Status
1	Bank XYZ establishes an assessment using the technical criteria approach for EO1 – Climate Change Mitigation	Follow the criteria set out in TKBI.
2	TSC “Green” EO1 TKBI for Real Estate/Residential Area activities, meets/has: 1. Building Plan Approval (PBG); and 2. Function-worthy Certificate (SLF); and 3. The building has been certified: a. BGH certification with a “Utama” rating; or b. International certification achieving “advanced level of certification” for climate change mitigation purposes, including in the energy category.	The assessment is carried out from the side of the “product” purchased by the consumer. • If the product meets the criteria for “Green” or “Transition” Environmental Objectives, it can be categorized accordingly as “Green” or “Transition.” • The Essential Criteria (EC) assessment at the entity level is not conducted, as the loan is intended for the debtor’s consumptive activities. Debtor Mr. A purchased a house that already had Building Plan Approval (PBG) and Function-worthy Certificate (SLF) and is located in a residential area certified as a Green Building (BGH) with a “Utama” rating. Therefore, the Housing Loan (KPR) in this case study can be classified as “Green” since it meets the “Green” criteria for residential buildings, having been certified as a Green Building with a <i>Utama</i> ranking.

Steps	Company/Assessor	Assessment Status
	Interim Classification	Green
3	A re-evaluation will be carried out (according to the validity period of the BGH and SLF certificates) within 5 years.	Based on the assessment results, the residential area received a “ <i>Utama</i> ” rating for BGH. Therefore, the final classification of the activity is “Green”.
	Final Classification	Green

B. Home Insurance

Context:

- PQR Insurance Company has a portfolio of home insurance products, with policyholder Mr. A, who obtained a KPR consumer loan from Bank XYZ.
- It was confirmed that Mr. A purchased a house in a residential area certified as a Green Building with a “*Utama*” rating based on the Regulation of the Minister of Public Works and Housing Number 21 of 2021 concerning the Green Building Performance Assessment. Additionally, the house is equipped with Building Plan Approval (PBG) and Function-worthy Certificate (SLF).

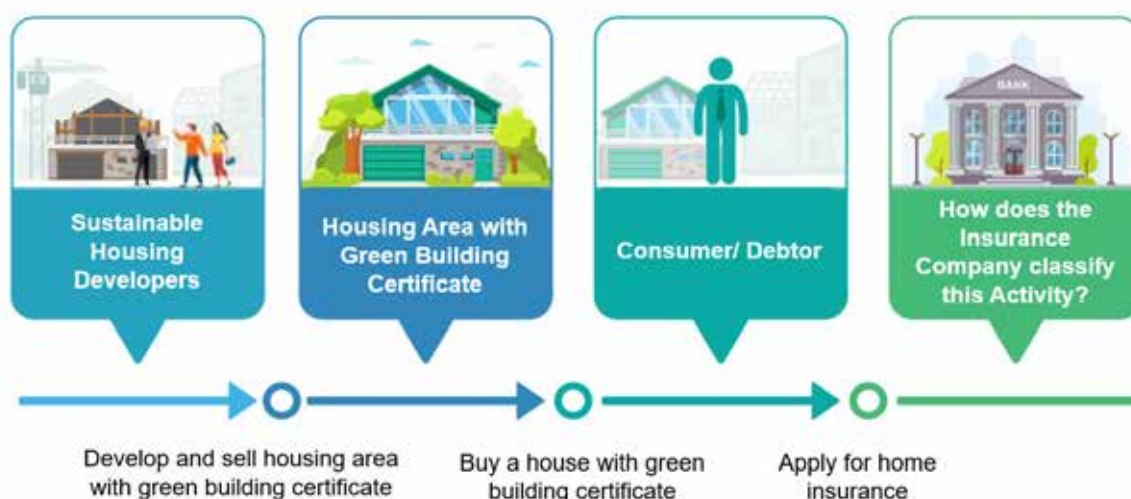


Figure 2 Illustration of the Insurance for House/Residence

Steps	Company/Assessor	Assessment Status
1	PQR Insurance Company establishes an assessment using the technical criteria approach for EO1 – Climate Change Mitigation	Follow the criteria set out in TKBI.
2	TSC “Green” EO1 TKBI for Real Estate/Residential Area activities, meets/has: 1. Building Plan Approval (PBG); and 2. Function-worthy certificate (SLF); and 3. The building has been certified:	The assessment is carried out from the side of the “product” purchased by the consumer. • If the product meets the criteria for “Green” or “Transition” Environmental Objectives, it can be

Steps	Company/Assessor	Assessment Status
	a. BGH certification with a "<i>Utama</i>" rating; or a. International certification achieving "advanced level of certification" for climate change mitigation purposes, including in the energy category.	categorized accordingly as "Green" or "Transition." • The Essential Criteria (EC) assessment at the entity level is not conducted, as the loan is intended for the debtor's consumptive activities. Debtor Mr. A purchased a house that already had Building Plan Approval (PBG) and Function-worthy Certificate (SLF) and is located in a residential area certified as a Green Building (BGH) with a "<i>Utama</i>" rating. Therefore, the Home Insurance in this case study can be classified as "Green" since it meets the "Green" criteria for residential buildings, having been certified as a Green Building with a <i>Utama</i> ranking.
	Interim Classification	Green
3	A re-evaluation will be carried out (according to the validity period of the BGH and SLF certificates) within 5 years.	Based on the assessment results, the residential area received a "<i>Utama</i>" rating for BGH. Therefore, the final classification of the activity is "Green."
	Final Classification	Green

C. Car Financing (*Kredit Kendaraan Bermotor/KKB*)

Context:

- ABC Financing Company provides a consumer loan/financing to debtor Mr. JS.
- Mr. JS purchased a battery electric vehicle (BEV) with zero direct (tailpipe) CO₂ emissions.

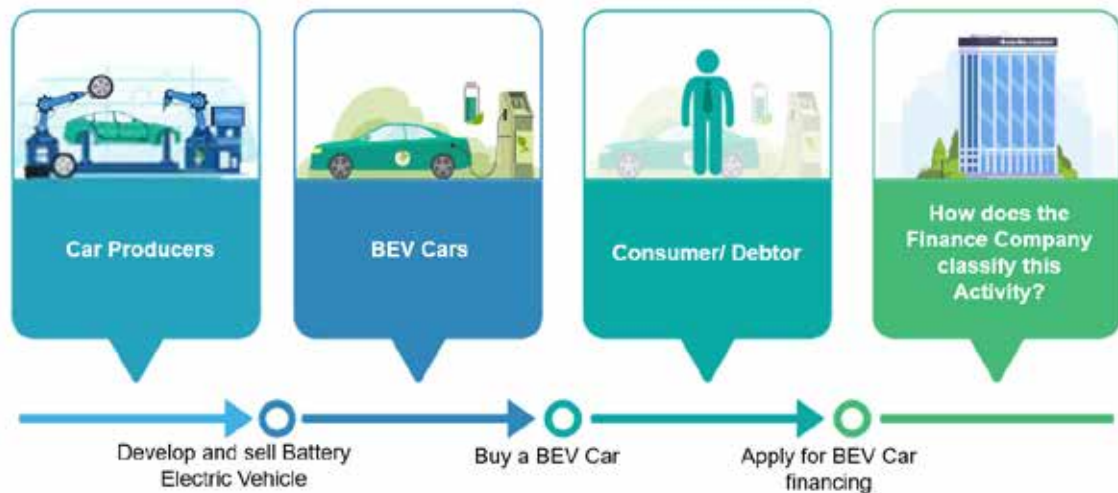


Figure 3 Illustration of Consumer Financing for Motor Vehicles

Steps	Company/Assessor	Assessment Status
1	ABC Financing Company establishes an assessment using the technical criteria approach for EO1 – Climate Change Mitigation	Follow the criteria set out in TKBI.
2	In TKBI, Battery Electric Vehicle (BEV) products fall under the activity “Transport by motorbikes, passenger cars, and light commercial vehicles” within the Transportation & Storage Sector, with the TSC classified as “Green” under Environmental Objective 1 (EO1) of TKBI: 1. Activity must meet the following criteria: a. For vehicles in categories M1 and N1: i. Until 31 December 2025, CO₂ emissions must be ≤50 g CO₂e/v-km ii. Starting 1 January 2026, CO₂ emissions must be zero direct tailpipe; or b. For category L vehicles, zero direct tailpipe CO₂ emissions; and	The assessment is carried out from the side of the “product” purchased by the consumer. • If the product meets the criteria for “Green” or “Transition” Environmental Objectives, it can be categorized accordingly as “Green” or “Transition.” • The Essential Criteria (EC) assessment at the entity level is not conducted, as the loan is intended for the debtor’s consumptive activities. Mr. JS purchased a Battery Electric Vehicle (BEV) with zero direct (tailpipe) CO₂ emissions. Therefore, the Financing in this case study can be classified as “Green”, as it meets the “Green” criteria of 0 gCO₂e/v-km CO₂ emissions;

Steps	Company/Assessor	Assessment Status
	2. The vehicle is not dedicated to transporting fossil fuels.	
	Final Classification	Green

D. Car Insurance

Context:

- VWX Insurance Company has a portfolio of car insurance products with policyholder Mr. JS, who received car loans from ABC Financing Company.
- Mr. JS purchased a Battery Electric Vehicle (BEV) with zero direct (tailpipe) CO₂ emissions.

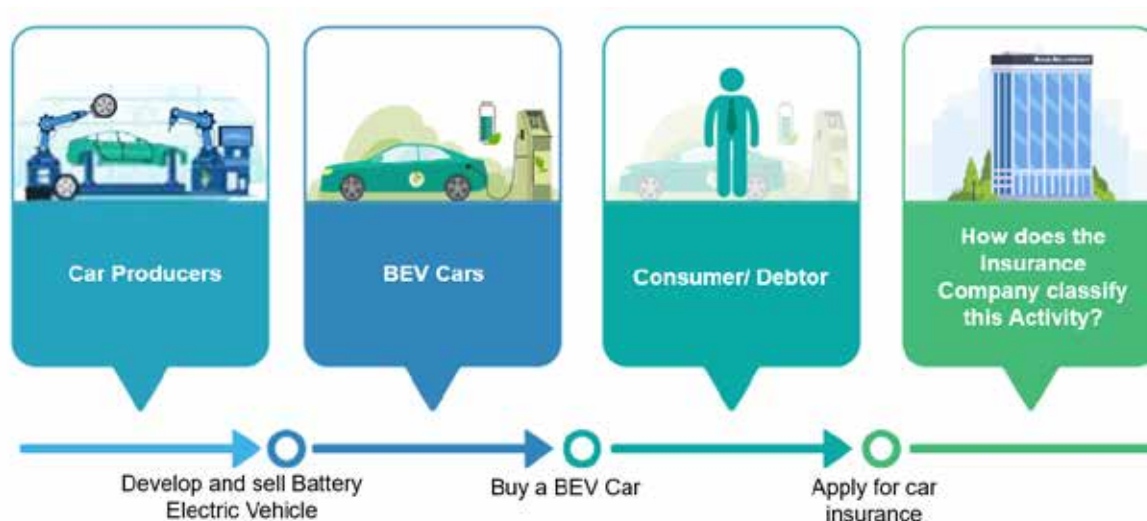


Figure 4 Illustration of Insurance for Car Insurance

Steps	Company/Assessor	Assessment Status
1	VWX Insurance Company establishes an assessment using the technical criteria approach for EO1 – Climate Change Mitigation	Follow the criteria set out in TKBI.
2	In TKBI, Battery Electric Vehicle (BEV) products fall under the activity “Transport by motorbikes, passenger cars, and light commercial vehicles” within the Transportation & Storage Sector, with the TSC classified as “Green” under Environmental Objective 1 (EO1) of TKBI: 1. Activity must meet the following criteria:	The assessment is carried out from the side of the “product” purchased by the consumer. • If the product meets the criteria for “Green” or “Transition” Environmental Objectives, it can be categorized accordingly as “Green” or “Transition.” • The Essential Criteria (EC) assessment at the entity level is not conducted, as the loan is intended for the debtor’s consumptive activities.

Steps	Company/Assessor	Assessment Status
	a. For vehicles in categories M1 and N1: i. Until 31 December 2025, CO₂ emissions must be ≤50 g CO₂e/v-km ii. Starting 1 January 2026, CO₂ emissions must be zero direct tailpipe; or b. For category L vehicles, zero direct tailpipe CO₂ emissions; and 2. The vehicle is not dedicated to transporting fossil fuels.	Mr. JS purchased a Battery Electric Vehicle (BEV) with zero direct (tailpipe) CO ₂ emissions. Therefore, the insurance policy in this case study can be classified as “Green”, as it meets the “Green” criteria of 0 gCO ₂ e/v-km CO ₂ emissions.
	Final Classification	Green

E. Loan for PLTS ATAP (Rooftop Solar-Power System)

Context:

- Bank MNO has a consumer loan for Rooftop Solar Power Plants to debtor B.
- Debtor B installs *PLTS Atap* for residential homes.

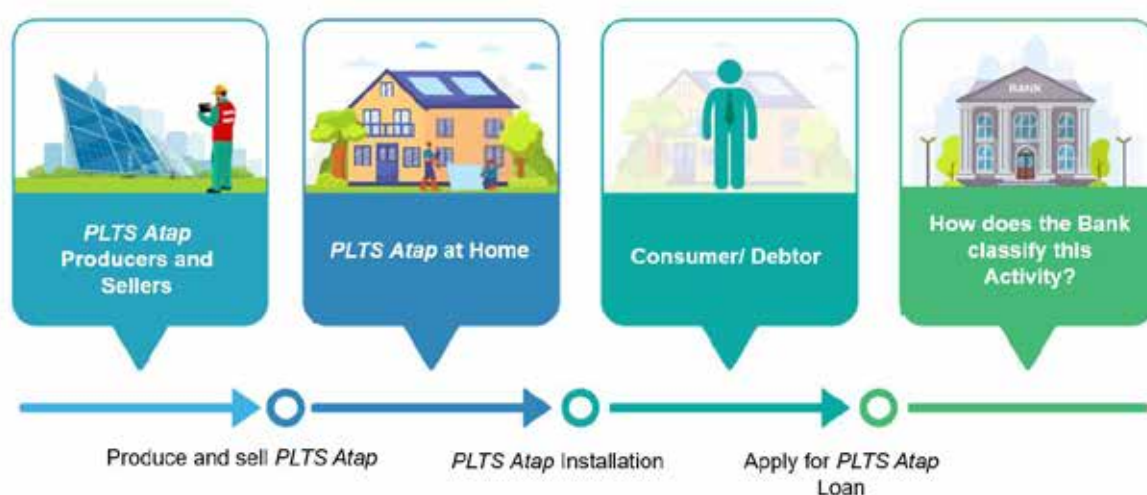


Figure 5 Illustration of Loan for *PLTS Atap*

Steps	Company/Assessor	Assessment Status
1	MNO Bank establishes an assessment using the technical criteria approach for EO1 – Climate Change Mitigation	Follow the criteria set out in TKBI.

Steps	Company/Assessor	Assessment Status
2	In TKBI, PLTS Atap products fall under the “Electrical Installation” activity within the Construction & Real Estate sector, classified as “Green” under TSC EO1 TKBI: If the Installation, Maintenance, and Repair Activities for New and Renewable Energy are part of a residential building: 1. installation, maintenance, and repair of solar photovoltaic systems and supporting technical equipment; or 2. installation, maintenance, and repair of solar hot water panels and supporting technical equipment; or 3. activities involving the installation, maintenance, repair, and upgrading of heat pump systems to advance the use of renewable energy for heating and cooling purposes; or 4. installation, maintenance, and repair of wind turbines and supporting technical equipment; or 5. installation, maintenance, and repair of solar collectors and their supporting technical equipment; or 6. installation, maintenance, and repair of heat or electricity storage units and their supporting technical equipment; or 7. installation, maintenance, and repair of high-efficiency micro combined heat and power plants; or 8. installation, maintenance, and repair of heat exchanger/recovery systems.	The assessment is carried out from the side of the “product” purchased by the consumer. • If the product meets the criteria for “Green” or “Transition” Environmental Objectives, it can be categorized accordingly as “Green” or “Transition.” • The Essential Criteria (EC) assessment at the entity level is not conducted, as the credit is intended for the debtor’s consumptive activities. Debtor B installs Rooftop PLTS for a residential house that meets the TSC “Green” EO1 for Electrical Installation. Therefore, the loan in this case study can be classified as “Green”.
	Final Classification	Green

ANNEX

Public Disclosure Program for
Environmental Compliance
(PROPER)



A. PROPER Highlights

PROPER is an evaluation of the performance of the person in charge of business and/or activities in the field of environmental management conducted by the Ministry of Environment and Forestry. PROPER is regulated in the Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 1 of 2021 concerning the Company Performance Rating Assessment Program in Environmental Management. PROPER is an important environmental performance assessment and reporting program to encourage companies in Indonesia to improve environmental performance and be more environmentally responsible. PROPER has various benefits, including improving corporate environmental performance, increasing corporate social responsibility, increasing corporate transparency and accountability, increasing healthy business competition, and encouraging innovation in environmental management. and encourages innovation in environmental management.

The PROPER assessment criteria comprise two categories:

- **Compliance assessment criteria:** These assess whether the company meets the requirements of environmental laws and regulations.
- **Beyond compliance assessment criteria:** These evaluate whether the company exceeds statutory regulations by implementing advanced environmental management practices. These criteria are adaptable to technological advancements, best practices in environmental management, and global environmental concerns.

The PROPER assessment results are stated through color rankings:

- **Gold:** Demonstrates consistent environmental excellence in production and service processes, alongside ethical and responsible business practices towards society.
- **Green:** Implements environmental management practices beyond regulatory requirements by establishing an environmental management system, efficiently utilizing resources, and fulfilling social responsibilities.
- **Blue:** Adheres to environmental management requirements as stipulated by applicable laws and regulations.
- **Red:** Engages in environmental management efforts but does not fully comply with legislative requirements.
- **Black:** Intentionally engages in actions or omissions resulting in environmental pollution or damage, violates applicable laws and regulations, and/or neglects administrative sanctions.

Further information about PROPER is available on the website of the Ministry of Environment and Forestry of the Republic of Indonesia (<https://proper.menlhk.go.id/proper/>).

B. Aspects of Pollution Control, Environmental Damage, Waste Management, and Non-Hazardous and Toxic (B3) Waste Management in Accordance with Green PROPER Criteria Requirements

Based on the Green PROPER criteria, the following aspects of pollution control, environmental damage, waste management, non-hazardous and toxic (B3) waste management are crucial:

1. Obtaining Environmental Approval (*Surat Pernyataan Pengelolaan Lingkungan* or SPPL)

2. Air Pollution Control

For activities with potential negative impacts related to air pollution, compliance with the following provisions is necessary:

- a. Possessing Technical Approval to meet Emission Quality Standards (for required businesses and/or activities);
- b. Conducting monitoring of emissions and/or ambient air;
- c. Compliance with Emission Quality Standards;
- d. Employment of human resources competent to be responsible for controlling air pollution;
- e. Employment of human resources competent to be responsible for the operational operations of air pollution control installations;
- f. Documentation and implementation of an Environmental Management System; and
- g. Allocation of funds for maintaining and operating emission control equipment.

3. Water Pollution Control

If the activity has potential negative impacts related to water pollution, compliance with the following provisions is necessary:

- a. Personnel Competency
 - 1) There must be a certified person in charge of Water Pollution Control; and
 - 2) There should be a certified person in charge of wastewater treatment operations.
- b. Compliance with Permits
 - 1) Obtain technical approval to meet wastewater quality standards, which may include:
 - Discharge of wastewater into surface water bodies;
 - Discharge of wastewater into certain formations;
 - Use of wastewater on land for watering or washing;
 - Utilization of wastewater in the soil to add soil nutrients;
 - Use of wastewater in certain formations to prevent seawater intrusion;
 - Use of wastewater in certain formations for groundwater recharge;
 - Utilization of wastewater in certain formations for infiltration; and/or
 - Discharge of wastewater into the sea.
 - 2) Dispose of wastewater according to the provisions outlined in the technical agreement to meet wastewater quality standards;
 - 3) Utilize wastewater in accordance with the provisions outlined in the technical agreement to meet wastewater quality standards; and
 - 4) Ensure all wastewater outlets and outfalls have received technical approval.
- c. Adherence to Compliance and Monitoring Points:
 - 1) Monitor all compliance points for wastewater disposal and/or utilization as per technical approval to meet wastewater quality standards;
 - Manual for those required manual monitoring; or

- Automatic for compliance points for businesses and/or activities that are required to conduct automatic monitoring.
 - 2) Monitor all monitoring points in surface water bodies and/or groundwater according to technical approval to meet wastewater quality standards.
- Notes:
- Businesses and/or activities engaging in processing with third parties (integrated IPAL) must submit proof of cooperation.
 - Businesses and/or activities utilizing wastewater for main, supporting processes, and/or side products must submit a water balance statement in the environmental approval/environmental document.
- d. Compliance with Parameters:
- 1) Monitor all wastewater parameters specified in the technical agreement to meet wastewater quality standards; and
 - 2) Monitor all water parameters specified in the technical agreement to meet wastewater quality standards.
- e. Compliance with Data Reporting Requirements:
- 1) Report monthly wastewater monitoring data.
 - 2) Report daily wastewater monitoring results for parameters requiring daily reporting.
 - 3) Report the results of water pollution load calculations for businesses and/or activities as required.
- f. Adherence to Quality Standards:
- Ensure that reported monthly and daily monitoring results comply with the quality standards stipulated in the technical agreement for meeting wastewater quality standards.
- g. Compliance with Technical Provisions:
- 1) Identify all wastewater produced;
 - 2) Identify sources of activities producing wastewater and their processing;
 - 3) Record raw materials and actual production;
 - 4) Fulfill technical requirements for industries that require sparing;
 - 5) Fulfill technical requirements for the palm oil industry utilizing wastewater for soil application or adding soil nutrients;
 - 6) Fulfill administrative sanctions within the specified time limit;
 - 7) Fulfill all PPA technical provisions, including:
 - Completing alignment points with names and coordinates;
 - Separating wastewater channels from rainwater runoff;
 - Ensuring watertight wastewater channels;
 - Installing discharge measuring devices;
 - Utilizing registered laboratory services;
 - Avoiding dilution.
 - 8) Fulfilling technical requirements for the palm oil industry using wastewater for application or adding soil nutrients, including:
 - Conducting activities on land other than peatland;
 - Conducting activities on land with permeability between 1.5 and 15 cm/hour;
 - Avoiding activities on land with groundwater depth < 2 meters;

- Preventing runoff water from entering rivers;
 - Avoiding wastewater dilution;
 - Avoiding wastewater disposal outside designated locations;
 - Avoiding wastewater discharge into rivers;
- 9) Fulfilling technical requirements for industries that require sparring, including:
- Completing compliance points with names and coordinates;
 - Meeting calibration requirements;
 - Adhering to measuring range provisions;
 - Ensuring measurement accuracy as per applicable regulations.

