Frequently Asked Question

(FAQ)

Indonesia Taxonomy for Sustainable Finance

Version 2

Updated as of 11 Februari 2025

Table of Contents

List of Abbreviations and Terms

Abbreviations	Terms	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 / Areal Bernilai Konservasi Tinggi	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). *(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)*
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 */Analisis*	Assessment of significant environmental impacts of a proposed business and/or activity,

Abbreviations	Terms	Definition/Description
	Mengenai Dampak Lingkungan Hidup	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. *(Government Regulation in Lieu of Law of the Republic of Indonesia Number 2 of 2022 on Job Creation)*
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.
BaU	Business-as-Usual	-
-	Water Body (*Badan Air*)	Water collected in a natural or artificial container that has a hydrological character, physical, chemical, and biological form. *(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)*
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

Abbreviations	Terms	Definition/Description
		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. (IEA, 1997) *(IEA, 1997. Technical Synthesis Report: A Summary of Annexes 16 & 17 Building Energy Management Systems. Energy Conservation in Buildings and Community Systems)*
BGH	Green Building	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. *(Regulation of the Minister of Public Works and Housing of the Republic of Indonesia Number 21 of 2021 concerning Green Building Performance Assessment)*
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

Abbreviations	Terms	Definition/Description
		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. *(Presidential Regulation (PERPRES) Number 14 of 2024 concerning the Implementation of Carbon Capture and Storage Activities)*
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. (The International Maritime Organization, EEXI and CII – ship carbon intensity and rating system)
-	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

Abbreviations	Terms	Definition/Description
		activity from consumption of finite resources. *(Ellen MacArthur, 2015)*
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	Minimum criteria that must be met. The ECs consists of Do No Significant Harm (DNSH), Remedial Measures to Transition (RMT), and Social Aspect (SA). The explanation of each EC is further explained 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,

Abbreviations	Terms	Definition/Description
		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. *(TEG EU, 2020)*.
EO	Environmental Objective	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 2°C and ideally below 1.5°C.
-	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	-

Abbreviations	Terms	Definition/Description
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. *(Enhanced NDC, 2022)*
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 *(OECD, 2022)*. • 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 *(European Commission, 2022)*. • The practice of financial service providers making unsubstantiated claims about their sustainability conditions to gain a competitive advantage *(European*

Abbreviations	Terms	Definition/Description
		Securities and Markets Authority, 2022).
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. *(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)*
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	-

Abbreviations	Terms	Definition/Description
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 / Industri Jasa Keuangan	Companies/institutions and supporting institutions that engage in financial services.
ILO	International Labor 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. *(OECD, 2023)*
IPPU	Industrial Processes and Production Use	Any industrial activity that chemically or physically alters materials and includes a wide range of production process activities. *(Intergovernmental Panel on Climate Change, 2023)*
IPCC	Intergovernmental Panel on Climate Change	-

Abbreviations	Terms	Definition/Description
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. *(Presidential Regulation of the Republic of Indonesia Number 44 of 2020 concerning the Indonesian Sustainable Palm Oil Plantation Certification System).*
KB	Sustainable Finance/Keuangan Berkelanjutan	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. *(Law of the Republic of Indonesia Number 4 of 2023 concerning Developing and Strengthening of the Financial Sector)*
KBLI	Indonesian Standard Business Classification	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.

Abbreviations	Terms	Definition/Description
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. *(Indonesia National Standard (SNI) ISO 14040:2016 and SNI ISO 14044:2017)*
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	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. *(Law of the Republic of Indonesia Number 4 of 2023 concerning Developing and Strengthening of the Financial Sector)*
LTS-LCCR	Long-Term Strategy for Low Carbon and Climate Resilience	-
MBR	Low Income Communities/Masyarakat Berpenghasilan Rendah	People who have limited purchasing power need government support to obtain housing.

Abbreviations	Terms	Definition/Description
		(Law of the Republic of Indonesia Number 11 Year 2011 on Housing and Residential Areas)
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. *(https://mspo.org.my/)*
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

Abbreviations	Terms	Definition/Description
		communicated to the world through the United Nations Framework Convention on Climate Change.
NZE	Net Zero Emission	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	Organization 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/m2.
-	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 / Persetujuan Bangunan Gedung	Licenses given to building owners to build new, change, expand, reduce, and/or maintain Building in accordance with Building technical standards. *(Regulation of the Minister of Public Works and Housing of the Republic of Indonesia Number 21 of 2021 concerning Green Building Performance Assessment)*
PBN	Performance Based Navigation	-
PEFC	Program for the Endorsement of Forest Certification	-