4. Water Source Maintenance (for the Bottled Drinking Water industry)

Activities must comply with the following conditions:

- a. Compliance with Ownership of Surface/Ground Water Extraction Permits;
- b. Compliance with Ownership of Area/Utilization Zone Maps;
- c. Compliance with Ownership of Utilization Area Studies;
- d. Compliance with the Water Conservation Program;
- e. Compliance with the Fulfillment of Permit Conditions;
- f. Provisions for Ownership of Monitoring Wells;
- g. Compliance with Monitoring and Reporting;
- h. Compliance with Ground Water Level and Discharge Measurement Data; and
- i. Compliance with Operation Compliance with Water Source Treatment SOPs.

5. Controlling Land Damage

If the Activity has the potential for negative impacts related to land damage, it is necessary to comply with the following provisions:

- a. Implementation of the provisions in the Environmental Agreement, especially in the following aspects:
 - 1) Land clearing;
 - 2) Stripping topsoil;
 - 3) Stripping overburden;
 - 4) Mining;
 - 5) Hoarding; and
 - 6) Post-mining.
- b. Have the following documents:
 - 1) Map of plans and realization of mining activities;
 - 2) Spatial data on the realization of mining activities;
 - 3) Matrix of plans and realization of mining activities;
 - 4) Remote sensing data of mining concession areas;
 - 5) Cross-section map approved by management;
 - 6) Recommendations for feasibility study documents;
 - 7) Geotechnical studies;
 - 8) Standard Operating Procedures (SOP) for measuring slope stability;

- 9) Continuous monitoring of ground movements;
 - 10) SOP for tier formation;
 - 11) Puddle photos;
 - 12) Results and photos of puddle power of hydrogen (pH) measurements;
 - 13) Study of rocks with the potential to form acid mine drainage;
 - 14) SOP for handling rocks with the potential to form acid mine drainage;
 - 15) Technical drawings and photographs of drainage system facilities;
 - 16) Technical drawings and photos of terracing;
 - 17) Technical drawings and photos of bunds;
 - 18) Technical drawings and photos of cover crops (cover cropping);
 - 19) Technical drawings and photos of sediment trap ponds;
 - 20) Layout of the water management map from the activity location to the settling pond or Waste Water Management Installation (IPAL);
 - 21) Photos of slopes;
 - 22) Location map of vital public facilities (SUTT or SUTET, schools, hospitals, markets, settlements, and other community activity locations);
 - 23) Recommendation sheet on the feasibility study or AMDAL stating that the location's distance to vital public facilities is safe;
 - 24) Emergency response system (emergency response facilities and emergency response handling SOPs); and
 - 25) Hydrogeological studies.
- c. Fulfill the following management aspects:
 - 1) Planning in the form of maps and remote sensing; and
 - 2) Realization of schedule (area per assessment period), progress of area (realization of area per quarter), as well as maintaining continuity of realization stages.
 - d. Fulfill the following technical aspects:
 - 1) Geotechnical Stability in the form of landslide potential assessment;
 - 2) Potential polluting rocks in the form of efforts to handle rocks that have the potential to pollute the environment;
 - 3) Control erosion by having erosion control facilities, monitoring the condition of erosion control facilities, and having mechanisms if there are indications of erosion;
 - 4) Successful revegetation; and
 - 5) Minimize the risk of disasters to vital settlements and infrastructure and/or disasters to water sources.

6. Management of Hazardous and Toxic (B3) Waste

If the activity has potential negative impacts related to B3 Waste, it is necessary to comply with the following provisions:

- a. All B3 waste generated and/or potentially generated must be identified, codified, and its management recorded;
- b. Quarterly online B3 Waste management reporting must be conducted via the page <http://simpler.menlhk.go.id>, using the SIRAJA LIMBAH B3 application;
- c. Electronic Receipt (TTE) must be obtained quarterly via the page <http://simpler.menlhk.go.id>, using the SIRAJA LIMBAH B3 application;
- d. B3 Waste storage activities must be carried out with accompanying permits or permits in

- the renewal process;
- e. Activities for collecting, utilizing, processing, stockpiling, dumping, and/or managing B3 waste in a certain way must be accompanied by a permit or a permit in the process of being extended;
 - f. All required provisions and requirements (100%) in:
 - 1) Temporary storage permit;
 - 2) Collection permit;
 - 3) Utilization permit;
 - 4) Processing permit;
 - 5) Landfill permit; and/or
 - 6) Dumping permit must be fulfilled
 - g. Personnel responsible and competent in B3 Waste Management must be employed;
 - h. No open burning/open dumping activities are permitted;
 - i. A plan document for the restoration of environmental functions, management of handling contaminated land, or implementation of cleanup and restoration of hazardous waste contaminated land must be in accordance with statutory regulations;
 - j. All obligations in *Surat Status Penyelesaian Lahan Terkontaminasi* or SSPLT must be fulfilled.
 - k. The type and amount of B3 waste must be managed according to the provisions;
 - l. B3 Waste Balance must be maintained according to the assessment period;
 - m. If the B3 Waste management is carried out by the producing party to the B3 Waste collector:
 - 1) The producer must hand over the B3 waste to a licensed collector;
 - 2) The producer must hand over the B3 waste to the collector in accordance with the scope of the permit held;
 - 3) The producer must have:
 - Cooperation contracts with collectors;
 - A copy of the cooperation contract between the collector and the user/processor and/or landfill of the type of B3 waste produced; and
 - A copy of the permit of the third party final manager (utilizer/processor and/or landfill) of B3 Waste.
 - n. If the B3 Waste management is carried out by the producer to the processor, user, and/or landfill:
 - 1) Producers must hand over B3 Waste to licensed processors/utilizers and/or landfills;
 - 2) Producers must hand over B3 Waste to processors/utilizers and/or landfills in accordance with the scope of the permit held;
 - 3) The producer must have a cooperation contract with the processor/utilizer and/or stockpile.
 - o. If the B3 Waste management is carried out by the producer to a B3 Waste transportation service:
 - 1) The producer must hand over the B3 waste to the transporter who has:
 - Transportation permit and supervision card from the Ministry of Transportation of the Republic of Indonesia; and
 - Letter of recommendation from the Ministry of Environment and Forestry of the Republic of Indonesia.
 - 2) The producer must hand over the B3 waste to the transporter in accordance with the

scope of permits and recommendations held;

- 3) Transport equipment used by the carrier:
 - Must be in accordance with recommendations and permits;
 - Must have a location tracking device (GPS Tracking);
 - Must have implemented electronic manifests; and
 - Must have valid environmental pollution insurance.
- 4) Transport routes must be in accordance with the supervision card;
- 5) The producer must have a cooperation contract with:
 - Carrier; and
 - Collector/utilizer/processor and/or hoarder.
- p. If the management of B3 Waste is carried out by a Third Party, then the B3 Waste electronic manifest must be implemented.
- q. Fulfilled 100% of the technical provisions regarding the Emergency Response System for Hazardous Waste Management. Hazardous Waste Management System

7. Management of Non-B3 Waste

If the activity holds the potential for negative impacts related to non-B3 waste, it is imperative to manage non-B3 waste in accordance with the provisions stipulated in the Ministerial Decree.

8. Beyond Compliance

Provide documentation detailing:

- a. Implementation of life cycle assessment;
- b. Environmental management system;
- c. Implementation of an environmental management system for resource utilization in the following areas:
 - 1) Energy efficiency;
 - 2) Emission reduction;
 - 3) Water efficiency and reduction of water pollution load;
 - 4) Reduction and utilization of LB3;
 - 5) Reduction and utilization of non-B3 waste; and
 - 6) Protection of biodiversity.
- d. Community empowerment;
- e. Disaster response; and
- f. Social innovation

Notes:

Relevant evidence may include copies of certificates, awards, references supporting the data used in the form, photos, study results, and calculations supporting the numbers or graphs used in the form.

C. Aspects of Pollution Control, Environmental Damage, Waste Management, and Non-Hazardous and Toxic (B3) Waste Management in Accordance with Blue PROPER Criteria Requirements:

Aspects of pollution control, environmental damage, hazardous waste management and non-hazardous waste management in accordance with Blue PROPER criteria requirements:

1. Obtaining Environmental Approval (*Surat Pernyataan Pengelolaan Lingkungan* or SPPL)

2. Air Pollution Control:

If the activity has the potential for negative impacts related to air pollution, it is necessary to adhere to the following provisions:

- a. Obtain Technical Approval to meet Emission Quality Standards (for businesses and/or activities requiring it).
- b. Conduct monitoring of emissions and/or ambient air.
- c. Adhere to Emission Quality Standards.
- d. Employ personnel with the competence to oversee air pollution control.
- e. Employ personnel with the competence to manage the operational aspects of air pollution control installations.
- f. Develop and implement an Environmental Management System.
- g. Allocate resources for the maintenance and operation of emission control equipment.

3. Water Pollution Control

If the activity has potential negative impacts related to water pollution, compliance with the following provisions is necessary:

- a. Personnel Competency:
 - 1) Employ a certified individual responsible for water pollution control;
 - 2) Appoint certified personnel to oversee wastewater treatment operations
- b. Compliance with permits:
 - 1) Obtain technical approval to meet wastewater quality standards (for businesses and activities requiring it), which may include technical approval for:
 - Discharge of wastewater into surface water bodies;
 - Discharge of wastewater into specific formations;
 - Use of wastewater for land irrigation or washing;
 - Utilization of wastewater for soil nutrient enhancement;
 - Use of wastewater in specific formations to prevent seawater intrusion;
 - Use of wastewater in specific formations for groundwater replenishment;
 - Utilization of wastewater in certain formations for infiltration;
 - Discharge of wastewater into the sea.
 - 2) Ensure disposal is in accordance with the provisions outlined in the technical agreement to meet wastewater quality standards;
 - 3) Utilize wastewater in alignment with the stipulations set forth in the technical agreement to meet wastewater quality standards;
 - 4) Ensure all wastewater outlets and outfalls are covered by technical approval
- c. Adherence to Compliance Points and/or Monitoring Points:
 - 1) Monitor all compliance points for the disposal and/or utilization of wastewater in accordance with technical approval to meet wastewater quality standards by:

- Manual monitoring for those requiring manual oversight; or
- Automatic compliance points for businesses and activities mandated to conduct automatic monitoring;
- Monitor all monitoring points in surface water bodies and/or groundwater as per technical approval to meet wastewater quality standards.

Notes:

- Businesses and activities engaging in processing for third parties (integrated IPAL) must provide evidence of collaboration with third parties,
- Businesses and activities utilizing wastewater for primary, ancillary processes, and/or by-products must furnish a water balance (documented in the environmental approval/environmental document).

d. Compliance with Parameters:

- 1) Monitor all wastewater parameters outlined in the technical agreement to meet wastewater quality standards; and
- 2) Monitor all water parameters specified in the technical agreement to meet wastewater quality standards.

e. Compliance with Reporting Data for Each Parameter:

- 1) Provide monthly reports on wastewater monitoring results;
- 2) Submit daily reports on wastewater monitoring results for parameters requiring daily monitoring; and
- 3) Report the findings of water pollution load calculations for businesses and activities as required.

f. Adherence to Quality Standards:

The reported monthly and daily monitoring results are in compliance with the quality standards stipulated in the technical agreement for fulfilling wastewater quality standards.

g. Compliance with Technical Provisions:

- 1) Identification of all wastewater produced;
- 2) Identification of the sources of activities producing wastewater and their processing;
- 3) Recording of raw materials and actual production;
- 4) Fulfillment of technical requirements for sparing for types of industries requiring it;
- 5) Fulfillment of technical requirements for the palm oil industry utilizing wastewater for soil application or soil nutrient enhancement;
- 6) Adherence to administrative sanctions within the specified time limit;
- 7) Fulfillment of all PPA technical provisions, including:
 - Completion of alignment points with names and point coordinates;
 - Separation of wastewater channels from rainwater runoff;
 - Installation of watertight wastewater channels;
 - Installation of discharge measuring devices;
 - Utilization of registered laboratory services;
 - Prohibition of dilution.
- 8) Fulfillment of technical requirements for the palm oil industry utilizing wastewater for soil application or soil nutrient enhancement, including:
 - Conducting activities on land other than peatland;
 - Conducting activities on land other than land with permeability > 15 cm/hour;

- Conducting activities on land other than land with permeability < 1.5 cm/hour;
 - Prohibition of activities on land with groundwater depth < 2 meters;
 - Prevention of runoff water entering rivers;
 - Prohibition of wastewater dilution;
 - Prohibition of wastewater disposal on land outside designated locations;
 - Prohibition of wastewater discharge into rivers
- 9) Fulfillment of technical requirements for industries requiring sparing, including:
- Completion of compliance points with names and coordinates;
 - Declaration of meeting calibration requirements;
 - Adherence to measuring range provisions;
 - Adherence to measurement accuracy provisions in accordance with applicable regulations

4. Water Source Maintenance (for the Bottled Drinking Water Industry)

Activities in this sector must adhere to the following conditions:

- a. Adherence to Ownership of Surface Water/Groundwater Extraction Permits;
- b. Adherence to Ownership of Area/Utilization Zone Maps;
- c. Adherence to Ownership of Utilization Area Studies;
- d. Adherence to the Water Conservation Program;
- e. Adherence to the Fulfillment of Permit Conditions;
- f. Provisions for Ownership of Monitoring Wells;
- g. Adherence to Monitoring & Reporting;
- h. Adherence to Groundwater Level & Discharge Measurement Data;
- i. Adherence to Operational Compliance with Water Source Treatment SOPs.

5. Controlling Land Damage

If the activity has potential negative impacts related to land damage, compliance with the following provisions is necessary:

- a. Implementation of the provisions in the Environmental Agreement, particularly in the following aspects:
 - 1) Land clearing;
 - 2) Topsoil removal;
 - 3) Overburden rock removal;
 - 4) Mining;
 - 5) Stockpiling; and
 - 6) Post-mining.
- b. Documentation Requirements:
 - 1) Maps of plans and realization of mining activities;
 - 2) Spatial data detailing the execution of mining activities;
 - 3) Matrices outlining plans and execution of mining activities;
 - 4) Remote sensing data pertaining to mining concession areas;
 - 5) Cross-section maps approved by management;
 - 6) Feasibility study recommendations;

- 7) Geotechnical studies;
 - 8) Standard Operating Procedures (SOP) for slope stability measurement.
 - 9) Continuous monitoring of ground movements;
 - 10) SOP for establishing levels;
 - 11) Puddle photographs;
 - 12) pH measurement results and photos;
 - 13) Study of rocks with potential for acid mine drainage;
 - 14) SOP for handling rocks prone to acid mine drainage formation;
 - 15) Technical drawings and photographs of drainage system facilities;
 - 16) Technical drawings and photos of terracing;
 - 17) Technical drawings and photos of bunds;
 - 18) Technical drawings and photos of cover crops (cover cropping);
 - 19) Technical drawings and photos of sediment trap ponds;
 - 20) Layout of water management from activity site to settling pond or Waste Water Management Installation (IPAL);
 - 21) Slope photographs;
 - 22) Location map of vital public facilities;
 - 23) Feasibility study or AMDAL recommendation sheet confirming safe distance from vital public facilities;
 - 24) Emergency response system documentation;
 - 25) Hydrogeological studies.
- c. Management Aspect Fulfillment:
- 1) Planning through maps and remote sensing;
 - 2) Execution schedule realization (area per assessment period), progress monitoring (area realization per quarter), and continuity maintenance of realization stages.
- d. Technical Aspect Fulfillment:
- 1) Geotechnical Stability assessment for landslide potential;
 - 2) Efforts to handle rocks with environmental pollution potential;
 - 3) Erosion control through facility establishment, monitoring, and response mechanisms.
 - 4) Successful revegetation efforts;
 - 5) Minimization of disaster risk to vital settlements, infrastructure, and water sources.

6. Management of B3 Waste

If the activity poses potential negative impacts related to B3 waste, compliance with the following provisions is necessary:

- a. Identification, codification, and recording of all generated and/or potentially generated B3 waste for proper management;
- b. Quarterly online reporting of B3 waste management via the page <http://simpl.menlhk.go.id>, SIRAJA LIMBAH B3 application;
- c. Quarterly issuance of Electronic Receipt (TTE) via the page <http://simpl.menlhk.go.id>, SIRAJA LIMBAH B3 application;
- d. Conducting B3 waste storage activities with permits or permits in the renewal process;
- e. Undertaking activities related to collecting, utilizing, processing, stockpiling, dumping,

- and/or managing B3 waste in a prescribed manner, with accompanying permits or permissions in the process of extension;
- f. Fulfillment of all required provisions and requirements (100%) in:
 - 1) Temporary storage permit
 - 2) Collection permit;
 - 3) Utilization permit;
 - 4) Processing permit;
 - 5) Landfill permit; and/or
 - 6) Dumping permit.
 - g. Employing personnel responsible and competent in B3 Waste Management;
 - h. Prohibition of open burning/open dumping activities;
 - i. Development of a plan for environmental function restoration and contaminated land management, complying with statutory regulations, or implementing cleanup and restoration of hazardous waste-contaminated land as per predetermined plans;
 - j. Fulfillment of all obligations in SSPLT;
 - k. Management of B3 waste types and amounts in accordance with provisions;
 - l. Maintenance of B3 Waste Balance according to the assessment period;
 - m. If B3 waste management is outsourced to a collector:
 - 1) Handover of B3 waste to a licensed collector;
 - 2) Compliance with the scope of the collector's permit;
 - 3) Produce must:
 - cooperation contracts with collectors;
 - a copy of the cooperation contract between the collector and the user/processor and/or the disposer of the generated B3 waste; and
 - a copy of permits of third-party final managers (utilizers/processors and/or landfills) of B3 waste;
 - n. If B3 waste management is outsourced to a processor, user, and/or landfill:
 - 1) Handover of B3 Waste to licensed processors/utilizers and/or landfill;
 - 2) Compliance with the scope of the permit;
 - 3) Possession of cooperation contracts with processors/utilizers and/or stockpiles;
 - o. If B3 waste management is outsourced to a transportation service:
 - 1) Handover of B3 waste to a transporter with:
 - appropriate permits from the Ministry of Forest; and
 - recommendations from the Ministry of Forest.
 - 2) Compliance with the scope of permits and recommendations.
 - 3) Utilization of transport equipment must be:
 - in accordance with recommendations and permits;
 - equipped with location tracking devices;
 - equipped with electronic manifests, and
 - having valid environmental pollution insurance.
 - 4) Compliance with transport routes specified in the supervision card.

- 5) Possession of cooperation contracts with:
- carriers; and
 - collectors/utilizers/processors and/or hoarders.
- p. Implementation of B3 Waste electronic manifest if managed by a Third Party;
- q. Fulfillment of 100% of the technical provisions regarding the B3 Waste Management Emergency Response System.
- 7. Management of Non-B3 Waste**
- If the activity has the potential for negative impacts related to non-B3 waste, manage non-B3 waste in accordance with the provisions stipulated in the Ministerial Decree.

ANNEX

10

List of Provisions
Associated with Activities
in the Energy, C&RE,
T&S, and AFOLU Sectors

A. List of Provisions Related to Activities in the Energy Sector

1. Electricity, Gas, Steam And Air Conditioning Supply

No	KBLI Level 5	Activity	Related Provisions (Non-exhaustive List)
1	(35101)	Electric Power Generation	• Law of the Republic of Indonesia Number 30 of 2007 concerning Energy. • Law of the Republic of Indonesia Number 30 of 2009 on Electricity as amended by Government Regulation in Lieu of Law (Perppu) Number 2 of 2022 concerning Job Creation as enacted by Law Number 6 of 2023 concerning the Ratification of Perppu Number 2 of 2022 concerning Job Creation into Law (Job Creation Law). • Law of the Republic of Indonesia Number 21 of 2014 concerning Geothermal Energy as amended by the Job Creation Law. • Government Regulation of the Republic of Indonesia Number 14 of 2012 as amended by Government Regulation Number 23 of 2014 concerning the Business Activities of Electricity Supply. • Government Regulation of the Republic of Indonesia Number 79 of 2014 concerning National Energy Policy (KEN). • Government Regulation of the Republic of Indonesia Number 28 of 2016 concerning the Amount and Procedures for Granting Geothermal Production Bonus. • Government Regulation of the Republic of Indonesia Number 7 of 2017 concerning Geothermal Energy for Indirect Utilization as amended by Government Regulation Number 25 of 2021 concerning the Implementation of the Energy and Mineral Resources Sector. • Government Regulation of the Republic of Indonesia Number 5 of 2021 concerning the Implementation of Risk-Based Business Licensing. • Government Regulation of the Republic of Indonesia Number 22 of 2021

No	KBLI Level 5	Activity	Related Provisions (Non-exhaustive List)
			concerning the Implementation of Environmental Protection and Management. • Government Regulation of the Republic of Indonesia Number 33 of 2023 concerning Energy Conservation. • Presidential Regulation of the Republic of Indonesia Number 4 of 2010 as amended by Presidential Regulation of the Republic of Indonesia Number 48 of 2011 and Presidential Regulation Number 194 of 2014 concerning the Assignment to PT Perusahaan Listrik Negara (Persero) to Accelerate the Development of Power Plants Using Renewable Energy, Coal, and Gas. • Presidential Regulation of the Republic of Indonesia Number 4 of 2016 as amended by Presidential Regulation of the Republic of Indonesia Number 14 of 2017 concerning the Acceleration of Electricity Infrastructure Development. • Presidential Regulation of the Republic of Indonesia Number 3 of 2016 as amended by Presidential Regulation of the Republic of Indonesia Number 58 of 2017, Presidential Regulation of the Republic of Indonesia Number 56 of 2018, and Presidential Regulation Number 109 of 2020 concerning the Acceleration of the Implementation of National Strategic Projects. • Presidential Regulation of the Republic of Indonesia Number 22 of 2017 concerning the National Energy General Plan. • Presidential Regulation of the Republic of Indonesia Number 112 of 2022 concerning Acceleration of Renewable Energy Development for Electricity Supply. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 11 of 2009 as amended by Regulation of Minister of Energy and Mineral Resources Number

No	KBLI Level 5	Activity	Related Provisions (Non-exhaustive List)
			18 of 2012 concerning the Implementation of Geothermal Business Activities. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 17 Year 2014 concerning the Purchase of Electricity from Geothermal Power Plants (PLTP) and Geothermal Steam for PLTP by PT Perusahaan Listrik Negara (Persero). • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 15 of 2010 as amended by Regulation of Minister of Energy and Mineral Resources Number 1 of 2012, Regulation of Minister of Energy and Mineral Resources Number 21 of 2013, Regulation of Minister of Energy and Mineral Resources Number 32 of 2014, and Regulation of Minister of Energy and Mineral Resources Number 40 of 2014 concerning the List of Accelerated Development Projects for Power Plants Using Renewable Energy, Coal, and Natural Gas, and Related Transmissions. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 44 of 2016 concerning the Forms and Procedures for Placement and Disbursement of Geothermal Exploration Commitments. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 10 of 2017 as amended by Regulation of Minister of Energy and Mineral Resources Number 49 of 2017 and Regulation of Minister of Energy and Mineral Resources Number 10 of 2018 concerning the Essentials in Power Purchase Agreements. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 21 of 2017 concerning the Management of Waste Mud and Boron Powder in Geothermal Drilling.