Abbreviations	Terms	Definition/Description
PHL	Sustainable Forest Management / Pengelolaan Hutan Lestari	-
PKO	Palm Kernel Oil	-
PUSK	Financial Sector Business Actors / Pelaku Usaha Sektor Keuangan	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. (Law of the Republic of Indonesia Number 4 of 2023 concerning Developing and Strengthening of the Financial Sector).
PROPER	Company Performance Rating Assessment Program in Environmental Management / Program Penilaian Peringkat Kinerja Perusahaan dalam Pengelolaan Lingkungan Hidup	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). *(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 Management)*

Abbreviations	Terms	Definition/Description
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 / Rencana Usaha Penyedia Tenaga Listrik	Electricity procurement plan covers the field of generation, transmission, distribution, and/or sale of electricity to consumers in a business area. *(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)*
S-PHL	Certificate of Sustainable Forest Management / Sertifikat Pengelolaan Hutan Lestari	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). *(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)*

Abbreviations	Terms	Definition/Description
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. *(International Civil Aviation Organization)*
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.
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. *(Definition by Forest Europe and adopted by the UN Food and Agriculture Organization/FAO)*
SKEM	Minimum Energy Performance Standard / Standar Kinerja Energi Minimum	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.

Abbreviations	Terms	Definition/Description
		(Directorate General of New, Renewable Energy and Energy Conservation of the Ministry of Energy and Mineral Resources)
SLF	Certificate of Fit for Purpose / Sertifikat Laik Fungsi	Certificate given by the Local Government to certify the feasibility of the Building function before it can be utilized. *(Regulation of the Minister of Public Works and Housing of the Republic of Indonesia Number 21 of 2021 concerning Green Building Performance Assessment)*
-	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. *(Williams, 2022)*
SPKLU	Public Electric Vehicle Charging Stations / Stasiun Pengisian Kendaraan Listrik Umum	-
SPPL	Letter of Undertaking for Environmental Management and Monitoring / Surat Pernyataan Kesanggupan Pengelolaan dan Pemantauan Lingkungan Hidup	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.

Abbreviations	Terms	Definition/Description
		(Government Regulation of the Republic of Indonesia Number 22 of 2021 concerning the Implementation of Environmental Protection and Management)
SVLK	Legality and Sustainability Verification System / Sistem Verifikasi Legalitas Kayu	A system to ensure the credibility of Forest Product Legality Assurance, traceability of Forest products, and/or sustainability of Forest management. *(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)*
THI	Indonesia's Green Taxonomy	Classification of economic activities that support environmental protection and management as well as mitigation and adaptation to climate change. *(FSA, 2022)*
SDGs	Sustainable Development Goals	The Sustainable Development Goals (SDGs), hereinafter abbreviated as SDGs, is a global development agenda to end poverty, promote prosperity, and protect the planet, through the achievement of 17 (seventeen) goals by 2030. *(Presidential Regulation of the Republic of Indonesia Number 111 of 2022 on the Implementation of Achieving the Sustainable Development Goals)*

Abbreviations	Terms	Definition/Description
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.
UMKM	Micro, Small and Medium Enterprises	• 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. *(Government Regulation of the Republic of Indonesia Number 7 of 2021 concerning Ease, Protection, and Empowerment of Cooperatives*

Abbreviations	Terms	Definition/Description
		and Micro, Small, and Medium Enterprises)
UKL-UPL	Environmental Management Efforts and Environmental Monitoring Efforts	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. *(Government Regulation in Lieu of Law of the Republic of Indonesia Number 2 of 2022 on Job Creation)*
UNFCCC	United Nations Framework Convention on Climate Change	-

Question and Answer List - General

1. What is TKBI and what are the strategic objectives of TKBI?

TKBI is a classification of economic activities that support Indonesia's Sustainable Development Goals (SDGs) covering economic, environmental and social aspects. TKBI is implemented as a framework for enhancing sustainable financing and capital allocation in order to facilitate Indonesia's net zero emission target. The strategic objectives of TKBI are as follows:

a. Refine the standard definition of economic activity to aligned with SDGs which harmonize economic, environmental and social aspects.
b. Implement a science-based framework to minimize multi-interpretation, greenwashing, social washing, and impact washing.
c. Accelerate sustainable financing and capital allocation to facilitate Indonesia's NZE target and global commitments on climate change.
d. Serve as a foundation for the development of sustainability policies including sustainability reporting, incentives and disincentives, and the development of innovative Sustainable Finance products and/or services.
e. Improving the accessibility, literacy and inclusion of sustainable products/services by expanding the user base to includes MSMEs, thereby stimulating economic growth.
f. As a showcase of cross-sectoral synergy with a variety of stakeholders in an effort to support Sustainable Finance initiatives in Indonesia including meeting Indonesia's targets in various global commitments on climate change.