No	KBLI Level 5	Activity	Related Provisions (Non-exhaustive List)
			• Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 23 of 2017 concerning the Procedures for Reconciliation, Deposit, and Reporting of Geothermal Production Bonuses. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 36 of 2017 concerning the Procedures for Preliminary Survey Assignments (PSP) and Exploration Survey Assignments (PSE) for Geothermal. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 37 of 2017 concerning Geothermal Working Areas for Indirect Utilization. • Regulation of the Minister of Energy and Mineral Resources of the Republic of Indonesia Number 50 of 2017 as amended by Regulation of the Minister of Energy and Mineral Resources Number 53 of 2018 concerning Utilization of Renewable Energy Sources (EBT) for Electricity Supply. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 33 of 2018 concerning the Management and Utilization of Data and Information on Geothermal Energy for Indirect Utilization. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 37 of 2018 concerning the Offering of Geothermal Working Areas, Granting Geothermal Permits, and Assigning Geothermal Business Operations. • Regulation of Minister of Environment and Forestry of the Republic of Indonesia Number P.4/MENLHK/SETJEN/KUM.1/1/2019 of 2019

No	KBLI Level 5	Activity	Related Provisions (Non-exhaustive List)
			- concerning the Utilization of Geothermal Environmental Services in National Parks, Botanical Forest Park, and Nature Conservation Areas. - Regulation of Minister of Environment and Forestry of the Republic of Indonesia Number P.15/MENLJK/SETJEN/KUM.1/4/2019 of 2019 - concerning the Emission Quality Standards for Thermal Power Plants. - Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 50 of 2017 as amended by Regulation of Minister of Energy and Mineral Resources Number 53 of 2018 and Regulation of Minister of Energy and Mineral Resources Number 4 of 2020 concerning the Utilization of Renewable Energy Resources for Electricity Provision. - Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 11 of 2021 concerning the Implementation of Electricity Business Operations. - Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 26 of 2021 concerning Rooftop Solar Power Plants Connected to the Electricity Network of Business License Holders for Electricity Supply for Public Interest. - Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 16 of 2022 concerning Procedures for the Implementation of Economic Value of Carbon in the Subsector of Electricity Generation Plants.
		- Electricity generation from solar power	Presidential Regulation of the Republic of Indonesia Number 112 of 2022 concerning the Acceleration of Renewable Energy Development for Electricity Supply.

No	KBLI Level 5	Activity	Related Provisions (Non-exhaustive List)
			Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 50 of 2017 as amended by Regulation of Minister of Energy and Mineral Resources Number 53 of 2018 and Regulation of Minister of Energy and Mineral Resources Number 4 of 2020 concerning the Utilization of Renewable Energy Resources for Electricity Supply.
		- Electricity generation from wind power	- Presidential Regulation of the Republic of Indonesia Number 112 of 2022 concerning the Acceleration of Renewable Energy Development for Electricity Supply. - Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 50 of 2017 as amended by Regulation of Minister of Energy and Mineral Resources Number 53 of 2018 and Regulation of Minister of Energy and Mineral Resources Number 4 of 2020 concerning the Utilization of Renewable Energy Resources for Electricity Supply.
		- Electricity generation from ocean power	- Presidential Regulation of the Republic of Indonesia Number 112 of 2022 concerning Acceleration of Renewable Energy Development for Electricity Supply. - Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 50 of 2017 as amended by Regulation of Minister of Energy and Mineral Resources Number 53 of 2018 and Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 4 of 2020 concerning Utilization of Renewable Energy Resources for Electricity Supply. - Presidential decree of the Republic of Indonesia Number 1 of 2010 concerning Acceleration of the Implementation of National Development Priorities for the Year 2010, which among others regulates the development of alternative

No	KBLI Level 5	Activity	Related Provisions (Non-exhaustive List)
			energy sources outside of geothermal, particularly the utilization of ocean energy.
		- Electricity generation from hydropower	• Presidential Regulation of the Republic of Indonesia Number 112 of 2022 concerning the Acceleration of Development of Renewable Energy for Electricity Power Supply. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 9 of 2018 concerning the Revocation of Regulation of Minister of Energy and Mineral Resources Related to Activities in the Field of New, Renewable, and Energy Conservation. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 50 of 2017 as amended by Regulation of Minister of Energy and Mineral Resources Number 53 of 2018 and Regulation of Minister of Energy and Mineral Resources Number 4 of 2020 concerning the Utilization of Renewable Energy Resources for Electricity Supply.
		- Electricity generation from geothermal power	• Presidential Regulation of the Republic of Indonesia Number 112 of 2022 concerning the Acceleration of Development of Renewable Energy for Electricity Power Supply. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 11 of 2009 as amended by Regulation of Minister of Energy and Mineral Resources Number 18 of 2012 concerning the Implementation of Geothermal Business Activities. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 17 of 2014 concerning the Purchase of Electricity from Geothermal Power Plants and Steam for Geothermal Power Plants by PT. Perusahaan Listrik Negara (Persero).

No	KBLI Level 5	Activity	Related Provisions (Non-exhaustive List)
			• Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 50 of 2017 as amended by Regulation of Minister of Energy and Mineral Resources Number 53 of 2018 and Regulation of Minister of Energy and Mineral Resources Number 4 of 2020 concerning the Utilization of Renewable Energy Resources for Electricity Supply. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 33 of 2018 concerning the Management and Utilization of Geothermal Data and Information for Indirect Utilization. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 37 of 2018 concerning the Offering of Geothermal Working Areas, Granting Geothermal Permits, and Assigning Geothermal Business Operations.
		- Electricity generation from bioenergy power	• Government Regulation of the Republic of Indonesia Number 81 of 2012 concerning Household Waste Management and Similar Waste to Household Waste. • Government Regulation of the Republic of Indonesia Number 79 of 2014 concerning National Energy Policy. • Government Regulation of the Republic of Indonesia Number 5 of 2021 concerning Risk- Based Business Licensing. • Presidential Regulation of the Republic of Indonesia Number 3 of 2016 juncto Number 58 • of 2017 juncto Number 56 Year 2018 concerning the Acceleration of National Strategic Projects (PSN) Implementation. • Presidential Regulation of the Republic of Indonesia Number 4 of 2016 juncto Number 14 of 2017 concerning the

No	KBLI Level 5	Activity	Related Provisions (Non-exhaustive List)
			Acceleration of Electricity Infrastructure Development. • Presidential Regulation of the Republic of Indonesia Number 35 of 2018 concerning the Acceleration of the Development of Waste Processing Installations into Environmentally Friendly Technology-Based Electric Energy. • Presidential Regulation of the Republic of Indonesia Number 112 of 2022 concerning the Acceleration of Renewable Energy Development for Electricity Supply. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 12 of 2015 on Amendment to the Regulation of Minister of Energy and Mineral Resources Number 32 of 2008 concerning the Third Amendment to the Regulation of Minister of Energy and Mineral Resources Number 32 of 2008 concerning the Provision, Utilization, and Trade of Biofuel as an Alternative Fuel. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 35 of 2013 juncto Number 12 of 2016 concerning the Procedures for Licensing Electricity Business. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 10 of 2017 juncto Number 49 of 2017 concerning the Principles of Electricity Purchase Agreements. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 48 of 2017 concerning Supervision of Operations in the Energy and Mineral Resources Sector. • Regulation of Minister of Energy and Mineral Resources of the Republic of

No	KBLI Level 5	Activity	Related Provisions (Non-exhaustive List)
			Indonesia Number 50 of 2017 juncto Number 53 of 2018 juncto Number 4 of 2020 concerning the Utilization of Renewable Energy Resources for Electricity Supply. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 53 of 2018 concerning Amendment to Regulation of Minister of Energy and Mineral Resources Number 50 of 2017. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 169 of 2021 concerning the Amount of Basic Cost of PT PLN (Persero) Generation Provision in 2020.
		- Electricity generation from gas power	• Regulation of Minister of Energy and Mineral of the Republic of Indonesia Number 45 of 2017 concerning the Utilization of Natural Gas for Electricity Generation.
		- Coal-Fired Power Plant (CFPP),including early retirement of CFPP	• Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 12 of 2023 concerning the Utilization of Biomass Fuels as Fuel Blends in Steam Power Plants. • Presidential Regulation of the Republic of Indonesia Number 112 of 2022 concerning the Acceleration of Renewable Energy Development for Electricity Supply. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 19 of 2017 concerning the Utilization of Coal for Power Plants and Purchase of Excess Power. • Regulation of Minister of Environment and Forestry of the Republic of Indonesia Number P.15/MENLHK/SETJEN/KUM.1/4/2019 • concerning the Emission Quality Standards for Thermal Power Plants.

No	KBLI Level 5	Activity	Related Provisions (Non-exhaustive List)
			• Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 50 of 2017 as amended by Regulation of Minister of Energy and Mineral Resources Number 53 of 2018 and Regulation of Minister of Energy and Mineral Resources Number 4 of 2020 concerning the Utilization of Renewable Energy Resources for Electricity Supply. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 12 of 2021 concerning the Classification, Qualification, Accreditation, and Certification of Electricity Support Services Businesses. • Decree of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 14.K/TL.04/MEM.L/2023 concerning the Technical Approval of Greenhouse Gas Emission Limits (PTBAE) for Coal-fired Power Plants Connected to the State Electricity Company (PT PLN) Network Phase One.
		- Electricity generation from nuclear power	• Law of the Republic of Indonesia Number 10 of 1997 on Nuclear Energy as amended by Government Regulation in Lieu of Law (Perppu) Number 2 of 2022 concerning Job Creation as enacted in Law Number 6 of 2023 concerning the Ratification of Perppu Number 2 of 2022 on Job Creation into Law (Job Creation Law). • Presidential Regulation of the Republic of Indonesia Number 112 of 2022 concerning the Acceleration of Renewable Energy Development for Electricity Supply. • Government Regulation of the Republic of Indonesia Number 54 of 2012 concerning the Safety and Security of Nuclear Installations. • Government Regulation of the Republic of Indonesia Number 61 of 2013

No	KBLI Level 5	Activity	Related Provisions (Non-exhaustive List)
			concerning Radioactive Waste Management. • Government Regulation of the Republic of Indonesia Number 58 of 2015 concerning Radiation Safety and Security in the Transport of Radioactive Substances. • Government Regulation of the Republic of Indonesia Number 5 of 2021 concerning Risk- Based Business Licensing. • Government Regulation of the Republic of Indonesia Number 45 of 2023 concerning Ionizing Radiation Safety and Radioactive Substance Security. • Regulation of the Nuclear Energy Regulatory Agency of the Republic of Indonesia Number 9 of 2006 concerning the Implementation of Additional Protocols concerning Nuclear Material Accountability and Control. • Regulation of the Nuclear Energy Supervisory Agency of the Republic of Indonesia Number 1 of 2009 concerning Provisions for Physical Protection Systems for Nuclear Installations and Materials. • Regulation of the Nuclear Energy Regulatory Agency of the Republic of Indonesia Number 4 of 2011 concerning the Safeguard System. • Regulation of the Nuclear Energy Regulatory Agency of the Republic of Indonesia Number 4 of 2013 concerning Radiation Safety in the Utilization of Nuclear Energy. • Regulation of the Nuclear Energy Regulatory Agency of the Republic of Indonesia Number 7 of 2013 as amended by the Regulation of the Head of the Nuclear Energy Regulatory Agency of the Republic of Indonesia Number 7 of 2017 concerning the Environmental Radioactivity Limits.

No	KBLI Level 5	Activity	Related Provisions (Non-exhaustive List)
			• Regulation of the Nuclear Energy Regulatory Agency of the Republic of Indonesia Number 3 of 2021 concerning Business Activity Standards and Product Standards in Nuclear Sector Risk-Based Business Licensing. • Regulation of the Nuclear Energy Regulatory Agency of the Republic of Indonesia Number 1 of 2022 concerning the Implementation of Risk-Based Business Licensing in the Nuclear Sector. • Decree of the Head of the Nuclear Energy Regulatory Agency of the Republic of Indonesia Number 0528/K/III/2022 of 2022 concerning the Roadmap for Supervising Nuclear Power Plants for the Year 2022– 2035.
		- Electricity generation from hydrogen gas power	• Presidential Regulation of the Republic of Indonesia Number 112 of 2022 concerning the Acceleration of Renewable Energy Development for Electricity Supply.
2.	(35102)	Transmission of electricity	• Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 13 of 2021 concerning Free Space and Minimum Clearance Distance of Electricity Transmission Network and Compensation for Land, Buildings, and/or Plants Located Below the Free Space of Electricity Transmission Network. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 11 of 2021 concerning the Implementation of Electricity Business.
3.	(35103)	Distribution of electricity	• Government Regulation of the Republic of Indonesia Number 53 of 2003 concerning the Supervisory Body of Electricity Market. • Government Regulation of the Republic of Indonesia Number 62 of 2012 concerning Electricity Support Services Business.

No	KBLI Level 5	Activity	Related Provisions (Non-exhaustive List)
			- Government Regulation of the Republic of Indonesia Number 14 of 2012 as amended by Government Regulation Number 23 of 2014 concerning Electricity Supply Business Activities. - Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 4 of 2009 on Electricity Distribution Rules. - Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 20 of 2020 concerning the Rules of Electrical Power System Network (Grid Code).
4.	(35104)	Electrical power support including Energy Conservation/ Energy Efficiency	- Law of the Republic of Indonesia Number 30 of 2009 concerning Electricity as amended by Government Regulation in Lieu of Law (Perppu) Number 2 of 2022 concerning Job Creation as enacted in Law Number 6 of 2023 concerning the Ratification of Perppu Number 2 of 2022 concerning Job Creation into Law (Job Creation Law). - Government Regulation of the Republic of Indonesia Number 33 of 2023 concerning Energy Conservation. - Government Regulation of the Republic of Indonesia Number 14 of 2012 as amended by Government Regulation Number 23 of 2014 concerning Electricity Supply Business Activities. - Government Regulation of the Republic of Indonesia Number 62 of 2012 concerning Electricity Support Services Business Activities. - Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 11 of 2021 concerning the Implementation of Electricity Business Activities. - Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 12 of 2021 concerning the Classification, Qualification, Accreditation, and

No	KBLI Level 5	Activity	Related Provisions (Non-exhaustive List)
			Certification of Electricity Support Services Business Activities.
5.	(35202)	Distribution of natural and synthetic gas	• Law of the Republic of Indonesia Number 22 of 2001 concerning Oil and Natural Gas as amended by the Job Creation Law. • Government Regulation of the Republic of Indonesia Number 36 of 2004 as amended by Government Regulation Number 30 of 2009 concerning Downstream Oil and Gas Activities. • Government Regulation of the Republic of Indonesia Number 33 of 2023 concerning Energy Conservation. • Presidential Regulation of the Republic of Indonesia Number 6 of 2019 concerning the Provision and Distribution of Natural Gas through Transmission and/or Distribution Networks for Household and Small Customers. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 4 of 2018 as amended by Regulation of Minister of Energy and Mineral Resources Number 19 of 2021 concerning Natural Gas Business in Downstream Oil and Gas Activities. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 5 of 2021 concerning Business Activity and Product Standards in Risk-Based Business Licensing for the Energy and Mineral Resources Sector.
6.	(35301)	Production of heating/cooling	• Decree of Minister of Manpower and Transmigration of the Republic of Indonesia Number 125 of 2014 concerning the Determination of the Indonesian National Work Competency Standards Category of Electricity, Gas, Steam/Hot Water, and Cold Air Procurement Group Electricity, Gas, Steam/Hot Water, and Cold Air Distribution Sector for Non-Pipeline.

No	KBLI Level 5	Activity	Related Provisions (Non-exhaustive List)
			Decree of Minister of Manpower of the Republic of Indonesia Number 111 of 2021 concerning the Determination of the Indonesian National Work Competency Standards Category of Electricity, Gas, Steam/Hot Water, and Cold Air Procurement Group Electricity, Gas, Steam/Hot Water, and Cold Air Distribution Sector for Non-Oil Fuel.

2. Mining and Quarrying Activities

No	KBLI Level 5	Activity	Related Provision (non-exhausted list)
1	07101	Mining of iron sand	- Law of the Republic of Indonesia Number 4 of 2009 concerning Mineral Mining And Coal as amended with: (1) Mineral and Coal (Minerba) Law; and (2) Job Creation Law. - Government Regulation of the Republic of Indonesia Number 96 of 2021 concerning the Implementation of Mineral and Coal Mining Business Activities Coal. - Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 25 of 2018 as amended by Regulation of the Minister of Energy and Mineral Resources Mineral Resources Number 50 of 2018, Regulation of Minister of Energy and Mineral Resources Number 11 of 2019 and Minister of Energy and Mineral Resources Regulation Number 17 of 2020 concerning the Concession of Mineral and Coal Mining. - Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 5 of 2021 concerning Business Activity Standards and Products in the Implementation of Risk-Based Business Licensing Risk-Based Business Licensing in the Energy and Mineral Resources Sector. - Regulation of Minister of Trade of the Republic of Indonesia Number 45 of

No	KBLI Level 5	Activity	Related Provision (non-exhausted list)
			2022 concerning Determination of Export Benchmark Prices for Mining Products Subject to Export Duty. - Decree of Minister of Energy and Mineral Resources Republic of Indonesia Number 296.K / MB.01 / MEM.B / 2023 concerning Determination of Commodity Types that are in Critical Mineral Classification. - Regulation of West Java Governor Number 19 of 2006 concerning Iron Sand Management.
2	07102	Mining of iron ores	- 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. - Government Regulation of the Republic of Indonesia Number 96 of 2021 concerning the Implementation of Mineral and Coal Mining Business Activities. - Regulation of Minister of Environment of the Republic of Indonesia Number 21 of 2009 concerning Wastewater Quality Standards for Iron Ore Mining Businesses and / or Activities. - Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 25 of 2018 as amended by Regulation of the Minister of Energy and Mineral Resources Number 50 of 2018, Regulation of Minister of Energy and Mineral Resources Number 11 of 2019 and Regulation of Minister of Energy and Mineral Resources Number 17 of 2020 concerning the Concession of Mineral and Coal Mining. - Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 5 of 2021 concerning Business Activity Standards and Products in the Implementation of Risk-

No	KBLI Level 5	Activity	Related Provision (non-exhausted list)
			Based Business Licensing in the Energy and Mineral Resources Sector. Decree of Minister of Energy and Mineral Resources Republic of Indonesia Number 296.K/MB.01/MEM.B/2023 concerning Determination of Commodity Types that are in Critical Mineral Classification.
3	07292	Mining of black lead ores, including Galena	- 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. - Government Regulation Number 96 of 2021 concerning Implementation of Mineral and Coal Mining Business Activities. - Regulation of Minister of Energy and Mineral Resources Number 25 of 2018 as amended by Regulation of Minister of Energy and Mineral Resources Number 50 of 2018, Regulation of Minister of Energy and Mineral Resources Number 11 of 2019 and Regulation of Minister of Energy and Mineral Resources Number 17 of 2020 concerning Mineral and Coal Mining Business. - Regulation of Minister of Trade Number 92 of 2020 concerning Inter-island Trade. - Regulation of 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. - Decree of Minister of Energy and Mineral Resources Number 296.K/MB.01/MEM.B/2023 concerning Determining Types of Commodities that are Classified as Critical Minerals.
4	07293	Mining of bauxite/aluminium ores	Law of the Republic of Indonesia Number 4 of 2009 concerning Mineral

No	KBLI Level 5	Activity	Related Provision (non-exhausted list)
			and Coal Mining as amended by: (1) Mineral and Coal (Minerba) Law; and (2) Job Creation Law. • Government Regulation Number 96 of 2021 concerning Implementation of Mineral and Coal Mining Business Activities. • Regulation of Minister of Environment Number 34 of 2009 concerning Waste Water Quality Standards for Bauxite Ore Mining Businesses and/or Activities. • Regulation of Minister of Energy and Mineral Resources Number 25 of 2018 as amended by Regulation of Minister of Energy and Mineral Resources Number 50 of 2018, Regulation of Minister of Energy and Mineral Resources Number 11 of 2019 and Regulation of Minister of Energy and Mineral Resources Number 17 of 2020 concerning Mineral and Coal Mining Business. • Regulation of 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. • Decree of Minister of Energy and Mineral Resources Number 296.K/MB.01/MEM.B/2023 concerning Determining Types of Commodities that are Classified as Critical Minerals.
5	07294	Mining of copper ores	• 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. • Government Regulation Number 96 of 2021 concerning Implementation of Mineral and Coal Mining Business Activities. • Regulation of Minister of Energy and Mineral Resources Number 25 of 2018 as amended by Regulation of Minister of

No	KBLI Level 5	Activity	Related Provision (non-exhausted list)
			Energy and Mineral Resources Number 50 of 2018, Regulation of Minister of Energy and Mineral Resources Number 11 of 2019 and Regulation of Minister of Energy and Mineral Resources Number 17 of 2020 concerning Mineral and Coal Mining Business. • Regulation of 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. • Decree of Minister of Energy and Mineral Resources Number 301.K/MB.01/MEM.B/2022 concerning the National Mineral and Coal Management Plan for 2022-2027. • Decree of Minister of Energy and Mineral Resources Number 296.K/MB.01/MEM.B/2023 concerning Determining Types of Commodities that are Classified as Critical Minerals.
6	07295	Mining of nickel ores	• 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. • Government Regulation Number 96 of 2021 concerning Implementation of Mineral and Coal Mining Business Activities. • Regulation of Minister of Energy and Mineral Resources Number 7 of 2017 as amended by Regulation of Minister of Energy and Mineral Resources Number 44 of 2017, Regulation of Minister of Energy and Mineral Resources Number 19 of 2018 and Regulation of Minister of Energy and Mineral Resources Number 11 of 2020 concerning Procedures for Determining Benchmark Prices for the Sale of Metallic Minerals and Coal.

No	KBLI Level 5	Activity	Related Provision (non-exhausted list)
			• Regulation of Minister of Energy and Mineral Resources Number 25 of 2018 as amended by Regulation of Minister of Energy and Mineral Resources Number 50 of 2018, Regulation of Minister of Energy and Mineral Resources Number 11 of 2019 and Regulation of Minister of Energy and Mineral Resources Number 17 of 2020 concerning Mineral and Coal Mining Business. • Regulation of 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. • Decree of Minister of Energy and Mineral Resources Number 296.K/MB.01/MEM.B/2023 concerning Determining Types of Commodities that are Classified as Critical Minerals.
7	07296	Mining of manganese ores	• Law of the Republic of Indonesia Number 4 Year 2009 on Mineral Mining And Coal as amended with: (1) Mineral and Coal (Minerba) Law; and (2) Job Creation Law. • Government Regulation of the Republic of Indonesia Number 96 of 2021 concerning the Implementation of Mineral and Coal Mining Business Activities. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 07 of 2017 as amended by Regulation of Minister of Energy and Mineral Resources Number 44 of 2017, Regulation of Minister of Energy and Mineral Resources Number 19 of 2018 and Regulation of Minister of Energy and Mineral Resources Number 11 of 2020 concerning Procedures for Determining Sales Benchmark Prices for Metal Minerals and Coal. • Regulation of Minister of Energy and Mineral Resources of the Republic of

No	KBLI Level 5	Activity	Related Provision (non-exhausted list)
			Indonesia Number 25 of 2018 as amended by Regulation of Minister of Energy and Mineral Resources Number 50 of 2018, Regulation of Minister of Energy and Mineral Resources Number 11 of 2019 and Regulation of Minister of Energy and Mineral Resources Number 17 of 2020 concerning Mineral and Coal Mining Business. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 5 of 2021 on Business Activity Standards and Products in the Implementation of Risk-Based Business Licensing in the Energy and Mineral Resources Sector. • Decree of Minister of Energy and Mineral Resources Republic of Indonesia Number 296.K/MB.01/MEM.B/2023 concerning Determination of Commodity Types that are in Critical Mineral Classification
8	07299	Mining of other non-ferrous metal ores, including zinc, lithium, cobalt, platinum, cadmium, gallium or tellurium	• 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. • Government Regulation Number 96 of 2021 concerning Implementation of Mineral and Coal Mining Business Activities. • Regulation of the Minister of Energy and Mineral Resources Number 25 of 2018 as amended by Regulation of the Minister of Energy and Mineral Resources Number 50 of 2018, Regulation of the Minister of Energy and Mineral Resources Number 11 of 2019 and Regulation of the Minister of Energy and Mineral Resources Number 17 of 2020 concerning Mineral and Coal Mining Business. • Regulation of Minister of Energy and Mineral Resources Number 5 of 2021 concerning Standards for Business Activities and Products in the

No	KBLI Level 5	Activity	Related Provision (non-exhausted list)
			Implementation of Risk- Based Business Licensing in the Energy and Mineral Resources Sector. Decree of Minister of Energy and Mineral Resources Number 296.K/MB.01/MEM.B/2023 concerning Determining Types of Commodities that are Classified as Critical Minerals.
9	08995	Quartz Sand Quarrying	- 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 - Government Regulation Number 96 of 2021 concerning Implementation of Mineral and Coal Mining Business Activities. - Regulation of Minister of Energy and Mineral Resources Number 25 of 2018 as amended by Regulation of Minister of Energy and Mineral Resources Number 50 of 2018, Regulation of Minister of Energy and Mineral Resources Number 11 of 2019 and Regulation of Minister of Energy and Mineral Resources Number 17 of 2020 concerning Mineral and Coal Mining Business. - Regulation of 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. - Decree of Minister of Energy and Mineral Resources Number 296.K/MB.01/MEM.B/2023 concerning Determining Types of Commodities that are Classified as Critical Minerals.
10	08999	Mining and other quarryings that are not included in others	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.

No	KBLI Level 5	Activity	Related Provision (non-exhausted list)
			• Government Regulation Number 96 of 2021 concerning Implementation of Mineral and Coal Mining Business Activities. • Regulation of Minister of Energy and Mineral Resources Number 25 of 2018 as amended by Regulation of Minister of Energy and Mineral Resources Number 50 of 2018, Regulation of Minister of Energy and Mineral Resources Number 11 of 2019 and Regulation of Minister of Energy and Mineral Resources Number 17 of 2020 concerning Mineral and Coal Mining Business. • Regulation of Minister of Energy and Mineral Resources Number 7 of 2020 as amended by Regulation of Minister of Energy and Mineral Resources Number 16 of 2021 concerning Procedures for Granting Areas, Licensing and Reporting on Mineral and Coal Mining Business Activities. • Regulation of 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. • Decree of Minister of Energy and Mineral Resources Number 296.K/MB.01/MEM.B/2023 concerning Determining Types of Commodities that are Classified as Critical Minerals.
11	09900	Other mining and quarrying supporting activities	• 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. • Government Regulation Number 96 of 2021 concerning Implementation of Mineral and Coal Mining Business Activities. • Regulation of Minister of Energy and Mineral Resources Number 25 of 2018

No	KBLI Level 5	Activity	Related Provision (non-exhausted list)
			as amended by Regulation of Minister of Energy and Mineral Resources Number 50 of 2018, Regulation of Minister of Energy and Mineral Resources Number 11 of 2019 and Regulation of Minister of Energy and Mineral Resources Number 17 of 2020 concerning Mineral and Coal Mining Business. • Regulation of Minister of Energy and Mineral Resources Number 7 of 2020 as amended by Regulation of Minister of Energy and Mineral Resources Number 16 of 2021 concerning Procedures for Granting Areas, Licensing and Reporting to Mineral and Coal Mining Business Activities. • Regulation of 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.
12	06100	Mining of petroleum, including CCS	• Law of the Republic of Indonesia Number 16 of 2016 on the Ratification of the Paris Agreement To The United Nations Framework Convention On Climate Change. • Law of the Republic of Indonesia Number 22 of 2001 on Oil and Gas as amended by Government Regulation in Lieu of Law (Perppu) Number 2 of 2022 on Job Creation as enacted into Law through Law Number 6 of 2023 concerning the Stipulation of Perppu Number 2 of 2022 on Job Creation into Law (Job Creation Law). • Government Regulation of the Republic of Indonesia Number 35 of 2004 as amended by Government Regulation Number 34 of 2005 and Government Regulation Number • 55 of 2009 on Upstream Oil and Gas Business Activities.

No	KBLI Level 5	Activity	Related Provision (non-exhausted list)
			• Government Regulation of the Republic of Indonesia Number 33 of 2023 on Energy Conservation. • Presidential Regulation of the Republic of Indonesia Number 98 of 2021 on the Implementation of Economic Value of Carbon for the Achievement of Nationally Determined Contribution Targets and the Controlling Greenhouse Gas Emissions in National Development. • Presidential Regulation of the Republic of Indonesia Number 112 of 2022 concerning Acceleration of Renewable Energy Development for Electricity Supply. • Presidential Regulation of the Republic of Indonesia Number 14 of 2024 on the Implementation of Carbon Capture and Storage Activities. • Regulation of Minister of Environment and Forestry of the Republic of Indonesia Number 13 of 2009 concerning Emission Quality Standard for Non-Mobile Resources for Oil and Gas Business and/or Activities. • Regulation of 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. • Regulation of Minister of Energy and Mineral Resources of Republic of Indonesia Number 17 of 2021 concerning the Implementation of Flare Gas Management in Oil and Gas Business Activities. • Regulation of Minister of Energy and Mineral Resources of Republic of Indonesia Number 7 of 2019 as amended by Regulation of Minister of Energy and Mineral Resources Number

No	KBLI Level 5	Activity	Related Provision (non-exhausted list)
			1 of 2022 concerning Management and Utilization of Oil and Gas Data. - Regulation of Minister of Environment and Forestry of the Republic of Indonesia Number 21 of 2022 on Procedures for Implementing Economic Value of Carbon. - Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 2 of 2023 concerning the Implementation of Carbon Capture and Carbon Storage, as well as Capture, Utilization, and Carbon Storage in Upstream Oil and Gas Business Activities.
13	06201	Mining of natural gas, including CCS	- Law of the Republic of Indonesia Number 16 of 2016 on the Ratification of the Paris Agreement To The United Nations Framework Convention On Climate Change. - Law of the Republic of Indonesia Number 22 of 2001 on Oil and Gas as amended by Government Regulation Government Regulation in Lieu of Law (Perppu) Number 2 of 2022 on Job Creation as enacted into Law through Law Number 6 of 2023 concerning the Stipulation of Perppu Number 2 of 2022 on Job Creation into Law (Job Creation Law). - Government Regulation of the Republic of Indonesia Number 35 of 2004 as amended by Government Regulation Number 34 of 2005 and Government Regulation Number 55 of 2009 on Upstream Oil and Gas Business Activities. - Government Regulation of the Republic of Indonesia Number 33 of 2023 on Energy Conservation. - Presidential Regulation of the Republic of Indonesia Number 98 of 2021 concerning the Implementation of Economic Value of Carbon for the Achievement of Nationally Determined

No	KBLI Level 5	Activity	Related Provision (non-exhausted list)
			Contribution Targets and the Controlling Greenhouse Gas Emissions in National Development. • Presidential Regulation of the Republic of Indonesia Number 112 of 2022 concerning Acceleration of Renewable Energy Development for Electricity Supply. • Presidential Regulation of the Republic of Indonesia Number 14 of 2024 on the Implementation of Carbon Capture and Storage Activities. • Regulation of Minister of Environment and Forestry of the Republic of Indonesia Number 13 of 2009 concerning Emission Quality Standard for Non-Mobile Sources for Oil and Gas Business and/or Activities Activities. • Regulation of 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. • Regulation of Minister of Energy and Mineral Resources of Republic of Indonesia Number 17 of 2021 concerning the Implementation of Flare Gas Management in Oil and Gas Business Activities. • Regulation of Minister of Energy and Mineral Resources of Republic Indonesia Number 7 of 2019 as amended by Regulation of the Minister of Energy and Mineral Resources Number 1 of 2022 concerning Management and Utilization of Oil and Gas Data Utilization. • Regulation of Minister of Environment and Forestry of the Republic of Indonesia Number 21 of 2022 on Procedures for Implementing Economic Value of Carbon.

No	KBLI Level 5	Activity	Related Provision (non-exhausted list)
			Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 2 of 2023 concerning the Implementation of Carbon Capture and Carbon Storage, as well as Capture, Utilization, and Carbon Storage in Upstream Oil and Gas Business Activities.
14	09100	Supporting activities for mining of petroleum and natural gas, including Research, Development and Innovation for CCS related technology	- Law of the Republic of Indonesia Number 16 of 2016 concerning the Ratification of the Paris Agreement To The United Nations Framework Convention On Climate Change. - Law of the Republic of Indonesia Number 22 of 2001 concerning Oil and Gas as amended by Government Regulation in Lieu of Law (Perppu) Number 2 of 2022 concerning Job Creation as enacted into Law through Law Number 6 of 2023 concerning the Stipulation of Perppu Number 2 of 2022 concerning Job Creation into Law (Job Creation Law). - Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia No. 5 of 2015 on the Mandatory Implementation of Indonesian National Competency Standards (SKKNI) in the Field of Oil and Gas Business Activities. - Government Regulation of the Republic of Indonesia Number 5 of 2021 concerning the Implementation of Risk-Based Business Licensing and Investment Coordinating Board (BKPM) Regulation Number 4 of 2021 concerning Guidelines and Procedures for Risk-Based Business Licensing and Investment Facilities, for companies engaged in oil and natural gas mining services. - Government Regulation of the Republic of Indonesia Number 33 of 2023 concerning Energy Conservation. - Presidential Regulation of the Republic of Indonesia Number 14 of 2024

No	KBLI Level 5	Activity	Related Provision (non-exhausted list)
			concerning the Implementation of Carbon Capture and Storage Activities. • Presidential Regulation of the Republic of Indonesia Number 98 of 2021 concerning the Implementation of Economic Value of carbon for the Achievement of Nationally Determined Contribution Targets and the Controlling Greenhouse Gas Emissions in National Development. • Presidential Regulation of the Republic of Indonesia Number 112 of 2022 concerning Acceleration of Renewable Energy Development for Electricity Supply. • Presidential Regulation of the Republic of Indonesia Number 14 of 2024 concerning the Implementation of Carbon Capture and Storage Activities. • Regulation of 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. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 35 of 2021 concerning Procedures for Determining and Bidding for Oil and Gas Working Areas. • Regulation of Minister of Environment and Forestry of the Republic of Indonesia Number 21 of 2022 on Procedures for Implementing Economic Value of Carbon. • Regulation of Minister of Energy and Mineral Resources of the Republic of Indonesia Number 2 of 2023 on the Implementation of Carbon Capture and Carbon Storage, as well as Capture, Utilization, and Carbon Storage in Upstream Oil and Gas Business Activities.

B. Other Provisions in the Energy and Environment Sectors

No	Sector	Related Provisions (Non-exhaustive List)
1	Energy	• Law of the Republic of Indonesia Number 22 of 2001 concerning Oil and Natural Gas as amended by Government Regulation in Lieu of Law (Perppu) Number 2 of 2022 concerning Job Creation as enacted into Law through Law Number 6 of 2023 concerning Determination Perppu Number 2 of 2022 concerning Job Creation Becomes Law (Job Creation Law). • Law of the Republic of Indonesia Number 30 of 2007 concerning Energy. • Implementing Regulations for the Job Creation Law relating to the Energy and Mineral Resources Sector. • Government Regulation Number 79 of 2014 concerning National Energy Policy. • Government Regulation Number 96 of 2021 concerning the Implementation of Mineral and Coal Mining Business Activities. • Government Regulation Number 33 of 2023 concerning Energy Conservation. • Presidential Regulation Number 22 of 2017 concerning the General National Energy Plan. • Presidential Regulation Number 55 of 2022 concerning Delegation of Granting Business Licensing in the Mineral and Coal Mining Sector. • Regulation of Minister of Energy and Mineral Resources Number 22 of 2019 concerning Guidelines for Implementing Greenhouse Gas Inventory and Mitigation in the Energy Sector.
2	Environment	• 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 enacted into Law through Law Number 6 of 2023 concerning Determination of Perppu Number 2 of 2022 concerning Job Creation Becomes Law (Job Creation Law). • Law of the Republic of Indonesia Number 24 of 2007 concerning Disaster Management. • Law of the Republic of Indonesia Number 32 of 2009 concerning Environmental Protection and Management as amended by the Job Creation Law. • Law of the Republic of Indonesia Number 31 of 2004 as amended by Law Number 45 of 2009 concerning Fisheries. • Law of the Republic of Indonesia Number 17 of 2019 concerning Water Resources as amended by the Job Creation Law. • Law of the Republic of Indonesia Number 7 of 2021 concerning Harmonization of Tax Regulations. • Government Regulation Number 27 of 2012 concerning Environmental Permits.

No	Sector	Related Provisions (Non-exhaustive List)
		• Government Regulation Number 46 of 2017 concerning Environmental Economic Instruments. • Government Regulation Number 14 of 2016 as amended by Government Regulation Number 12 of 2021 concerning the Implementation of Housing and Settlement Areas. • Presidential Regulation of the Republic of Indonesia Number 83 of 2018 concerning Handling of Marine Debris. • Presidential Regulation Number 98 of 2021 concerning Implementation of the Economic Value of Carbon to Achieve Nationally Determined Contribution Targets and Control of Greenhouse Gas Emissions in National Development. • Presidential Regulation Number 55 of 2019 as amended by Presidential Regulation Number 79 of 2023 concerning the Acceleration of the Battery Electric Vehicle Program for Road Transportation. • Regulation of Minister of Environment and Forestry Number 17 of 2012 concerning Guidelines for Community Involvement in the Environmental Impact Analysis and Environmental Permit Process. • Regulation of Minister of Environment and Forestry Number 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 Minister of Environment and Forestry Number P.7/MENLHK/SETJEN/KUM.1/2/2018 concerning Guidelines for the Study of Vulnerability, Risks and Impacts of Climate Change. • Regulation of Minister of Environment and Forestry Number P.75/MENLHK/SETJEN/KUM.1/10/2019 concerning Roadmap for Waste Reduction by Producers. • Regulation of Minister of Environment and Forestry Number 21 of 2022 concerning Procedures for Implementing the Economic Value of Carbon. • Regulation of Minister of Environment and Forestry Number 2 of 2023 concerning Assignments for Implementing Peat Restoration Activities for the 2023 Fiscal Year. • Regulation of Minister of Environment and Forestry Number 7 of 2023 concerning Procedures for Carbon Trading in the Forestry Sector.

C. List of Provisions Related to Activities in the C&RE Sector

1. New Building Construction Activities (*Konstruksi Gedung Baru*)

No	KBLI Level 5	Activity	Related Provisions (Non-exhaustive List)
1	41011	Construction of residential building	- Government Regulation Number 16 of 2021, which serves as the implementing regulation of Law Number 28 of 2002 on Building Construction - Regulation of the Minister of Public Works and Housing No. 21/2021 on Green Building Performance Assessment - Regulation of the Minister of Public Works and Housing of the Republic of Indonesia Number 22/PRT/M/2018 of 2018 on the Construction of State Buildings - Regulation of the Minister of Health of the Republic of Indonesia Number 3 of 2020 on Classification and Licensing of Hospitals - Regulation of the Minister of Tourism of the Republic of Indonesia Number 12 of 2019 concerning the Second Amendment to the Regulation of the Minister of Tourism and Creative Economy Number PM.53/HM.001/MPEK/2013 concerning Hotel Business Standards - Circular Letter of the Director General of Human Settlements Number 03/SE/DC/2023 concerning Technical Instructions for Green Building Performance Assessment for Building Class 1a
	41012	Construction of office building	
	41013	Construction of industrial building	
	41014	Construction of shopping center	
	41015	Construction of healthcare center	
	41016	Construction of educational building	
	41017	Construction of accommodation building	
	41018	Construction of entertainment and sports center building	
	41019	Construction of other buildings	

2. Existing Building/Renovation Construction Activities (*Konstruksi Gedung Existing/Renovasi*)

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
1	41011	Construction of residential building	- Government Regulation Number 16 of 2021, which serves as the implementing regulation of Law Number 28 of 2002 on Building Construction - Government Regulation No. 33 of 2023 concerning Energy Conservation
	41012	Construction of office building	
	41013	Construction of industrial building	
	41014	Construction of shopping center	

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
	41015	Construction of healthcare center	- Regulation of the Minister of Public Works and Public Housing No. 21 of 2021 on Green Building Performance Assessment - Regulation of the Minister of Tourism of the Republic of Indonesia Number 12 of 2019 concerning the Second Amendment to the Regulation of the Minister of Tourism and Creative Economy Number PM.53/HM.001/MPEK/2013 concerning Hotel Business Standards - Regulation of the Minister of Health of the Republic of Indonesia Number 3 of 2020 on Classification and Licensing of Hospitals
	41016	Construction of educational building	
	41017	Construction of accommodation building	
	41018	Construction of entertainment and sports center building	
	41019	Construction of other buildings	

3. Building Acquisition and Ownership (*Akuisisi dan Kepemilikan Gedung/Bangunan*)

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
1	68110	Owned or leased real estate	- Government Regulation Number 16 of 2021, which serves as the implementing regulation of Law Number 28 of 2002 on Building Construction - Government Regulation Number 33 of 2023 concerning Energy Conservation - Regulation of the Minister of Public Works and Public Housing Number 21 of 2021 on Green Building Performance Assessment - Circular Letter of the Director General of Human Settlements Number 03/SE/DC/2023 concerning Technical Instructions for Green Building Performance Assessment for Building Class 1a

4. Civil Building Construction (*Konstruksi Bangunan Sipil*)

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
1	42111	Highway construction	- Law of the Republic of Indonesia Number 2 of 2022 concerning the second amendment to Law No. 38 of 2004 concerning Roads - Government Regulation of the Republic of Indonesia Number 14/2021 amending Government Regulation No. 22/2020 on the
	42112	Bridge and overpass construction	
	42114	Railway and rail bridge construction	
	42115	Tunnel construction	

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
2	42211	Irrigation system construction	Implementing Regulations of Law No. 2/2017 concerning Construction Services
	42214	Telecommunications structures, navigation aids and river signage construction	Government Regulation of the Republic of Indonesia Number 33 of 2021 on the Implementation of the Railway Sector
	42215	Air navigation telecommunications construction	Regulation of the Minister of Public Works and Housing Number 10 of 2022 concerning the Implementation of Bridge and Road Tunnel Safety
	42216	Railway signal telecommunications construction	Regulation of the Minister of Public Works and Housing Number 9 of 2021 on Guidelines for the Implementation of Sustainable Construction
3	42911	Water resources infrastructure building construction	Regulation of the Minister of Public Works and Public Housing Number 27/PRT/M/2015 of 2015 concerning Dams
	42912	Non-fishery harbor building construction	Regulation of the Minister of Public Works and Public Housing of the Republic of Indonesia Number 5 of 2023 on Technical Requirements for Roads and Technical Planning of Roads
	42913	Fishery harbor building construction	
4	42211	Other civil building construction not otherwise classified	Circular Letter of the Director General of Highways PUPR No. 29/SE/Db of 2023 on Guidelines for Technical Requirements for Sustainable Construction in the Road Sector

5. Demolition and Site Preparation (*Pembongkaran dan Penyiapan Lahan*)

No	KBLI Level 5	Activity	Related Provisions (Non-exhaustive List)
1	43110	Demolition	Regulation of the Minister of Public Works and Housing Number 18 of 2021 on Standards for Demolition of Buildings
	43120	Site Preparation	- Regulation of the Minister of Public Works and Public Housing Number 21 of 2021 on Green Building Performance Assessment - Regulation of the Minister of Agrarian Affairs and Spatial Planning/Head of the National Land Agency of the Republic of Indonesia Number 11 of 2021 on Procedures for Preparation, Review, Revision, and Issuance of Approval of the Substance of Spatial Plans for Provinces, Regencies, Cities, and Detailed Spatial Plans

6. Renewable Technologies – Electrical Installation (*Teknologi Terbarukan - Instalasi Listrik*)

No	KBLI Level 5	Activities	Related Provisions (Non-exhaustive List)
1	43221	Electrical Installation	• Law of the Republic of Indonesia Number 6 of 2023 concerning the Stipulation of Government Regulation in Lieu of Law Number 2 of 2022 concerning the ratification of Job Creation Law • Government Regulation of the Republic of Indonesia Number 14 of 2012 concerning Electricity Supply Business Activities • Regulation of the Minister of Energy and Mineral Resources of the Republic of Indonesia Number 5 of 2014 concerning Procedures for Accreditation and Certification of Electricity, Certification Test Items for Low Voltage Electricity Utilization Installations

7. Energy Efficient Equipment (*Instalasi, Pemeliharaan, Perbaikan Peralatan Efisiensi Energi*)

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
1	43301	Glass and Aluminium Installation Work	• Government Regulation of the Republic of Indonesia Number 14/2021 amending Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services • Government Regulation of the Republic of Indonesia Number 16 of 2021, which serves as the implementing regulation of Law Number 28 of 2002 on Building Construction • Government Regulation of the Republic of Indonesia Number 14/2021 amending Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services • Regulation of the Minister of Public Works and Public Housing of the Republic of Indonesia Number 7 of 2021 on Recording of Construction Material Resources and Equipment
	43302	Floor, Wall, Sanitary Ware and Ceiling Work	
	43304	Interior Decoration	
	43305	Exterior Decoration	