2. Who are the users of TKBI?

Stakeholders, including companies, financial institutions, regulators, investors, supporting professions, auditors, verifiers, and rating agencies, may implement TKBI to evaluate whether an Activity has accomplished its sustainability objectives. Additional information is available in the TKBI User Guidance Book or Appendix 1 of TKBI Version 2.

3. How does TKBI stand within the Indonesian Sustainable Finance framework?

TKBI plays a critical role in the Indonesian Sustainable Finance policy framework. TKBI serves as a unified language for the purpose of defining economic activities that are consistent with the SDGs and as a mechanism to enhance transparency in order to prevent greenwashing, social washing, and impact washing. TKBI's classification results may be used as a reliable database for the development of further Sustainable Finance policies, which include disclosure obligations, risk management, product/service innovation, and other topics. The consistency of sustainability performance assessment and disclosure between one entity and another can be enhanced by the TKBI feature.

In accordance with the Law of the Republic of Indonesia Number 4 of 2023 concerning Developing and Strengthening of the Financial Sector (P2SK Law), TKBI will be updated to accommodate the ongoing discussion of the Draft Government Regulation (RPP) on sustainable finance including taxonomy. In addition, OJK Regulations will further regulate the implementation of TKBI in the Financial Services Sector.

4. To what extent does TKBI facilitate interoperability with taxonomies from other countries or regions?

TKBI employs the ASEAN Taxonomy for Sustainable Finance (ATSF) as its primary reference, which is customized to align with national policies and conditions. The four environmental objectives (EOs) that TKBI has adopted are the four primary features of ATSF: Climate Change Mitigation (EO1), Climate Change Adaptation (EO2), Protection of Healthy Ecosystems and Biodiversity (EO3), and Resource Resilience and the Transition to a Circular Economy (EO4). In addition, three essential criteria (EC) in the ATSF are also adopted in TKBI: Do No Significant Harm (DNSH)-EC1, Remedial Measures to Transition (RMT)-EC2, and Social Aspect (SA)-EC3. In addition, the application of EO and EC in TKBI is tailored to the circumstances of the economy in Indonesia. This includes the principle-based assessment approach in the Foundation Framework for the Micro, Small, and Medium Enterprises (MSME) segment and the Technical Screening Criteria (TSC) based approach in the Plus Standard for the corporate/non-MSME segment respectively.

5. What is the connection between the TKBI and the previously published THI?

The development of TKBI involves an approach that is comparable to regional best practices, such as the ATSF, which focuses on sectors that contribute to the economy and have high emissions. TKBI will concentrate on specific sectors in accordance with the Indonesian government's commitment in the NDC, rather than all sectors in KBLI. TKBI's sector focus is on the sectors that are committed in the NDC, including Energy, Waste, IPPU, Agriculture, and Forest and Other Land Use (FOLU). The energy sector will be the first focus in 2024. In the years to come, additional sectors will be developed to ensure that all NDC sectors are included in the TKBI coverage. Assessment conducted using THI remains valid provided that it does not conflict with TKBI, as outlined in the following provisions:

a. Economic activities have been identified within the scope of THI and TKBI. The assessment approach and mechanism in TKBI will be applied if the economic activity has been identified in both THI and TKBI. For instance, the activity of Electric Power Transmission [KBLI 35102] has been identified in both THI and TKBI. Consequently, the activity must be assessed by users using the TKBI mechanism.
b. Economic activity has been identified within the scope of THI, but it has not yet been identified in TKBI. In the event that an economic activity has been identified within the scope of the THI but has not been identified in the TKBI, the assessment will use the mechanisms and criteria in the THI. For example, the assessment should refer to

5. What is the connection between the TKBI and the previously published THI?

the THI mechanism because Corn Farming Activity [KBLI 01111] has been identified in the THI but has not yet been identified in the TKBI. The THI classification definitions of "Green," "Yellow," and "Red" are different from the TKBI classifications of "Green," "Transitional," and "Does Not Meet Classification." Nevertheless, during the transition period, the classifications "Green," "Yellow," and "Red" can be equated with "Green," "Transitional," and "Does Not Meet Classification."

c. Economic activity is not included in the scope of THI; however, it is included in TKBI. The TKBI assessment is adopted in the event that economic activities are not included in the scope of THI but are included in TKBI. Acceleration of the operational period's conclusion at a coal-fired power plant (PLTU). Consequently, the TKBI framework will be implemented in all taxonomic assessments in the future. Example: early retirement of a coal-fired power plant (PLTU).

Thus, in the future, all taxonomic assessments will use the TKBI framework.