8. Energy Performance Measurement, Regulation, Control (*Instalasi, Pemeliharaan, Perbaikan*)

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
1	43217	Electronic Installation	- Government Regulation of the Republic of Indonesia Number 14 of 2021 amending Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services - Government Regulation of the Republic of Indonesia Number 16 of 2021, which serves as the implementing regulation of Law Number 28 of 2002 on Building Construction - Government Regulation of the Republic of Indonesia Number 14/2021 amending Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services - Government Regulation of the Republic of Indonesia Number 16 of 2021, which serves as the implementing regulation of Law Number 28 of 2002 on Building Construction - Regulation of the Minister of Public Works and Housing No. 21/2021 on Green Building Performance Assessment - Regulation of the Minister of Public Works and Public Housing of the Republic of Indonesia Number 6 of 2021 on Standards for Business Activities and Products in the Implementation of Risk-Based Business Licensing in the Public Works and Public Housing Sector - Regulation of the Minister of Public Works and Public Housing of the Republic of Indonesia Number 8 of 2022 on Procedures for Implementing the Fulfillment of Construction Service Standard Certificates in the Framework of Supporting Ease of Business Licensing for Construction Service Businesses
	43221	Water Pipe Installation (Plumbing)	
	43224	Air Conditioning and Ventilation Installation	
	43291	Mechanical Installation	

9. Enabling Activities

a. Prefabricated Building Installation (*Pemasangan Bangunan Prefabrikasi*)

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
1	41020	Prefabricated building installation for buildings	- Government Regulation of the Republic of Indonesia Number 14/2021 amending Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services - Government Regulation of the Republic of Indonesia Number 16 of 2021, which serves as the implementing regulation of Law Number 28 of 2002 on Building Construction - Regulation of the Minister of Public Works and Public Housing of the Republic of Indonesia Number 8 of 2022 on Procedures for Implementing the Fulfillment of Construction Service Standard Certificates in the Framework of Supporting Ease of Business Licensing for Construction Service Businesses did
	42120	Installation of prefabricated buildings for roadway and railway construction	
	42220	Installation of prefabricated buildings for irrigation, communication, and waste system construction	

b. Dredging (*Pengerukan*)

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
1	42915	Dredging	- Government Regulation of the Republic of Indonesia Number 14 of 2021 amending Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services - Government Regulation of the Republic of Indonesia Number 13 of 2017 on the Amendments to Government Regulation Number 26 of 2008 on National Spatial Planning - Government Regulation of the Republic of Indonesia Number 14 of 2021 amending Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services - Regulation of the Minister of Transportation of the Republic of Indonesia Number 53 of 2021 on the Amendments to the Regulation of the Minister of Transportation of the

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
			Republic of Indonesia Number PM 125 of 2018 concerning Dredging and Reclamation

c. Telecommunication Installations and Marine, River, and Air Navigation Installations
(Instalasi Telekomunikasi dan Instalasi Navigasi Laut, Sungai dan Udara)

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
1	43212	Telecommunication Installation	- Government Regulation of the Republic of Indonesia Number 14 of 2021 amending Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services - Government Regulation Number 16 of 2021, which serves as the implementing regulation of Law Number 28 of 2002 on Building Construction - Government Regulation of the Republic of Indonesia Number 14 of 2021 amending Government Regulation No. 22/2020 on the Implementing Regulations of Law No. 2/2017 concerning Construction Services - Government Regulation of the Republic of Indonesia Number 31 of 2021 on the Implementation of the Shipping Sector - Government Regulation of the Republic of Indonesia Number 33 of 2021 on the Implementation of the Railway Sector - Government Regulation of the Republic of Indonesia Number 46 of 2021 concerning Post, Telecommunications, and Broadcasting - Government Regulation of the Republic of Indonesia Number 16 of 2021, which serves as the implementing regulation of Law Number 28 of 2002 on Building Construction - Regulation of the Minister of Transportation of the Republic of Indonesia Number 53 of 2021 on the Amendments to the Regulation of the Minister of Transportation of the Republic of Indonesia Number PM 125 of 2018 concerning Dredging and Reclamation - Regulation of the Minister of Communication and Informatics of the Republic of Indonesia Number 13 of 2021 concerning Technical
	43213	Marine and River Navigation Installations	
	43214	Air Navigation Installation	
	43215	Railway Signal and Telecommunication Installations	

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
			Standards for Telecommunication Equipment and/or Cellular Mobile Telecommunication Devices Regulation of the Minister of Transportation of the Republic of Indonesia Number 9 of 2022 concerning Amendments to Regulation of the Minister of Transportation Number 55 of 2016 concerning National Air Navigation Order

D. List of Provisions Related to Activities in the T&S Sector

1. Passenger Land and Other Passenger Transport (*Angkutan Penumpang Darat dan Angkutan Penumpang Lainnya*)

No	KBLI Level 5	Activity	Related Provisions (Non-exhaustive List)
1	49211	Intercity bus transportation	- Government Regulation of the Republic of Indonesia Number 30 of 2021 on the Implementation of the Traffic and Road Transportation Sector - Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.20/MENLHK/SETJEN/KUM.1/3/2017 on Exhaust Gas Emission Quality Standards for New Type Motor Vehicles in Category M, Category N, and Category O - Regulation of the Minister of Transportation of the Republic of Indonesia Number 15 of 2019 on the Implementation of Public Motorized Vehicles for Passenger Transportation on Routes - Regulation of the Minister of Transportation of the Republic of Indonesia Number 24 of 2021 on the Implementation of Road Transportation Passenger Terminals - Regulation of the Minister of Transportation of the Republic of Indonesia Number 83 of 2021 on the Implementation of Public Passenger Transportation in National Strategic Areas - Regulation of the Minister of Industry of the Republic of Indonesia Number 6 of 2022 on Specifications, Development Roadmap, and Provisions for Calculating the Value of
	49212	Cross-border bus transportation	
	49213	Intraprovincial intercity bus transport	
	49214	City bus transportation	
	49215	International cross-border bus transportation	
	49216	Special bus transportation	
	49219	Other scheduled bus transportation	
	49221	Tourist bus transportation	
	49229	Other non-scheduled bus transportation	
	49411	Scheduled non-bus cross-border transportation	
	49412	Scheduled non-bus intraprovincial intercity transportation	
	49414	Scheduled non-bus urban transportation	

No	KBLI Level 5	Activity	Related Provisions (Non-exhaustive List)
	49415	Specialized non-bus land transportation	Domestic Component Levels for Battery Electric Vehicles
	49419	Other scheduled non-bus passenger land transportation	- Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 8 of 2023 on the Implementation of Emission Quality Standards for Motor Vehicles Category M, Category N, Category O, and Category L - Decree of the Minister of Transportation of the Republic of Indonesia Number 123 of 2022 concerning Service Standards at the Roadworthiness Testing and Certification Center for Motor Vehicles

2. Transport by motorbikes, passenger cars and light commercial vehicles (*Transportasi dengan sepeda motor, mobil penumpang, dan kendaraan komersil lain*)

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
1	49421	Taxi	- Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.20/MENLHK/SETJEN/KUM.1/3/2017 on Exhaust Gas Emission Quality Standards for New Type Motor Vehicles in Category M, Category N, and Category O - Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 8 of 2023 on the Implementation of Emission Quality Standards for Motor Vehicles Category M, Category N, Category O, and Category L - Regulation of the Minister of Transportation of the Republic of Indonesia Number 118 of 2018 on the Implementation of Special Rental Transportation - Regulation of the Minister of Transportation of the Republic of Indonesia Number 12 of 2019 concerning the Protection of the Safety of Motorcycle Users Used for the Interest of the Community - Regulation of the Minister of Transportation of the Republic of Indonesia Number 15 of 2019 concerning the Implementation of Transportation of People with Public Motorized Vehicles on Routes - Regulation of the Minister of Transportation of the Republic of Indonesia Number 44 of
	49422	Rental transportation	
	49424	Motorbike taxi transportation	
	49425	Tourist land transportation	
	49429	Other land transportation for passengers	

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
			2020 concerning Testing the Physical Type of Motorized Vehicles with Electric Motors as the Driving Motor - Regulation of the Minister of Industry of the Republic of Indonesia Number 6 of 2022 on Specifications, Development Roadmap, and Provisions for Calculating the Value of Domestic Component Levels for Battery Electric Vehicles - Decree of the Minister of Transportation of the Republic of Indonesia Number 123 of 2022 concerning Service Standards at the Roadworthiness Testing and Certification Center for Motor Vehicles

3. Road Freight Transport (*Angkutan Darat untuk Barang*)

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
1	49431	Motorized transportation for general goods	Government Regulation of the Republic of Indonesia Number 30 of 2021 on the Implementation of the Traffic and Road Transportation Sector
	49432	Motorized transportation for special goods	- Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.20/MENLHK/SETJEN/KUM.1/3/2017 on Exhaust Gas Emission Quality Standards for New Type Motor Vehicles in Category M, Category N, and Category O - Regulation of the Minister of Transportation of the Republic of Indonesia Number 15 of 2019 concerning the Implementation of Transportation of People with Public Motorized Vehicles on Routes - Regulation of the Minister of Transportation of the Republic of Indonesia Number 44 of 2020 concerning Testing the Physical Type of Motorized Vehicles with Electric Motors as the Driving Motor - Regulation of the Minister of Transportation of the Republic of Indonesia Number 13 of 2023 on Amendments to the Regulation of the Minister of Transportation Number 12 of 2021 concerning Standards for Business Activities and Products in the Implementation of Risk-Based Business Licensing in the Transportation Sector - Regulation of the Minister of Finance of the Republic of Indonesia No. 138 of 2021 on Types and Tariffs for Types of Volatile Non-

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
			Tax State Revenue and Urgent Needs Applicable to the Ministry of Transportation Decree of the Minister of Transportation of the Republic of Indonesia Number 123 of 2022 on Service Standards at the Roadworthiness Testing and Certification Center for Motor Vehicles

4. Operation of personal mobility devices, cycle logistics (*Angkutan Tidak Bermotor Untuk Penumpang dan Barang*)

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
1	49423	Non-motorized transportation for passengers	Regulation of the Governor of the Special Capital Region of Jakarta Number 128 of 2019 on the Provision of Bicycle Lanes
	49433	Non-motorized transportation for general goods	- Instruction of the Governor of the Special Capital Region of Jakarta Number 79 of 2016 on the Planning of the Arrangement of Pedestrian Facilities, Roads and Their Facilities Along the Corridor of <i>Jalan Sudirman-Jalan Thamrin</i> Governor of the Special Capital Region of Jakarta Province. - Other Regional Government Regulations related

5. Passenger interurban rail transport (*Transportasi Darat Kereta untuk Penumpang*)

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
1	49110	Long-distance rail transportation for passengers	- Government Regulation of the Republic of Indonesia Number 61 of 2016 on Amendments to Government Regulation Number 72 of 2009 concerning Railway Traffic and Transportation - Government Regulation of the Republic of Indonesia Number 33 of 2021 on the Implementation of the Railway Sector
	49441	Urban rail transportation	
	49442	Rail transportation for tourism	
	49450	Other rail transportation	

6. Freight interurban rail transport (*Transportasi Darat Kereta untuk Barang*)

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
1	49120	Rail transportation for goods	Government Regulation of the Republic of Indonesia Number 61 of 2016 on Amendments to Government Regulation Number 72 of 2009 concerning Railway Traffic and Transportation

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
			Government Regulation of the Republic of Indonesia Number 33 of 2021 on the Implementation of the Railway Sector

7. Infrastructure for road and public transportation, including infrastructure to enable low-carbon land transport (*Infrastruktur Jalan dan Transportasi Umum, termasuk Infrastruktur yang Mendukung Transportasi Darat Rendah Karbon*)

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
1	52211	Land terminal activities	- Government Regulation of the Republic of Indonesia Number 34 of 2006 on Roads - Government Regulation of the Republic of Indonesia Number 79 of 2013 on Traffic Networks and Road Transportation - Government Regulation of the Republic of Indonesia Number 23 of 2024 on Toll Roads - Presidential Regulation of the Republic of Indonesia No. 22 of 2017 concerning the National Energy General Plan - Regulation of the Minister of Transportation of the Republic of Indonesia Number 60 of 2019 concerning the Implementation of Goods Transportation by Motorized Vehicles on the Road - Regulation of the Minister of Transportation of the Republic of Indonesia Number 24 of 2021 on the Implementation of Road Transportation Passenger Terminals - Decree of the Minister of Transportation of the Republic of Indonesia Number KM 66 of 1993 on Public Parking Facilities - Decree of the Minister of Transportation Number . KM 8 of 2023 on the Determination of Climate Change Mitigation Actions in the Transportation Sector for Achieving Nationally Determined Contribution Targets
	52213	Toll road activities	
	52214	On street parking	
	52215	Off street parking	
	52219	Other supporting activities for land transportation	

8. Infrastructure for rail transport (*Infrastruktur Pendukung Angkutan Kereta*)

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
1	52212	Railway station activities	Government Regulation of the Republic of Indonesia Number 61 of 2016 on Amendments to Government Regulation Number 72 of 2009 on Railway Traffic and Transportation
	52292	Rail cargo expedition and land transportation expedition activities ((EMKA & EAD))	

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
			- Regulation of the Minister of Transportation of the Republic of Indonesia Number 60 of 2012 on Technical Requirements for Railway Tracks - Regulation of the Minister of Transportation of the Republic of Indonesia Number 48 of 2014 on Procedures for Loading, Arranging, Transporting, and Unloading Goods by Train - Decree of the Minister of Transportation Number KM 8 of 2023 on the Determination of Climate Change Mitigation Actions in the Transportation Sector for Achieving Nationally Determined Contribution Targets

9. Sea and coastal passenger water transport (*Angkutan Perairan - Laut untuk Penumpang*)

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
1	50111	Domestic sea transport liner for passengers	- Government Regulation of the Republic of Indonesia Number 31 of 2021 on the Implementation of the Shipping Sector - Presidential Regulation (PERPRES) Number 29 of 2012 concerning the Ratification of Annex III, Annex IV, Annex V, and Annex VI of the International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol of 1978 related thereto (Annex III, Annex IV, Annex V, and Annex VI of the 1973 International Convention on the Prevention of Pollution from Ships, as amended by the 1978 Protocol) - Regulation of the Minister of Transportation of the Republic of Indonesia Number 60 of 2021 on the Second Amendment to the Regulation of the Minister of Transportation Number 104 of 2017 concerning the Implementation of Ferry Transportation - Regulation of the Minister of Transportation of the Republic of Indonesia Number 91 of 2021 on Zoning in Port Areas Used to Serve Ferry Transportation - Regulation of the Minister of Transportation of the Republic of Indonesia Number 24 of 2022 on Amendments to Regulation of the Minister of Transportation Number 29 of 2014 on Prevention of Maritime Environmental Pollution
	50112	Domestic sea transport tramper for passengers	
	50113	Domestic sea transport for tourism	
	50114	Pioneer domestic sea transport for passengers	
	50121	International sea transport liner for passengers	
	50122	International sea transport tramper for passengers	
	50123	International sea transport for tourism	
	50214	Inter-province passenger ferry transport	
	50215	Pioneer inter-province passenger ferry transport	
	50216	Inter-county/city passenger ferry transport	
	50217	Pioneer inter-county/city passenger ferry transport	

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
	50218	Intra-county/city passenger ferry transport	Regulation of the Minister of Transportation of the Republic of Indonesia Number 7 of 2023 on Pioneer Sea Transportation Tariffs
	50219	Other passenger ferry transport, including international ferry transport	- Decree of the Minister of Transportation of the Republic of Indonesia Number KM 86 of 2002 on Passenger Tariffs and Mining Fees for Pioneer Sea Transportation - Circular Letter of the Director General of Sea Transportation Number . UM.003/93/14/DJPL-18, dated 30 October 2018, on Limits of Sulphur Content in Fuel and Obligations to Submit Fuel Consumption on Ships - Regulation of the Governor of East Java Province Number 7 of 2023 on Economy Class Water Ferry Tariffs for Inter-District/City Ferries within the Province

10. Inland passenger water transport (*Angkutan Perairan - Sungai, Danau dan Penyeberangan untuk Penumpang*)

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
1	50211	River and lake liner transport (fixed and regular routes) for passengers	- Presidential Regulation (PERPRES) Number 29 of 2012 concerning the Ratification of Annex III, Annex IV, Annex V, and Annex VI of the International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol of 1978 related there to (Annex III, Annex IV, Annex V, and Annex VI of the 1973 International Convention on the Prevention of Pollution from Ships, as amended by the 1978 Protocol) - Regulation of the Minister of Transportation of the Republic of Indonesia Number 24 of 2022 on Amendments to Regulation of the Minister of Transportation Number 29 of 2014 on Prevention of Maritime Environmental Pollution - Regulation of the Minister of Transportation of the Republic of Indonesia Number 61 of 2021 on the Implementation of River and Lake Transportation
	50212	River and lake tramper transport (non-fixed and irregular routes) for passengers	
	50213	River and lake transport for tourism and related thereto	

11. Sea and Coastal Freight Water Transport and Retrofitting (*Angkutan Perairan – Laut dan Retrofit*)

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
1	50131	Domestic sea liner transport for goods	• Law of the Republic of Indonesia Number 66 of 2024 concerning the Third Amendment to Law Number 17 of 2008 concerning Shipping • Presidential Regulation (PERPRES) Number 29 of 2012 concerning the Ratification of Annex III, Annex IV, Annex V, and Annex VI of the International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol of 1978 related thereto (Annex III, Annex IV, Annex V, and Annex VI of the 1973 International Convention on the Prevention of Pollution from Ships, as amended by the 1978 Protocol) • Regulation of the Minister of Transportation of the Republic of Indonesia Number 60 of 2021 on the Second Amendment to the Regulation of the Minister of Transportation Number 104 of 2017 concerning the Implementation of Ferry Transportation • Regulation of the Minister of Transportation of the Republic of Indonesia Number 23 of 2022 concerning the Second Amendment to the Regulation of the Minister of Transportation Number 93 of 2013 on the Organization and Business of Sea Transportation • Regulation of the Minister of Transportation of the Republic of Indonesia Number 24 of 2022 on Amendments to Regulation of the Minister of Transportation Number 29 of 2014 on Prevention of Maritime Environmental Pollution • Circular Letter of the Director General of Sea Transportation Number UM.003/93/14/DJPL-18, dated 30 October 2018, on Limits of Sulphur Content in Fuel and Obligations to Submit Fuel Consumption on Ships
	50132	Domestic sea tramper transport for goods	
	50133	Domestic sea transport for special goods	
	50134	Pioneer domestic sea transport for goods	
	50135	Domestic traditional shipping	
	50141	International sea liner transport for goods	
	50142	International sea tramper transport for goods	
	50143	International sea transport for special goods	
	50144	International traditional shipping	

12. Inland Freight Water Transport and Retrofitting (*Angkutan Perairan – Sungai dan Danau untuk Barang*)

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
1	50221	River and lake transport for general goods and/or animals	• Presidential Regulation (PERPRES) Number 29 of 2012 concerning the Ratification of Annex III, Annex IV, Annex V,

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
	50222	River and lake transport for special goods	and Annex VI of the International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol of 1978 related thereto (Annex III, Annex IV, Annex V, and Annex VI of the 1973 International Convention on the Prevention of Pollution from Ships, as amended by the 1978 Protocol) - Regulation of the Minister of Transportation of the Republic of Indonesia Number 24 of 2022 on Amendments to Regulation of the Minister of Transportation Number 29 of 2014 on Prevention of Maritime Environmental Pollution - Circular Letter of the Director General of Sea Transportation No. UM.003/93/14/DJPL-18, dated 30 October 2018, on Limits of Sulphur Content in Fuel and Obligations to Submit Fuel Consumption on Ships
	50223	River and lake transport for dangerous goods	
	50224	General interprovincial ferry transport for goods	
	50225	Pioneer interprovincial ferry transport for goods	
	50226	General cross-county/city ferry transport for goods	
	50227	Pioneer cross-county/city ferry transport for goods	
	50228	General ferry transport within county/city for goods	
	50229	Other ferry transport for goods, including international ferry transport	

13. Infrastructure for water transportation, including infrastructure to enable low-carbon water transport (*Infrastruktur untuk Transportasi Air, Termasuk Infrastruktur untuk Memungkinkan Transportasi Air Rendah Karbon*)

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
1	52221	Sea port service activities	- Law of the Republic of Indonesia Number 66 of 2024 concerning the Third Amendment to Law Number 17 of 2008 concerning Shipping - Government Regulation of the Republic of Indonesia Number 31 of 2021 on the Implementation of the Shipping Sector - Presidential Regulation of the Republic of Indonesia Number 22 of 2017 concerning the National Energy General Plan - Regulation of the Minister of Transportation Number 93 of 2013 on the Organization and Business of Sea Transportation - Regulation of the Minister of Transportation of the Republic of Indonesia Number 60 of 2019 concerning the Implementation of Goods Transportation by Motorized Vehicles on the Road
	52222	River and lake port service activities	
	52223	Ferry port service activities	
	52225	Ship management activities	
	52229	Other water transportation enabling activities	
	52293	Activities related to the expedition or freight forwarding of goods by sea	

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
			• Regulation of the Minister of Transportation of the Republic of Indonesia Number 62 of 2019 on Minimum Service Standards for Crossing Transportation • Regulation of the Minister of Transportation of the Republic of Indonesia Number 50 of 2021 concerning the Implementation of Seaports • Regulation of the Minister of Transportation of the Republic of Indonesia Number PM 59 of 2021 concerning the Implementation of Service Businesses Related to Water Transportation • Regulation of the Minister of Transportation of the Republic of Indonesia Number 60 of 2021 on the Second Amendment to the Regulation of the Minister of Transportation Number 104 of 2017 concerning the Implementation of Ferry Transportation • Regulation of the Minister of Transportation of the Republic of Indonesia Number 91 of 2021 on Zoning in Port Areas Used to Serve Ferry Transportation • Decree of the Minister of Transportation of the Republic of Indonesia Number KM 82/AL 305/PHB-85 concerning Sea Freight Expeditions • Decree of the Minister of Transportation Number KM 8 of 2023 on the Determination of Climate Change Mitigation Actions in the Transportation Sector for Achieving Nationally Determined Contribution Targets

14. Air Transport for Freight and Passenger (*Angkutan Udara untuk Penumpang dan Barang*)

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
1	51101	General domestic scheduled air transportation for passengers	• Government Regulation of the Republic of Indonesia Number 3 of 2000 on Amendments to Government Regulation Number 40 of 1995 on Air Transportation
	51102	Pioneer scheduled domestic air transportation for passengers	• Regulation of the Minister of Transportation of the Republic of Indonesia Number 66 of 2020 on Amendments to Regulation of the Minister of Transportation Number 79 of

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
	51103	Scheduled international air transportation for passengers	2017 on Criteria and Implementation of Pioneer Air Transportation Activities and Subsidies for Cargo Air Transportation Regulation of the Minister of Transportation of the Republic of Indonesia Number 30 of 2021 on Minimum Service Standards for Air Transportation Passengers
	51104	Non-scheduled domestic general air transportation for passengers	
	51105	Pioneer non-scheduled domestic air transportation for passengers	
	51106	Air transportation for sports	
	51107	Air transportation for tourism	
	51109	Other air transportation for passengers	
	51201	Scheduled domestic general air transportation for goods	
	51202	Pioneer scheduled domestic air transportation for goods	
	51203	Scheduled international air transportation for goods	
	51204	Non-scheduled domestic general air transportation for goods	
	51205	Pioneer non-scheduled domestic air transportation for goods	

15. Airport infrastructure, including low-carbon assets and facilities (*Infrastruktur bandara, termasuk aset dan fasilitas rendah karbon*)

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
1	52230	Aiport operations	- Government Regulation of the Republic of Indonesia Number 3 of 2000 on Amendments to Government Regulation Number 40 of 1995 on Air Transportation - Government Regulation of the Republic of Indonesia Number 70 of 2001 on Airports - Regulation of the Minister of Transportation of the Republic of Indonesia Number 40 of 2023 on Amendments to Regulation of the
	52294	Air cargo expedition activities (EMPU)	

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
			Minister of Transportation Number 39 of 2019 on National Airport Order

16. Enabling Activities

a. Land, Water, and Air Transport Enabling Services (*Jasa Penunjang Angkutan Darat, Laut dan Udara*)

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
1	52240	Cargo handling (loading and unloading of goods)	• Law of the Republic of Indonesia Number 66 of 2024 concerning the Third Amendment to Law Number 17 of 2008 concerning Shipping • Government Regulation of the Republic of Indonesia Number 31 of 2021 on the Implementation of the Shipping Sector • Presidential Regulation of the Republic of Indonesia Number 22 of 2017 concerning the National Energy General Plan • Regulation of the Minister of Transportation of the Republic of Indonesia Number 16 of 2021 on Procedures for Handling and Transporting Dangerous Goods at Ports • Regulation of the Minister of Transportation of the Republic of Indonesia No. PM 59 of 2021 concerning the Implementation of Services Business Related to Transportation in Waters • Decree of the Minister of Transportation Number KM 8 of 2023 on the Determination of Climate Change Mitigation Actions in the Transportation Sector for Achieving Nationally Determined Contribution Targets
	52291	Transportation management services	
	52299	Other transportation support activities not otherwise classified	

b. Multimodal Transport (*Angkutan Multimoda*)

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
1	52295	Multimodal transportation	• Law of the Republic of Indonesia Number 66 of 2024 concerning the Third Amendment to Law Number 17 of 2008 concerning Shipping • Government Regulation of the Republic of Indonesia Number 8 of 2011 on Multimodal Transportation • Regulation of the Minister of Transportation of the Republic of Indonesia Number 8 of 2012 on the Implementation and Business of Multimodal Transportation

No	KBLI Level 5	Activities	Related Provisions (non-exhaustive list)
			Decree of the Minister of Transportation Number KM 8 of 2023 on the Determination of Climate Change Mitigation Actions in the Transportation Sector for Achieving Nationally Determined Contribution Targets

E. List of Provisions Related to Activities in the AFOLU Sector

1. Sustainable Forest Management

No	KBLI Level 5	Activity	Related Provisions (non-exhaustive list)
1	02120	Business of Natural Forests	- Government Regulation of the Republic of Indonesia Number 6 of 1999 concerning Forest Management and Extraction of Forest Products in Production Forests - Government Regulation of the Republic of Indonesia Number 23 of 2021 concerning the Implementation of Forestry - Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 8 of 2021 concerning Forestry Planning and Preparation of Forest Management Plans, and Forest Utilization in Protected and Production Forests - Decree of the Minister of Environment and Forestry Number SK.9895/MenLHK-PHL/BPPHH/HPL.3/12/2022 concerning Standard Guidelines for Implementing the Legality and Sustainability Verification System
2	02201	Wood Harvesting	

2. Plantation Forestry (*Hutan Tanaman*)

No	KBLI Level 5	Activity	Related Provisions (non-exhaustive list)
1	02111	Teak Forest Business	- Government Regulation of the Republic of Indonesia Number 6 of 1999 concerning Forest Management and Extraction of Forest Products in Production Forests - Government Regulation of the Republic of Indonesia Number 23 of 2021 concerning the Implementation of Forestry
	02112	Pine Forest Business	
	02113	Mahogany Forest Business	
	02114	Sonokeling Forest Business	Regulation of the Minister of Environment and Forestry of the Republic of Indonesia
	02115	<i>Sengon/Albasia/Jeunjing</i> Forest Business	

No	KBLI Level 5	Activity	Related Provisions (non-exhaustive list)
	02116	Sandalwood Forest Business	Number 8 of 2021 concerning Forestry Planning and Preparation of Forest Management Plans, and Forest Utilization in Protected and Production Forests Decree of the Minister of Environment and Forestry Number SK.9895/MenLHK-PHL/BPPHH/HPL.3/12/2022 concerning Standard Guidelines for Implementing the Legality and Sustainability Verification System
	02117	Acacia Forest Business	
	02118	Eucalyptus Forest Business	
	02119	Other Forestry Business	
2	02201	Wood Harvesting	

3. Non-timber Forest Product (*Produk Hutan Selain Kayu*)

No	KBLI Level 5	Activity	Related Provisions (non-exhaustive list)
1	02131	Rattan Business	- Government Regulation of the Republic of Indonesia Number 6 of 1999 concerning Forest Management and Extraction of Forest Products in Production Forests - Government Regulation of the Republic of Indonesia Number 23 of 2021 concerning the Implementation of Forestry - Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.77/MENLHK/SETJEN/KUM.1/10/2019 on the Utilization of Non-Timber Forest Products in Production Forests and the Extraction of Non-Timber Forest Products in State Forests - Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 8 of 2021 concerning Forestry Planning and Preparation of Forest Management Plans, and Forest Utilization in Protected and Production Forests - Decree of the Minister of Environment and Forestry Number SK.9895/MenLHK-PHL/BPPHH/HPL.3/12/2022 concerning Standard Guidelines for Implementing the Legality and Sustainability Verification System
	02132	Pine Resin Business	
	02133	Eucalyptus Leaves Business	
	02134	Bamboo Business	
	02135	Resin Business	
	02136	Agarwood Business	
	02139	Other Non-Timber Forestry Product Businesses	
2	02301	Rubber Latex Extraction	- Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 8 of 2021 concerning Forestry Planning and Preparation of Forest Management Plans, and Forest Utilization in Protected and Production Forests - Decree of the Minister of Environment and Forestry Number SK.9895/MenLHK-PHL/BPPHH/HPL.3/12/2022 concerning Standard Guidelines for Implementing the Legality and Sustainability Verification System
	02302	Rattan Extraction	
	02303	Pine Resin Extraction	
	02304	Eucalyptus Leaves Extraction	
	02305	Silkworms/Cocoon Extraction	
	02306	Resin Extraction	
	02307	Honey Extraction	
	02308	Bamboo Extraction	
	02309	Other Non-Timber Products Extraction	
3	02209	Other Forestry Businesses	Law of the Republic of Indonesia Number 5 of 1990 concerning Conservation of

No	KBLI Level 5	Activity	Related Provisions (non-exhaustive list)
			Biological Natural Resources and their Ecosystems • Law of the Republic of Indonesia Number 32 of 2024 concerning Amendments to Law Number 5 of 1990 concerning Conservation of Biological Natural Resources and their Ecosystems • Government Regulation of the Republic of Indonesia Number 5 of 2021 concerning the Implementation of Risk-Based Business Licensing • Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 3 of 2021 concerning Business Activity Standards in the Implementation of Risk-Based Business Licensing in the Environmental and Forestry Sector • Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 8 of 2021 concerning Forestry Planning and Preparation of Forest Management Plans, and Forest Utilization in Protected and Production Forests • Regulation of the Director General of Forest Protection and Nature Conservation Number P.22/IV-SET/2014 concerning Implementation of Supervision, Evaluation and Guidance of Water and Water Energy Utilization in Wildlife Sanctuaries, National Parks, Grand Forest Parks and Nature Tourism Parks • Regulation of the Director General of Natural Resources and Ecosystem Conservation Number P.03/KSDAE/SET/KSA.3/8/2019 concerning Guidelines for Control, Monitoring and Evaluation of Nature Tourism Business in Wildlife Sanctuaries, National Parks, Grand Forest Parks and Nature Tourism Parks • Regulation of the Director General of Natural Resources and Ecosystem Conservation Number P.5/KSDAE/SET/KUM.1/12/2019 concerning Guidelines for Guidance, Supervision and Evaluation of Geothermal Environmental Services Utilization in National Park Areas, Grand Forest Parks and Nature Tourism Parks

4. Conservation and Restoration Forestry Land (*Konservasi dan Restorasi Hutan*)

No	KBLI Level 5	Activity	Related Provisions (non-exhaustive list)
1	02402	Forest Protection and Nature Conservation Services	• Law of the Republic of Indonesia Number 5 of 1990 concerning Conservation of Biological Natural Resources and their Ecosystems • Law of the Republic of Indonesia Number 32 of 2024 concerning Amendments to Law Number 5 of 1990 concerning Conservation of Biological Natural Resources and their Ecosystems • Government Regulation of the Republic of Indonesia Number 45 of 2004 on Forest Protection • Government Regulation of the Republic of Indonesia Number 60 of 2009 Amending Government Regulation Number 45 of 2004 regarding Procedures for Forest Protection • Government Regulation of the Republic of Indonesia Number 23 of 2021 concerning the Implementation of Forestry • Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 8 of 2021 concerning Forestry Planning and Preparation of Forest Management Plans, and Forest Utilization in Protected and Production Forests • Decree of the Minister of Environment and Forestry Number SK.9895/MenLHK-PHL/BPPHH/HPL.3/12/2022 concerning Standard Guidelines for Implementing the Legality and Sustainability Verification System
	02403	Social Forestry Rehabilitation and Restoration Services	

5. Forestry Supply Chain (*Rantai Nilai Tambah Kehutanan*)

No	KBLI Level 5	Activity	Related Provisions (non-exhaustive list)
1	02141	Teak Plant Nursery Business	• Government Regulation of the Republic of Indonesia Number 5 of 2021 concerning the Implementation of Risk-Based Business Licensing • Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.3/MENLHK/SETJEN/KUM.1/1/2020 on Implementing Forest Plant Seeds
	02142	Pines Nursery Business	
	02143	Mahogany Plant Nursery Business	
	02144	Sonokeling Plant Nursery Business	

No	KBLI Level 5	Activity	Related Provisions (non-exhaustive list)
	02145	<i>Segon / Albasia / Jeunjing</i> Nursery Business	
	02146	Jabon Plant Nursery Business	
	02147	Acacia Plant Nursery Business	
	02148	Eucalyptus Nursery Business	
	02149	Other Forestry Plant Nursery Business	

6. Palm Oil Plantation (*Perkebunan Kelapa Sawit*)

No	KBLI Level 5	Activity	Related Provisions (non-exhaustive list)
1	01262	Palm oil Plantation	- Presidential Regulation of the Republic of Indonesia Number 44 of 2020 Concerning the Indonesian Sustainable Palm Oil Plantation Certification System - Regulation of the Minister of Agriculture of the Republic of Indonesia Number 38 of 2020 Concerning the Implementation of the Indonesian Sustainable Palm Oil Plantation Certification

ANNEX

List of Social Aspect Provisions

A. For Corporations/Non-MSMEs

No	Social Aspects	Guiding Provisions (Non-exhaustive List)
1	Protection and Respect for Human Rights	Law of the Republic of Indonesia Number 3 of 1951 concerning Statement of Applicability of the Labor Inspection Law of 1948 Number 23 of the Republic of Indonesia for All of Indonesia
		Law of the Republic of Indonesia Number 18 of 1956 concerning Approval of the International Labor Organization Conference Number 98 concerning the Applicability of the Basics of the Right to Organize and Bargain Collectively
		Law of the Republic of Indonesia Number 3 of 1961 concerning Approval of International Labor Organization Conference Number 106 concerning Weekly Rest in Trade and Offices.
		Law of the Republic of Indonesia Number 3 of 1969 concerning Approval of the International Labor Organization Convention Number 120 Concerning Hygiene in Commerce and Offices.
		Law of the Republic of Indonesia Number 1 of 1970 concerning Work Safety.
		Law of the Republic of Indonesia Number 39 of 1999 concerning Human Rights to conduct studies related to international human rights instruments and recommend whether ratification is important or not.
		Law of the Republic of Indonesia Number 21 of 2000 concerning Trade Unions.
		Law of the Republic of Indonesia Number 13 of 2003 concerning Employment as amended by the Job Creation Law.
		Law of the Republic of Indonesia Number 21 of 2003 concerning Ratification of ILO Convention Number 81 Concerning Labor Inspection in Industry and Commerce.
		Law of the Republic of Indonesia Number 19 of 2011 concerning Ratification of the Convention on The Rights of Persons with Disabilities.
		Law of the Republic of Indonesia Number 8 of 2016 concerning Persons with Disabilities.
		Law of the Republic of Indonesia Number 15 of 2016 concerning Ratification of the Maritime Labor Convention, 2006.
		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 Number 19 of 1973 concerning Regulation and Supervision of Work Safety in the Mining Sector.
		Government Regulation Number 11 of 1979 concerning Work Safety in the Refining and Processing of Oil and Gas.
		Government Regulation Number 50 of 2012 concerning Implementation of the Occupational Safety and Health Management

No	Social Aspects	Guiding Provisions (Non-exhaustive List)
		System (SMK3).
		Government Regulation Number 5 of 2021 concerning Implementation of Risk-Based Business Licensing.
		Presidential Regulation Number 21 of 2010 concerning Labor Inspection.
		Presidential Regulation Number 34 of 2014 concerning Ratification of the Convention Concerning the Promotional Framework For Occupational Safety And Health/Convention 187, 2006.
		Joint Decree of Minister of Manpower - Minister of Public Works Number 174/MEN/1986 and Number 104/KPTS/1986 of 1986 concerning Occupational Safety and Health (K3) at Construction Activity Sites and Guidelines for Implementing K3 at Construction Activity Sites.
		Regulation of Minister of Manpower and Transmigration Number Per 01/MEN/1980 concerning Occupational Safety and Health in Building Construction.
		Regulation of Minister of Manpower Number Per-01/MEN/1992 concerning Occupational Safety and Health Requirements for Carbide Aircraft.
		Regulation of Minister of Manpower and Transmigration Number Per. 01/MEN/2007 concerning Guidelines for Giving K3 Awards.
		Regulation of Minister of Manpower and Transmigration Number Per. 15/MEN/VIII/2008 concerning First Aid for Accidents (P3K) in the Workplace.
		Regulation of Minister of Manpower and Transmigration Number Per. 08/MEN/VII/2010 concerning Personal Protective Equipment.
		Regulation of Minister of Manpower Number 26 of 2014 concerning Implementation Assessment of the Occupational Safety and Health Management System.
		Regulation of Minister of Manpower Number 12 of 2015 as amended by Regulation of the Minister of Manpower Number 33 of 2015 concerning Electrical Work Safety and Health in the Workplace.
		Regulation of Minister of Manpower Number 33 of 2016 as amended by Regulation of the Minister of Manpower Number 1 of 2020 concerning Procedures for Labor Inspection.
		Regulation of Minister of Manpower Number 37 of 2016 concerning Occupational Safety and Health of Pressure Vessels and Storage Tanks.
		Regulation of Minister of Manpower Number 38 of 2016 concerning Occupational Safety and Health of Power and Production Aircraft.
		Regulation of Minister of Manpower Number 6 of 2017 concerning Occupational Safety and Health of Elevators and Escalators.

No	Social Aspects	Guiding Provisions (Non-exhaustive List)
		Regulation of Minister of Manpower Number 5 of 2018 concerning Occupational Safety and Health Work Environment.
		Regulation of Minister of Public Works and Housing Number 21/PRT/M/2019 concerning Construction Safety Management System Guidelines.
		Regulation of Minister of Public Works and Housing Number 21/PRT/M/2019 concerning Construction Safety Management System Guidelines.
		Regulation of Minister of Public Works and Housing Number 21/PRT/M/2019 concerning Construction Safety Management System Guidelines.
		Regulation of Minister of Manpower Number 8 of 2020 concerning Occupational Safety and Health of Lifting Aircraft and Transport Aircraft.
		Regulation of Minister of Energy and Mineral Resources Number 33 of 2021 concerning Occupational Safety and Health, Environmental Protection and Management, and Geothermal Technical Rules for Indirect Use.
		Instruction of the Minister of Manpower Number 11/M/B/1997 concerning Special Supervision of K3 for Fire Management.
		Decree of the Directorate General of Supervision of Occupational Safety and Health Norms Number 64 of 2013 concerning Guidelines for the Development of Occupational Safety and Health for Underwater Diving Work.
		Construction and Building Guidelines Number 04/BM/2006 concerning Guidelines for Implementing Occupational Safety and Health (K3) for Road and Bridge Construction No.004/BM/2006.
2	Employment includes decent work, prevention of forced labor, protection of women and child labor, as well as development of human resource development.	Staatsblad Number 26 of 1933 and Staatsblad Number 236 of 1933 concerning Ratification of ILO Convention Number 29/1930 concerning Forced or Compulsory Labor. Staatsblad Number 219 of 1937 concerning Women's Work in All Kinds of Underground Mining. Law of the Republic of Indonesia concerning Steam of 1930. Law of the Republic of Indonesia Number 80 of 1957 concerning Approval of International Labor Organization Conference Number 100 concerning Equal Remuneration for Male and Female Workers for Work of the Same Value. Law of the Republic of Indonesia Number 1 of 1970 concerning Work Safety. Law of the Republic of Indonesia Number 7 of 1984 concerning Ratification of the Convention on the Elimination of All Forms of Discrimination Against Women.

No	Social Aspects	Guiding Provisions (Non-exhaustive List)
		Law of the Republic of Indonesia Number 24 of 2011 concerning Social Security Administering Bodies.
		Law of the Republic of Indonesia Number 19 of 1999 concerning Ratification of ILO Convention Number 105 Concerning The Abolition of Forced Labor.
		Law of the Republic of Indonesia Number 20 of 1999 concerning ratification of ILO Convention Number 138 Concerning Minimum Age for Admission to Employment.
		Law of the Republic of Indonesia Number 21 of 1999 concerning Ratification of ILO Convention Number 111 Concerning Discrimination In Respect of Employment and Occupation.
		Law of the Republic of Indonesia Number 29 of 1999 concerning Ratification of the International Convention on the Elimination of All Forms of Racial Discrimination 1965.
		Law of the Republic of Indonesia Number 1 of 2000 concerning Ratification of ILO Convention Number 182 Concerning The Prohibition and Immediate Action for Elimination of The Worst Forms of Child Labour.
		Law of the Republic of Indonesia Number 21 of 2007 concerning Eradication of the Crime of Human Trafficking.
		Law of the Republic of Indonesia Number 24 of 2011 concerning Social Security Administering Bodies.
		Law of the Republic of Indonesia Number 8 of 2016 concerning Persons with Disabilities.
		Law of the Republic of Indonesia Number 18 of 2017 concerning Protection of Indonesian Migrant Workers as amended by the Job Creation Law.
		Law of the Republic of Indonesia Number 11 of 2020 concerning Job Creation.
		Law of the Republic of Indonesia Number 12 of 2022 concerning Criminal Acts of Sexual Violence.
		Law of the Republic of Indonesia Number 6 of 2023 concerning the Stipulation of Government Regulations in Lieu of Law Number 2 of 2022 concerning Job Creation Becomes Law (Job Creation Law).
		Law of the Republic of Indonesia Number 17 of 2023 concerning Health.
		Law of the Republic of Indonesia Number 13 of 2003 concerning Employment as amended by the Job Creation Law.
		Law of the Republic of Indonesia Number 40 of 2004 concerning the National Social Security System as amended by: (1) Job Creation Law; and (2) Law Number 4 of 2023 concerning Development and Strengthening of the Financial Sector.

No	Social Aspects	Guiding Provisions (Non-exhaustive List)
		Regulation in Lieu of the Job Creation Law Number 2 of 2022 concerning Job Creation.
		Regulation in Lieu of the Job Creation Law Number 2 of 2022 concerning Job Creation.
		Government Regulation Number 31 of 2006 concerning the National Job Training System.
		Government Regulation Number 70 of 2015 as amended by Government Regulation Number 66 of 2017 concerning Work Accident Insurance and Death Insurance for State Civil Service Employees.
		Government Regulation Number 88 of 2019 concerning Occupational Health.
		Government Regulation Number 35 of 2021 concerning Specific Time Work Agreements, Outsourcing, Working Time and Rest Time, and Termination of Employment Relations.
		Government Regulation Number 59 of 2021 concerning Implementation of Protection of Indonesian Migrant Workers
		Government Regulation Number 36 of 2021 as amended by Government Regulation Number 51 of 2023 concerning Wages.
		Government Regulation Number 44 of 2015 as amended by Government Regulation Number 82 of 2019 and Government Regulation Number 49 of 2023 concerning the Implementation of Work Accident Insurance and Death Insurance Programs.
		Presidential Regulation Number 109 of 2013 concerning Phases of Social Security Program Participation
		Presidential Regulation Number 7 of 2019 concerning Occupational Diseases.
		Presidential Regulation Number 82 of 2018 as amended by Presidential Regulation Number 75 of 2019 and Presidential Regulation Number 64 of 2020 concerning Health Insurance
		Decree of the President of the Republic of Indonesia Number 36 of 1990 concerning Ratification of the Convention on the Rights of the Child
		Decree of the President of the Republic of Indonesia Number 36 of 1990 concerning Ratification of the Convention on the Rights of the Child
		Regulation of Minister of Manpower and Transmigration Number PER.01/MEN/1981 concerning the Obligation to Report Occupational Diseases.
		Regulation of Minister of Manpower and Transmigration Number PER.03/MEN/1982 concerning Worker Health Services.

No	Social Aspects	Guiding Provisions (Non-exhaustive List)
		Regulation of Minister of Manpower and Transmigration Number 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 Minister of Manpower and Transmigration Number PER.25/MEN/XII/2008 of 2008 concerning Guidelines for Diagnosis and Assessment of Disabilities due to Accidents and Occupational Diseases.
		Regulation of Minister of Home Affairs Number 6 of 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 Minister of Manpower and Transmigration Number 11 of 2013 concerning Guidelines for Implementing the National Job Training System in the Region.
		Regulation of Minister of Manpower and Transmigration Number 8 of 2014 concerning Guidelines for Organizing Competency Based Training.
		Regulation of Minister of Manpower Number 9 of 2016 concerning Occupational Safety and Health at Heights.
		Regulation of Minister of Manpower Number 10 of 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 Minister of Manpower Number 10 of 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 Minister of Manpower Number 5 of 2021 concerning Procedures for Implementing Work Accident Insurance, Death Insurance and Old Age Security Programs.
		Regulation of Minister of Energy and Mineral Resources Number 33 of 2021 concerning Occupational Safety and Health, Environmental Protection and Management, and Geothermal Technical Rules for Indirect Use.
		Regulation of Minister of Health Number 11 of 2022 concerning Health Services for Occupational Diseases.
		OJK Regulation Number 24 of 2022 concerning Development of the Quality of Human Resources for Commercial Banks
		Regulation of Minister of Manpower Number 23 of 2021 concerning Revocation of Regulations of Minister of Manpower as a Result of the Enactment of Law Number 11 of 2020 concerning Job Creation and enforcing Regulations.

No	Social Aspects	Guiding Provisions (Non-exhaustive List)
		Regulation of Minister of Women's Empowerment and Child Protection Number 1 of 2020 as amended by Regulation of Minister of Women's Empowerment and Child Protection Number 1 of 2023 concerning Providing Protective Housing for Female Workers in the Workplace.
		Regulation of Minister of Manpower Number 2 of 2023 concerning Procedures for Imposing Administrative Sanctions in the Implementation of the Placement and Protection of Indonesian Migrant Workers
		Regulation of Minister of Manpower Number 4 of 2023 concerning Social Security for Indonesian Migrant Workers
		Regulation of the Indonesian Migrant Worker Protection Agency Number 6 of 2022 concerning Organization and Work Procedures of Indonesian Migrant Worker Protection Service Centers.
		Regional Regulation of Central Java Province Number 9 of 2007 concerning the Prevention of Child Labor.
		Regional Regulation of East Java Province Number 2 of 2022 concerning Implementation of Protection of Indonesian Migrant Workers.
		Regional Regulation of Surabaya City Number 6 of 2011 concerning Implementation of Child Protection.
		Regional Regulation of Samarinda City Number 6 of 2015 concerning Child Labor Free Zones.
		Regional Regulation of Sragen Regency Number 14 of 2017 concerning Worker Protection.
		Regulation of Banten Governor Number 28 of 2016 concerning Industrial Areas as Child Labor Free Zones.
		Regulation of Mayor of Pekalongan City Number 65 of 2022 concerning Protection for Child Labor in Pekalongan City.
		Instruction of Minister of Manpower Number INS.11/M/BW/1997 concerning Supervision of K3 Specifically for Fire Management.
		Decree of Minister of Manpower Number KEP.187/MEN/1999 concerning Control of Dangerous Chemicals in the Workplace.
		Decree of Minister of Manpower and Transmigration Number KEP-224/MEN/2003 concerning the Obligations of Entrepreneurs Employing Female Worker Between 23.00 and 07.00.
		Decree of Minister of Manpower and Transmigration Number KEP.235/MEN/2003 concerning Types of Work that Endanger the Health, Safety or Morals of Children.
		Decree of Minister of Manpower and Transmigration Number KEP.68/MEN/IV/2004 concerning Prevention and Control of HIV/AIDS in the Workplace.

No	Social Aspects	Guiding Provisions (Non-exhaustive List)
		Decree of Minister of Manpower and Transmigration Number KEP.115/MEN/VII/2004 concerning Protection for Children Who Perform Work to Develop Talents and Interests.
		Decree of Minister of Manpower and Transmigration Number KEP.261/MEN/XI/2004 concerning Companies that are Required to Implement Job Training.
		Decree of Minister of Manpower Number 88 of 2023 concerning Guidelines for Preventing and Handling Sexual Violence in the Workplace.
		Decree of the Director General of Mining Number 747.k/61.01/DJP/1999 concerning Education, Training and Certification of Officials and Special Technical Personnel in General Mining Business Activities.
		Circular Letter of Minister of Manpower Number: SE.60/MEN/SJ-HK/II/2006 concerning Guidelines for Equal Opportunities and Treatment in Employment in Indonesia/Equal Employment Opportunity (EEO).
		Circular Letter of Minister of Manpower and Transmigration No. SE.03/MEN/IV/2011 concerning Guidelines for Preventing Sexual Harassment in the Workplace.
		Circular Letter of Minister of Energy and Transmigration Number SE.01/MEN/PPK/IV/2012 concerning Obligations for Occupational Safety and Health Requirements in Confined Spaces.
		Circular Letter of Minister of Public Works and Public Housing Number 13/SE/M/2012 dated 28 December 2012 concerning the HIV and AIDS Prevention Program in the Construction Sector within the Ministry of Public Works.
3	Impact on people living close to Investments covers aspects such as job creation, poverty alleviation, and fostering economic growth.	United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). Law of the Republic of Indonesia Number 13 of 2011 concerning Handling of the Poor.
		Law of the Republic of Indonesia Number 21 of 2001 as amended by Government Regulation in Lieu of Law Number 1 of 2008 and Law Number 2 of 2021 concerning Special Autonomy for the Province of Papua.
		Law of the Republic of Indonesia Number 22 of 2001 concerning Oil and Natural Gas as amended by Government Regulation in Lieu of Law (Perppu) Number 2 of 2022 concerning Job Creation as has been enacted into Law through Law Number 6 of 2023 concerning Determination of Perppu Number 2 of 2022 concerning Job Creation Becomes Law (Job Creation Law).
		Law of the Republic of Indonesia Number 13 of 2003 concerning Employment as amended by the Job Creation Law.
		Law of the Republic of Indonesia Number 19 of 2003 concerning State-Owned Enterprises as amended by the Job Creation Law.

No	Social Aspects	Guiding Provisions (Non-exhaustive List)
		Law of the Republic of Indonesia Number 25 of 2007 concerning Capital Investment as amended by the Job Creation Law.
		Law of the Republic of Indonesia Number 40 of 2007 concerning Limited Liability Companies as amended by the Job Creation Law.
		Law of the Republic of Indonesia Number 20 of 2008 concerning Micro, Small, and Medium Enterprises as amended by the Job Creation Law.
		Law of the Republic of Indonesia Number 4 of 2009 as amended by Law Number 3 of 2020 concerning Mineral and Coal Mining.
		Republic of Indonesia Law Number 32 of 2009 concerning Environmental Protection and Management as amended by the Job Creation Law.
		Law of the Republic of Indonesia Number 13 of 2011 concerning the Handling of the Poor.
		Law of the Republic of Indonesia Number 6 of 2014 concerning Villages as amended by the Job Creation Law.
		Law of the Republic of Indonesia Number 21 of 2014 concerning Geothermal Energy as amended by the Job Creation Law.
		Government Regulation Number 47 of 2012 concerning Social and Environmental Responsibility of Limited Liability Companies.
		Government Regulation Number 33 of 2013 concerning Expansion of Job Opportunities.
		Government Regulation of the Republic of Indonesia Number 96 of 2021 concerning the Implementation of Mineral and Coal Mining Business Activities.
		Government Regulation in Lieu of Law (Perppu) No.2 of 2022 concerning Job Creation as has been enacted as Law through Law No.6 of 2023 concerning Determination of Perppu No.2 of 2022 concerning Job Creation into Law (Job Creation Law).
		Presidential Regulation Number 186 of 2014 concerning Social Empowerment of Remote Indigenous Communities.
		Presidential Regulation Number 62 of 2023 concerning the Acceleration of Implementation of Agrarian Reform.
		Instruction of the President of the Republic of Indonesia Number 4 of 2022 concerning the Acceleration of the Elimination of Extreme Poverty.
		Regulation of the Minister of Home Affairs Number 51 of 2007 concerning Community-Based Rural Area Development.
		Regulation of the Minister of Environment Number 17 of 2012 concerning Guidelines for Community Involvement in the Environmental Impact Analysis and Environmental Permit Process.

No	Social Aspects	Guiding Provisions (Non-exhaustive List)
		Regulation of the Minister of State-Owned Enterprises Number PER-07/MBU/05/2015 of 2015 concerning the Partnership Program for State-Owned Enterprises with Small Businesses and the Environmental Development Program.
		Regulation of the Minister of Agrarian Affairs and Spatial Planning/National Land Agency Number 7 of 2017 concerning Arrangements and Procedures for Determining Cultivation Rights.
		Regulation of the Minister of Environment and Forestry Number 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 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
		Regulation of the Minister of Energy and Mineral Resources Number 25 of 2018 as amended by Regulation of the Minister of Energy and Mineral Resources Number 50 of 2018, Regulation of the Minister of Energy and Mineral Resources Number 11 of 2019 and Regulation of the Minister of Energy and Mineral Resources Number 17 2020 concerning Mineral and Coal Mining Business
		Regulation of the Minister of Cooperatives Number 5 of 2020 concerning the Strategic Plan of the Ministry of Cooperatives and Small and Medium Enterprises for 2020–2024
		Regulation of the Minister of Social Affairs Number 9 of 2020 concerning Social and Environmental Responsibility of Business Entities
		Regulation of the Minister of Agriculture a Number 38 of 2020 concerning Implementation of Indonesian Sustainable Palm Oil Plantation Certification
		Regulation of the Minister of Cooperatives and Small and Medium Enterprises Number 1 of 2021 concerning Organization and Work Procedures of the Ministry of Cooperatives and Small and Medium Enterprises
		Regulation of the Minister of Cooperatives and Small and Medium Enterprises Number 11 of 2022 concerning Organization and Work Procedures of the Ministry of Cooperatives and Small and Medium Enterprises
		Regulation of the Minister of Villages, Development of Disadvantaged Regions and Transmigration Number 21 of 2020 as amended by Regulation of the Minister of Villages, Development of Disadvantaged Regions and Transmigration Number 6 of 2023 concerning General

No	Social Aspects	Guiding Provisions (Non-exhaustive List)
		Guidelines for Village Development and Village Community Empowerment
		Regulation of the Minister of Environment and Forestry Number 2 of 2023 concerning Assignments for Implementing Peat Restoration Activities for the 2023 Fiscal Year.
		Regional Regulation of West Java Province Number 2 of 2013 concerning Guidelines for Corporate Social and Environmental Responsibility and Partnership and Environmental Development Programs in West Java
		Regional Regulation of East Kalimantan Province Number 3 of 2013 concerning Social and Environmental Responsibility of Limited Liability Companies and Partnership and Environmental Development Programs
		Regional Regulation of West Kalimantan Province Number 4 of 2016 concerning Management of Corporate Social Responsibility (CSR) in West Kalimantan Province.
		Regional Regulation of Papua Province Number 5 of 2018 concerning Corporate Social Responsibility.
		Regional Regulation of Papua Province Number 10 of 2019 concerning Sustainable Development in West Papua Province
		Governor Regulation of Central Sulawesi Number 37 of 2012 concerning General Guidelines for Implementing Free, Prior and Informed Consent on Reducing Emissions from Deforestation and Forest Degradation Plus (REDD+) in Central Sulawesi
		Governor Regulation of East Kalimantan Province Number 43 of 2021 concerning Management of Areas with High Conservation Value in Plantation Areas.
		Regional Regulation of Sorong Regency Number 10 of 2017 concerning Protection and Recognition of the Moi Traditional Law Community in Sorong Regency.
		Regional Regulation of Rembang Regency Number 5 of 2018 concerning Corporate Social Responsibility.
		Regional Regulation of Tambrau Regency Number 6/37/2018 of 2018 concerning Protection and Recognition of Traditional Law Communities in Tambrau Regency.
		Regional Regulation of Madiun City Number 42 of 2018 concerning Corporate Social Responsibility.
		Regional Regulation of Teluk Bintuni Regency Number 1 of 2019 concerning Protection and Recognition of Traditional Law Communities in Teluk Bintuni Regency.
		Regional Regulation of Humbang Hasundutan Regency Number 3 of 2019 concerning Recognition and Protection of the Pandumaan-Sipituhuta Indigenous Community.

No	Social Aspects	Guiding Provisions (Non-exhaustive List)
		Regional Regulation of Teluk Wondama Regency Number 13 of 2019 concerning Implementation of Recognition of Customary Law Communities in Teluk Wondama Regency.
		Regional Regulation of Banjar City Number 7 of 2020 concerning Corporate Social and Environmental Responsibility.
		Regional Regulation of Surabaya City Number 2 of 2021 concerning Implementation of Corporate Social and Environmental Responsibility.
		Regulation of Mayor of Madiun Number 85 of 2020 concerning Guidelines for Implementing Madiun City Regional Regulation Number 42 of 2018 concerning Corporate Social Responsibility.
		Decree of the Minister of Manpower Number KEP.187/MEN/1999 concerning Control of Hazardous Materials in the Workplace
		Decree of the Minister of Energy and Mineral Resources Number 1824 K/30/MEM/2018 concerning Guidelines for Implementing Community Development and Empowerment.
		Decree of the Minister of Environment and Forestry Number SK. 312/MENLHK/SETJEN/PSKL.1/4/2019 concerning Maps of Customary Forests and Indicative Areas of Customary Forests Phase I.

B. For MSMEs

No	Social Aspect	Reference of Provision (non-exhaustive list)
1	Protection and Respect for Human Rights	Law of the Republic of Indonesia Number 3 of 1951 concerning Statement of Applicability of the Labor Inspection Law of 1948 Number 23 of the Republic of Indonesia for All of Indonesia
		Law of the Republic of Indonesia Number 18 of 1956 concerning Approval of the International Labor Organization Conference Number 98 concerning the Applicability of the Basics of the Right to Organize and Bargain Collectively
		Law of the Republic of Indonesia Number 3 of 1961 concerning Approval of International Labor Organization Conference Number 106 concerning Weekly Rest in Trade and Offices.
		Law of the Republic of Indonesia Number 1 of 1970 concerning Work Safety.
		Law of the Republic of Indonesia Number 21 of 2000 concerning Trade Unions.
		Law of the Republic of Indonesia Number 13 of 2003 concerning Employment as amended by the Job Creation Law.
		Law of the Republic of Indonesia Number 21 of 2003 concerning Ratification of ILO Convention Number 81 Concerning Labor Inspection in Industry and Commerce.

No	Social Aspect	Reference of Provision (non-exhaustive list)
		Law of the Republic of Indonesia Number 19 of 2011 concerning Ratification of the Convention on The Rights of Persons With Disabilities.
		Law of the Republic of Indonesia Number 8 of 2016 concerning Persons with Disabilities.
		Law of the Republic of Indonesia Number 15 of 2016 concerning Ratification of the Maritime Labor Convention, 2006.
		Government Regulation Number 19 of 1973 concerning Regulation and Supervision of Work Safety in the Mining Sector.
		Government Regulation Number 11 of 1979 concerning Work Safety in the Refining and Processing of Oil and Gas.
		Government Regulation Number 50 of 2012 concerning Implementation of the Occupational Safety and Health Management System (SMK3).
		Government Regulation Number 5 of 2021 concerning Implementation of Risk-Based Business Licensing.
		Government Regulation in Lieu of the Republic of Indonesia Law (Perppu) No.2 of 2022 concerning Job Creation as has been enacted as Law through Law No.6 of 2023 concerning Determination of Perppu No 2 of 2022 concerning Job Creation into Law (Job Creation Law).
		Presidential Regulation Number 21 of 2010 concerning Labor Inspection.
		Presidential Regulation Number 34 of 2014 concerning Ratification of the Convention Concerning the Promotional Framework For Occupational Safety And Health/Convention 187, 2006.
		Joint Decree of Minister of Manpower - Minister of Public Works Number 174/MEN/1986 and Number 104/KPTS/1986 of 1986 concerning Occupational Safety and Health (K3) at Construction Activity Sites and Guidelines for Implementing K3 at Construction Activity Sites.
		Regulation of Minister of Manpower and Transmigration Number Per 01/MEN/1980 concerning Occupational Safety and Health in Building Construction.
		Regulation of Minister of Manpower Number Per-01/MEN/1992 concerning Occupational Safety and Health Requirements for Carbide Aircraft.
		Regulation of Minister of Manpower and Transmigration Number Per. 01/MEN/2007 concerning Guidelines for Giving K3 Awards.
		Regulation of Minister of Manpower and Transmigration Number Per. 15/MEN/VIII/2008 concerning First Aid for Accidents (P3K) in the Workplace.
		Regulation of Minister of Manpower and Transmigration Number

No	Social Aspect	Reference of Provision (non-exhaustive list)
		Per. 08/MEN/VII/2010 concerning Personal Protective Equipment.
		Regulation of the Minister of Manpower Number 5 of 2018 concerning Occupational Safety and Health in the Work Environment.
		Regulation of the Minister of Public Works and Public Housing Number 21/PRT/M/2019 of 2019 concerning Construction Safety Management System Guidelines.
		Regulation of Minister of Manpower Number 26 of 2014 concerning Implementation Assessment of the Occupational Safety and Health Management System.
		Regulation of Minister of Manpower Number 12 of 2015 as amended by Regulation of the Minister of Manpower Number 33 of 2015 concerning Electrical Work Safety and Health in the Workplace.
		Regulation of Minister of Manpower Number 33 of 2016 as amended by Regulation of the Minister of Manpower Number 1 of 2020 concerning Procedures for Labor Inspection.
		Regulation of Minister of Manpower Number 37 of 2016 concerning Occupational Safety and Health of Pressure Vessels and Storage Tanks.
		Regulation of Minister of Manpower Number 38 of 2016 concerning Occupational Safety and Health of Power and Production Aircraft.
		Regulation of Minister of Manpower Number 6 of 2017 concerning Occupational Safety and Health of Elevators and Escalators.
		Regulation of Minister of Manpower Number 5 of 2018 concerning Occupational Safety and Health Work Environment.
		Regulation of the Minister of Manpower Number 8 of 2020 concerning Occupational Safety and Health of Lifting Aircraft and Transport Aircraft.
		Regulation of the Minister of Energy and Mineral Resources Number 33 of 2021 concerning Occupational Safety and Health, Environmental Protection and Management, and Geothermal Technical Rules for Indirect Use.
		Instruction of the Minister of Manpower Number 11/M/B/1997 concerning Special Supervision of K3 for Fire Management.
		Decree of the Directorate General of Supervision of Occupational Safety and Health Norms of the Republic of Indonesia Number 64 of 2013 concerning Guidelines for the Development of Occupational Safety and Health for Underwater Diving Work.
		Construction and Building Guidelines Number 04/BM/2006 concerning Guidelines for Implementing Occupational Safety and Health (K3) for Road and Bridge Construction.

No	Social Aspect	Reference of Provision (non-exhaustive list)
2	Employment includes decent work, prevention of forced labor, protection of women and child labor, as well as development of human resource development.	Staatsblad Number 26 of 1933 and Staatsblad Number 236 of 1933 concerning Ratification of ILO Convention Number 29/1930 concerning Forced or Compulsory Labor.
		Staatsblad Number 219 of 1937 concerning Women's Work in All Kinds of Underground Mining.
		Law of the Republic of Indonesia Number 80 of 1957 concerning Approval of International Labor Organization Conference Number 100 concerning Equal Remuneration for Male and Female Workers for Work of the Same Value.
		Law of the Republic of Indonesia Number 1 of 1970 concerning Work Safety.
		Law of the Republic of Indonesia Number 7 of 1984 concerning Ratification of the Convention on the Elimination of All Forms of Discrimination Against Women.
		Law of the Republic of Indonesia Number 19 of 1999 concerning Ratification of ILO Convention Number 105 Concerning The Abolition of Forced Labor.
		Law of the Republic of Indonesia Number 20 of 1999 concerning ratification of ILO Convention Number 138 Concerning Minimum Age for Admission to Employment.
		Law of the Republic of Indonesia Number 21 of 1999 concerning Ratification of ILO Convention Number 111 Concerning Discrimination In Respect of Employment and Occupation.
		Law of the Republic of Indonesia Number 29 of 1999 concerning Ratification of the International Convention on the Elimination of All Forms of Racial Discrimination 1965.
		Law of the Republic of Indonesia Number 1 of 2000 concerning Ratification of ILO Convention Number 182 Concerning The Prohibition and Immediate Action for Elimination of The Worst Forms of Child Labour.
		Law of the Republic of Indonesia Number 13 of 2003 concerning Manpower as amended by the Job Creation Law.
		Law of the Republic of Indonesia Number 40 of 2004 concerning National Social Security System as amended by: (1) the Job Creation Law; and (2) Law Number 4 of 2023 on the Development and Strengthening of the Financial Sector.
		Law of the Republic of Indonesia Number 21 of 2007 concerning Eradication of the Crime of Human Trafficking.
		Law of the Republic of Indonesia Number 24 of 2011 concerning Social Security Administering Bodies.
		Law of the Republic of Indonesia Number 8 of 2016 concerning Persons with Disabilities.

No	Social Aspect	Reference of Provision (non-exhaustive list)
		Law of the Republic of Indonesia Number 17 of 2023 concerning Health.
		Law of the Republic of Indonesia Number 13 of 2003 concerning Employment as amended by the Job Creation Law.
		Law of the Republic of Indonesia Number 18 of 2017 concerning Protection of Indonesian Migrant Workers as amended by the Job Creation Law.
		Law of the Republic of Indonesia Number 40 of 2004 concerning the National Social Security System as amended by the Job Creation Law.
		Law of the Republic of Indonesia Number 12 of 2022 concerning Criminal Acts of Sexual Violence.
		Law of the Republic of Indonesia Number 6 of 2023 on Stipulating Government Regulation in Lieu of Law Number 2 of 2022 on Job Creation into Law.
		Government Regulation Number 31 of 2006 concerning the National Job Training System.
		Government Regulation Number 70 of 2015 as amended by Government Regulation Number 66 of 2017 concerning Work Accident Insurance and Death Insurance for State Civil Service Employees.
		Government Regulation Number 88 of 2019 concerning Occupational Health.
		Government Regulation Number 35 of 2021 concerning Specific Time Work Agreements, Outsourcing, Working Time and Rest Time, and Termination of Employment Relations.
		Government Regulation Number 36 of 2021 as amended by Government Regulation Number 51 of 2023 concerning Wages.
		Government Regulation Number 59 of 2021 concerning Implementation of Protection of Indonesian Migrant Workers.
		Government Regulation in Lieu of Law No. 2 of 2022 concerning Job Creation as has been enacted into Law through Law No. 6 of 2023 concerning Determination of Perppu No 2 of 2022 concerning Job Creation into Law (Job Creation Law).
		Republic of Indonesia Government Regulation Number 44 of 2015 as amended by Government Regulation Number 82 of 2019 and Government Regulation Number 49 of 2023 concerning the Implementation of Work Accident Insurance and Death Insurance Programs.
		Presidential Regulation Number 109 of 2013 concerning Phases of Social Security Program Participation.

No	Social Aspect	Reference of Provision (non-exhaustive list)
		Presidential Regulation Number 82 of 2018 as amended by Presidential Regulation Number 75 of 2019 and Presidential Regulation Number 64 of 2020 concerning Health Insurance.
		Presidential Regulation Number 7 of 2019 concerning Occupational Diseases.
		Decree of the President of the Republic of Indonesia Number 36 of 1990 concerning Ratification of the Convention on the Rights of the Child.
		Decree of the President of the Republic of Indonesia Number 59 of 2002 concerning the National Action Plan for the Elimination of the Worst Forms of Child Labor (RAN-PBPTA).
		Regulation of the Minister of Manpower and Transmigration Number PER.01/MEN/1981 concerning the Obligation to Report Occupational Diseases.
		Regulation of the Minister of Manpower and Transmigration Number PER.03/MEN/1982 concerning Worker Health Services
		Regulation of the Minister of Manpower and Transmigration Number 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 Number PER.25/MEN/XII/2008 of 2008 concerning Guidelines for Diagnosis and Assessment of Disabilities due to Accidents and Occupational Diseases
		Regulation of the Minister of Home Affairs of the Republic of Indonesia Number 6 of 2009 concerning Guidelines for the Establishment of Regional Action Committees, Establishment of Regional Action Plans, and Community Empowerment in the Elimination of the Worst Forms of Child Labor
		Regulation of the Minister of Manpower and Transmigration Number 11 of 2013 concerning Guidelines for Implementing the National Job Training System in the Region
		Regulation of the Minister of Manpower and Transmigration Number 8 of 2014 concerning Guidelines for Organizing Competency Based Training
		Regulation of the Minister of Manpower Number 9 of 2016 concerning Occupational Safety and Health at Height.
		Regulation of the Minister of Manpower Number 10 of 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 Number 11 of 2016 concerning Health Services and Tariffs in the Implementation of the Work Accident Insurance Program.

No	Social Aspect	Reference of Provision (non-exhaustive list)
		Regulation of the Minister of Manpower Number 23 of 2021 concerning Revocation of Regulations of the Minister of Manpower as a Result of the Enactment of Law Number 11 of 2020 concerning Job Creation and Implementing Regulations.
		Regulation of the Minister of Manpower Number 5 of 2021 concerning Procedures for Implementing Work Accident Insurance, Death Insurance and Old Age Security Programs.
		Regulation of the Minister of Energy and Mineral Resources Number 33 of 2021 concerning Occupational Safety and Health, Environmental Protection and Management, and Geothermal Technical Rules for Indirect Use.
		Regulation of the Minister of Health Number 11 of 2022 concerning Health Services for Occupational Diseases.
		Regulation of the Minister of Women's Empowerment and Child Protection Number 1 of 2020 as amended by Regulation of the
		Minister of Women's Empowerment and Child Protection Number 1 of 2023 concerning Providing Protective Housing for Female Workers in the Workplace.
		Regulation of the Minister of Manpower Number 2 of 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 Number 4 of 2023 concerning Social Security for Indonesian Migrant Workers.
		Regulation of Indonesian Migrant Worker Protection Agency Number 6 of 2022 concerning the Organization and Work Procedures of Indonesian Migrant Worker Protection Service Centers.
		Regional Regulation of Central Java Province Number 9 of 2007 concerning the Prevention of Child Labor.
		Regional Regulation of East Java Province Number 2 of 2022 concerning Implementation of Protection of Indonesian Migrant Workers.
		Regional Regulation of Surabaya City Number 6 of 2011 concerning Implementation of Child Protection.
		Regional Regulation of Samarinda City Number 6 of 2015 concerning Child Labor Free Zones.
		Regional Regulation of Sragen Regency Number 14 of 2017 concerning Worker Protection.
		Regulation of the Governor of Banten Number 28 of 2016 concerning Industrial Areas as Child Labor Free Zones.
		Regulation of the Mayor of Pekalongan City Number 65 of 2022 concerning Protection for Child Labor in Pekalongan City.

No	Social Aspect	Reference of Provision (non-exhaustive list)
		Instruction of the Minister of Manpower Number INS.11/M/BW/1997 concerning K3 Supervision Specifically for Fire Management.
		Decree of the Minister of Manpower Number KEP.187/MEN/1999 concerning Control of Hazardous Materials in the Workplace.
		Regulation of the Minister of Home Affairs Number 6 of 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.
		Sragen Regency Regional Regulation No. 14/2017 on Labor Protection.
		Regulation of the Governor of Banten Number 28 of 2016 concerning Industrial Zones Industrial Zone as a Child Labor Free Zone.
		Regulation of the Mayor of Pekalongan City No. 65 of 2022 regarding Protection for Child Labor in Pekalongan City.
		Instruction of the Minister of Manpower Number INS.11/M/BW/1997 regarding OHS Supervision for Special Fire Countermeasures.
		Decree of the Minister of Manpower of the Republic of Indonesia Number KEP.187/MEN/1999 on the Control of Hazardous Materials in the Workplace.
		Decree of the Minister of Manpower and Transmigration Number KEP-224/MEN/2003 of 2003 concerning the Obligations of Entrepreneurs Employing Female Workers Between 23.00 and 07.00.
		Decree of the Minister of Manpower and Transmigration Number KEP.235/MEN/2003 concerning Types of Work that Endanger the Health, Safety or Morals of Children.
		Decree of the Minister of Manpower and Transmigration Number KEP.68/MEN/IV/2004 concerning Prevention and Control of HIV/AIDS in the Workplace.
		Decree of the Minister of Manpower and Transmigration Number KEP.115/MEN/VII/2004 concerning Protection for Children Who Work to Develop Talents and Interests.
		Decree of the Minister of Manpower and Transmigration Number KEP.261/MEN/XI/2004 concerning Companies that are Required to Carry Out Job Training.
		Decree of the Minister of Manpower Number 88 of 2023 concerning Guidelines for Preventing and Handling Sexual Violence in the Workplace.
		Decree of the Director General of Mining Number 747.k/61.01/DJP/1999 concerning Education, Training and Certification of Officials and Special Technical Personnel in General Mining Business Activities.
		Circular Note of the Minister of Manpower Number: SE.60/MEN/SJ-HK/II/2006 concerning Guidelines for Equal Opportunities and

No	Social Aspect	Reference of Provision (non-exhaustive list)
		Treatment in Employment in Indonesia/Equal Employment Opportunity (EEO). Circular Note of the Minister of Manpower and Transmigration Number SE.03/MEN/IV/2011 concerning Guidelines for Preventing Sexual Harassment in the Workplace. Circular Note of the Minister of Energy and Number SE.01/MEN/PPK/IV/2012 concerning Obligations for Occupational Safety and Health Requirements in Confined Spaces. Circular Note of the Minister of Public Works and Public Housing Number 13/SE/M/2012 dated 28 December 2012 concerning the HIV and AIDS Prevention Program in the Construction Sector within the Ministry of Public Works.
3	Impact on people living close to Investments covers aspects such as job creation, poverty alleviation, and fostering economic growth.	Law of the Republic of Indonesia Number 13 of 2011 concerning Handling of the Poor. Law of the Republic of Indonesia Number 13 of 2003 concerning Employment as amended by the Job Creation Law. Law of the Republic of Indonesia Number 20 of 2008 concerning Micro, Small, and Medium Enterprises as amended by the Job Creation Law. Law of the Republic of Indonesia Number 4 of 2009 as amended by Law Number 3 of 2020 concerning Mineral and Coal Mining and the Job Creation Law. Law of the Republic of Indonesia Number 32 of 2009 concerning Environmental Protection and Management as amended by the Job Creation Law. Law of the Republic of Indonesia Number 6 of 2014 concerning Villages as amended by the Job Creation Law. Law of the Republic of Indonesia Number 32 of 2009 concerning Environmental Protection and Management as amended by the Job Creation Law. Law of the Republic of Indonesia Number 6 of 2014 concerning Village as amended by the Job Creation Law. Law of the Republic of Indonesia Number 21 of 2014 concerning Geothermal Energy as amended by the Job Creation Law. Government Regulation in Lieu of Law of the Republic of Indonesia No. 2 of 2022 concerning Job Creation as has been enacted into Law through Law No. 6 of 2023 concerning Determination of Perppu No 2 of 2022 concerning Job Creation into Law (Job Creation Law). Government Regulation of the Republic of Indonesia Number 47 of 2012 concerning Social and Environmental Responsibility of Limited Liability Companies. Government Regulation of the Republic of Indonesia Number 33 of 2013 concerning Expansion of Employment Opportunities.

No	Social Aspect	Reference of Provision (non-exhaustive list)
		Government Regulation Number 47 of 2012 concerning Social and Environmental Responsibility of Limited Liability Companies.
		Government Regulation of the Republic of Indonesia Number 96 of 2021 concerning the Implementation of Mineral and Coal Mining Business Activities.
		Presidential Instruction of the Republic of Indonesia Number 4 of 2022 concerning Acceleration of the Elimination of Extreme Poverty.
		Regulation of the Minister of Home Affairs Number 51 of 2007 concerning Community-Based Rural Area Development.
		Regulation of the Minister of State-Owned Enterprises Number PER-07/MBU/05/2015 concerning the Partnership Program for State-Owned Enterprises with Small Businesses and the Environmental Development Program.
		Regulation of the Minister of Cooperatives and Small and Medium Enterprises Number 1 of 2021 concerning Organization and Work Procedures of the Ministry of Cooperatives and Small and Medium Enterprises.
		Regulation of the Minister of Environment and Forestry Number P.43/MENLHK/SETJEN/KUM.1/6/2017 concerning Community Empowerment around Nature Reserve Areas and Nature Conservation Areas.
		Decree of the Minister of Energy and Mineral Resources Number 1824 K/30/MEM/2018 concerning Guidelines for Implementing Community Development and Empowerment.
		Regulation of the Minister of Energy and Mineral Resources a Number 25 of 2018 as amended by Regulation of the Minister of Energy and Mineral Resources Number 50 of 2018, Regulation of the Minister of Energy and Mineral Resources Number 11 of 2019 and Regulation of the Minister of Energy and Mineral Resources Number 17 of 2020 concerning Mineral and Coal Mining Business.
		Regulation of the Minister of Cooperatives Number 5 of 2020 concerning the Strategic Plan of the Ministry of Cooperatives and Small and Medium Enterprises for 2020 – 2024.
		Regulation of the Minister of Social Affairs Number 9 of 2020 concerning Social and Environmental Responsibility of Business Entities.
		Regulation of the Minister of Villages, Development of Disadvantaged Regions and Transmigration Number 21 of 2020 as amended by Regulation of the Minister of Villages, Development of Disadvantaged Regions and Transmigration Number 6 of 2023 concerning General Guidelines for Village Development and Village Community Empowerment.
		Decree of the Minister of Energy and Mineral Resources of the Republic of Indonesia Indonesia No. 1824 K/30/MEM/2018

No	Social Aspect	Reference of Provision (non-exhaustive list)
		concerning Guidelines for the Implementation of Community Development and Empowerment.
		Regional Regulation of East Kalimantan Province Number 3 of 2013 concerning Social and Environmental Responsibility of Limited Liability Companies and Partnership and Environmental Development Programs.

ANNEX

Climate Risk
and Vulnerability
Assessment (CRVA)

12

A. Background Context

A.1 Purpose

This appendix pertains to activities that must conduct a Climate Risk and Vulnerability Assessment (CRVA).

The CRVA is required for the following activities when undergoing assessment for classification based on their contribution to the Environmental Objective (EO):

1. Activities undergoing assessment for classification based on their contribution to Environmental Objective (EO) 2 – Climate Change Adaptation; and
2. Activities undergoing assessment for classification for other EO classifications that need to demonstrate compliance with the Do No Significant Harm (DNSH) criteria for EO2.

For point 1, the activity must demonstrate that it is essential for providing resilience to climate change for other activities, communities, or industries. For point 2, it must be demonstrated that the activity will remain resilient in the future.

This guidance follows ATSF version 3, referencing the German Environment Agency guidelines for CRVA⁴⁶ in line with taxonomies based on the principles and framework of the ISO 14091:2021 Adaptation to Climate Change-guidelines on vulnerability, impacts, and risk assessment.

A.2 CRVA Implementation

To demonstrate that an activity meets the TSC for EO2 or does not cause significant harm to factors related to climate change adaptation, the following must be considered:

1. Material climate-related physical risks to activities must be identified from the risks listed in Section B, through a robust CRVA. This includes the following steps:
 - a. Screening of activities to identify which climate-related physical risks from the list in Section B may affect the performance of the activity over that period;
 - b. If the activity is assessed to be at risk from one or more climate-related physical risks mentioned in Section B, a CRVA must be conducted to assess the significance of these risks on the activity; and
 - c. Assessment and prioritization of adaptation solutions that can reduce the impact of identified climate-related physical risks.
2. The CRVA is proportional to the scale of the activity and the estimated duration of the activity, namely:
 - a. For activities with a duration of less than 10 years, the assessment should be carried out at least using climate projections at the smallest appropriate scale, which may include extrapolated historical trend data; and
 - b. For all other activities, the assessment should be carried out using the best approach (highest available resolution), current climate projections across the full range of available future scenarios⁴⁷ that are consistent with the estimated duration of the activity, including at least climate projection scenarios for 10 to 30 years for large-scale investments.

⁴⁶ The EU Taxonomy refers to CRVA as a method to identify material impacts on activities, in line with the chronic and acute impacts of climate-related disasters

⁴⁷ Future scenarios include the Representative Concentration Pathways (RCP) of the Intergovernmental Panel on Climate Change (IPCC): RCP2.6, RCP4.5, RCP6.0, and RCP8.5.

Climate projections and impact assessments are based on best practices and available guidelines issued by international bodies, national or regional authorities, standardization organizations, and other equivalent sources, taking into account the latest science for vulnerability and risk analysis, as well as related methodologies that align with the Intergovernmental Panel on Climate Change (IPCC) reports, peer-reviewed scientific publications, and open-source or paid models.

For existing and new activities that use existing physical assets, physical and non-physical solutions (adaptation solutions) must be identified, assessed, and prioritized. An adaptation plan for implementing these solutions must be properly developed. This implementation plan should cover a period of up to 5 years and reduce the most significant physical climate-related risks identified that are material to the activity.

For new activities and those that use newly built physical assets, the activity must integrate adaptation solutions that reduce the most significant physical climate-related risks identified and that are material to the activity during design and construction and implement them before operationalization begins.

A.3 Terminology and Concepts for CRVA

The concepts in the CRVA are shown in Table 1.

Table 1-Concepts in CRVA⁴⁸

Terminology	Context
Climate-related hazard	The potential occurrence of events and physical changes caused by natural or human factors resulting from climate change driven by anthropogenic GHG emissions. Potential climate-related hazards are listed in Table 2, Section B of this Annex.
Vulnerability	Includes vulnerability to hazards and the lack of capacity to cope with and adapt.
Risk	In this context, the potential impacts resulting from exposure to hazards and the level of vulnerability to specific climate-related hazards.
Physical climate risk	Climate-related physical risks can occur in any activity (or system) where the activity is exposed to and sensitive to climate-related hazards. For example, 'potential damage from flooding to buildings or infrastructure'.

In general, there are four main steps that must be included as part of the CRVA:

- **Step 1:** Identifying the duration of the activity being assessed, and specifically identifying components (e.g., factors, processes, materials, etc.) of the activity that require investigation based on the risk assessment.
- **Step 2:** Conducting a screening of climate-related hazards from Table 2, Section B of this Annex and identifying the hazards with the highest potential risks to the activity and/or object being assessed.
- **Step 3:** Conducting a risk assessment. For current potential risks, it is recommended to use historical climate trends and climate projections based on current trends. For potential future risks, it is recommended to use various climate projections based on future scenarios.
 - For activities with a duration of less than 10 years, extrapolated historical trend data can be used for the assessment;

⁴⁸ The definition is adapted and derived from the relevant climate adaptation section of the IPCC AR6 and ISO 14090.

- For activities with a duration of more than 10 years, a risk assessment is required for both current and future risks based on model data.
- **Step 4:** Identifying adequate and effective adaptation solutions to reduce material risks of an activity, including:
 - Identifying various possible solutions/actions; and
 - Assessing various solutions by considering costs, benefits, and effectiveness in reducing risks, making adaptation efforts, or enhancing resilience.

Adaptation solutions must:

- Does not have an adverse impact on physical climate risks to others, nature, cultural heritage, assets, and other activities;
- Does not result in any form of maladaptation, including solutions that do not achieve the intended objectives or may lead to undesirable side effects;
- Be consistent with local, sectoral, and regional adaptation strategies and plans, and must consider the use of nature-based solutions.⁴⁹

Proactive consultation regarding the proposed activity must be conducted. This is necessary to ensure that the adaptation solutions do not adversely impact the adaptation efforts or the level of resilience to physical climate risks of other stakeholders (directly affected parties or interested parties). The consultation process should at least include:

1. Identifying communities, assets, heritage, and others that may be affected and/or have an interest; and
2. Communicating, consulting, and/or providing participation for the community/institutions to ensure 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 resulting from the implementation of the activity.

B. Classification of climate-related hazards

Table 2- Potential climate-related hazards that may cause risks and vulnerabilities

	Temperature-related	Air-related	Water-related	Solid mass-related
Chronic	• Temperature changes (air, freshwater, seawater) • Heat stress • Temperature variability	• Changes in wind patterns	• Changes in precipitation patterns and types • Precipitation or hydrological variability • Ocean acidification • Saltwater intrusion • Sea level rise • Water stress	• Coastal erosion • Land degradation • Soil erosion • Solifluction
Acute	• Heat wave	• Cyclones, storms, typhoons	• Drought	• Landslide

⁴⁹ Nature-based solutions are defined as 'solutions inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social, and economic benefits, and help build resilience. These solutions bring more and more diverse natural features and processes into cities, landscapes, and seascapes through locally tailored, resource-efficient, and systemic interventions. Therefore, nature-based solutions benefit biodiversity and support the provision of various ecosystems.

	Temperature-related	Air-related	Water-related	Solid mass-related
	• Wildfire	• Storms (including dust and sand storms) • Tornado	• High rainfall • Flooding (coastal, river, rainfall, groundwater)	• Land subsidence

C. CRVA Checklist Template

Entities can conduct a CRVA assessment through self-assessment referring to the ATSF version 3 template or through consultants/third parties, as evidence to be provided to the assessors that the climate risks and vulnerabilities of an activity have been considered.

Table 3- CRVA Checklist Template

Step	Item	Description	Explanation	Status
1A	Lifespan of the Activity Equipment and Materials	Activity description	What is the proposed Activity?	
1B		Description of Equipment and Materials	What equipment and materials are used to carry out the activity?	
1C		Activity starts	When will the activity begin?	
1D		Activity end	When will the activity cease operation (either due to component damage or a decrease in demand for the activity)?	
1E		Operational life >10 years?	Is the operational life of the activity expected to exceed 10 years? • If no, conduct the assessment using the current IPCC climate scenarios and trends based on the most recent extrapolated climate data. • If yes, conduct the assessment for both current and future conditions using the IPCC climate scenarios and trends.	
2A	Climate-Related Hazards	Potential Climate Risks to the Activity	Identify and compile a list of potential risks that may affect the activity, based on Table 2, taking into account the location factors of the activity as well as the relevant scenarios and trends as outlined in section 1E.	
2B		Evaluation of the most common potential risks	Consider the potential risks that may arise based on the activity's location.	

Step	Item	Description	Explanation	Status
3A	Risk Assessment	Projections of Climate Change-Related Risks	If the activity has an operational life of more than 10 years, what potential hazards could occur based on the climate scenarios and trends projected by the IPCC?	
3B		Potential Impacts of Climate Change-Related Risks	How can climate-related hazards affect the elements of the activity? The impacts may not always be direct; some impacts may emerge indirectly or sequentially. If needed, use a flowchart to map the risks and projected impacts of each identified climate risk hazard.	
4	Identify adequate and effective adaptation solutions	Adaptive Solutions	Compile a list of appropriate and effective adaptation solutions to address the climate change-related hazards that have been identified.	

Example of a CRVA Checklist

This example assumes that there is supporting documentation in other documents (e.g., EIA/ESIA/AMDAL/UKL/UPL/SPPL).

Table 4 provides an overview of the level of information required to provide evidence of mitigation actions against significant impacts on EO2.

Table 4- Example of a CRVA Checklist

Step	Item	Description	Explanation	Status
1A	Lifespan of the Activity Equipment and Materials	Activity description	What is the proposed Activity?	A 20 MW Solar Power Plant located at [location]
1B		Description of Equipment and Materials	What equipment and materials are used to carry out the activity?	(1) Solar panels; (2) Inverter; (3) Panel mounts, including concrete foundations; (4) Internal cabling; (5) Interconnecting cables to the substation; (6) Air-insulated switchgear equipment; (7) Ceramic isolators; (8) Monitoring and control equipment
1C		Activity starts	When will the activity begin?	Operation will begin on January 1, 2025.
1D		Activity end	When will the activity cease operation (either due to component damage or a decrease in demand for the activity)?	Operation will cease on January 1, 2025.

Step	Item	Description	Explanation	Status
1E		Operational life >10 years?	Is the operational life of the activity expected to exceed 10 years? • If no, conduct the assessment using the current IPCC climate scenarios and trends based on the most recent extrapolated climate data. • If yes, conduct the assessment for both current and future conditions using the IPCC climate scenarios and trends.	Yes
2A	Climate-Related Hazards	Potential Climate Risks to the Activity	Identify and compile a list of potential risks that may affect the activity, based on Table 2, taking into account the location factors of the activity as well as the relevant scenarios and trends as outlined in section 1E.	Related to water: Sea level rise
2B		Evaluation of the most common potential risks	Consider the potential risks that may arise based on the activity's location.	Sea level rise may occur due to the proximity of some equipment to the coastline.
3A	Risk Assessment	Projections of Climate Change-Related Risks	If the activity has an operational life of more than 10 years, what potential hazards could occur based on the climate scenarios and trends projected by the IPCC?	Sea level rise of up to 40 cm may occur by 2060. [refer to the appropriate source]
3B		Potential Impacts of Climate Change-Related Risks	How can climate-related hazards affect the elements of the activity? The impacts may not always be direct; some impacts may emerge indirectly or sequentially. If needed, use a flowchart to map the risks and projected impacts of each identified climate risk hazard.	See the flowchart in Figure 1.
4	Identify adequate and effective	Adaptive Solutions	Compile a list of appropriate and effective adaptation solutions to address the climate	The EPC (Engineering, Procurement, and Construction) contract will stipulate that equipment must be able

Step	Item	Description	Explanation	Status
	adaptation solutions		change-related hazards that have been identified.	to operate while considering the impacts caused by potential climate hazards. This includes ensuring that each piece of equipment is built on sufficiently elevated or protected land.

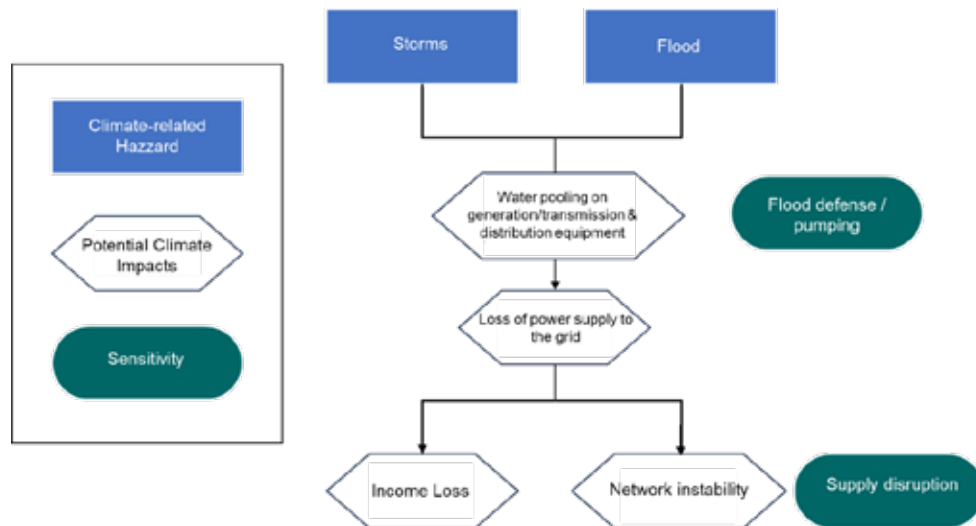


Figure 1: Example flowchart highlighting climate-related hazards and their impacts

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