6. How is TKBI assessed and do all criteria in the taxonomy need to be met?

The TKBI assessment is conducted in a series of stages. The following steps must be taken after users have identified the economic activity and scale of the business to be assessed and have confirmed that the economic activity falls within the scope of TKBI:

a. Determine the user entry point to identify the EO that is most applicable or makes the most significant contribution to an economic activity. This phase is essential because the criteria that an activity has to meet will be based on the EO that is selected. Based on the perspective/justification of the taxonomy user conducting the assessment, the same type of economic activity can be evaluated using multiple EOs (Appendix 2).

b. After determining the EO(s) that is most relevant or has the main contribution, the user then assesses the fulfilment of the EO based on the criteria that correspond to the EO in question. Appendix 3 provides the Technical Screening Criteria (TSC) for corporate/non-MSME businesses, while Appendix 4 provides the Sector-Agnostic Decision Tree (SDT) approach for MSME businesses. Each criterion in the EO listed in the TKBI must be satisfied, unless otherwise specified (e.g., "or," "and/or," or "option").

c. Once the user has completed the evaluation of the fulfilment of EO, the user must evaluate the fulfilment of DNSH for EOs that are not the most relevant or primary contributing EO (Appendix 5). For instance, the assessment of DNSH fulfilment is conducted in accordance with the criteria in EO2, EO3, and EO4 if EO1 is the primary EO. It is important to acknowledge that the DNSH fulfilment criteria for MSMEs and non-MSMEs are different. Each criterion on the DNSH listed in TKBI must be satisfied, unless otherwise specified (e.g., "or," "and/or," or "option").

d. In the event that the DNSH is not met, the user can perform improvement through assessment of the RMT aspect. Assessment of this aspect of RMT can be done using the guiding questions listed in the TKBI or other approaches, as long as all key principles are met (Appendix 6).

6. How is TKBI assessed and do all criteria in the taxonomy need to be met?

e. The social aspects are evaluated as the final step in the TKBI assessment (Appendix 7). It is important to acknowledge that the criteria for fulfilling social aspects differ between MSMEs and non-MSMEs. The social aspect criteria outlined in TKBI must be satisfied, unless otherwise specified (e.g., "or," "and/or," or "option"). The taxonomic classification of an economic activity ("Green," "Transition," or "Does Not Meet Classification") is ultimately determined by the social aspect.

7. Is the TKBI assessment conducted on an economic activity or business entity? What is the mechanism for assessing a business entity that engages in multiple economic activities?

Based on taxonomy best practices in the context of global sustainable finance, a taxonomy-aligned assessment can be applied at the Activity (activity level), Entity/Company (entity/company level), and Portfolio (portfolio level) levels. Currently, the TKBI assessment guidelines for EO, EC-DSNH and EC-RMT are carried out at the Activity level. Meanwhile, EC-SA at the Entity Level, noting that social policies are established and implemented at the Entity Level.

In the future, with the increasing use of TKBI and the move towards disclosing sustainability, the OJK will also develop assessments for entities and portfolios. The development of these guidelines will take into account ATSF version 4, which is currently in the process of being drafted.

As general, the levels of TKBI assessment are as follows:

a. Activity Level: assessment at the basic Activity level, where the TKBI criteria can be applied directly.
b. Company / Entity Level: determined by taxonomy-aligned assessment of each activity, then aggregating the contribution to the company level which can be expressed as a percentage of total revenue, capital expenditure (CapEx), or operating expenditure (OpEx).
c. Portfolio Level: determined by taxonomy-aligned assessment of each investment in different companies, then aggregating the contribution of each company to the portfolio level.

Furthermore, the approach to expanding the TKBI assessment will be part of the **User Guidance TKBI** which is a subsequent supplementary document (becoming a separate part of the TKBI Book version 2) and will be published in 2025.

8. May the TKBI assessment be conducted independently / through self-assessment, or is a third party required?

In an effort to prevent green washing, social washing, and impact washing, taxonomy users must assure that the classification assessment results are accurate in accordance with the assessment mechanism and TKBI's requirements. This can be achieved through self-assessment or the utilization of third-party services, such as public accountants,

8. May the TKBI assessment be conducted independently / through self-assessment, or is a third party required?

verifiers/assessors, or other third parties. While the TKBI assessment can still be conducted through self-assessment, users are expected to take measures to guarantee the validity of the results. To guarantee the validity of the assessment results and the quality of the data that will be used as an indicator of green/sustainable performance in the disclosure requirement, it is crucial to conduct verification/validation from a credible third party in the future.

It should be noted that there are several criteria whose assessment refers to the results of assessments that have been carried out by authorized and competent parties (for example PROPER, *Good Mining Practices*, ISPO, and so on), so that users of the taxonomy can refer to the results of assessments that have been carried out by these parties.

9. Why does TKBI continue to employ KBLI 2017?

TKBI, like THI, employs the 2017 KBLI (Head of BPS-Statistics Regulation Number 19 of 2017 concerning Amendments to the Head of BPS-Statistics Indonesia Number 95 of 2015 concerning the Indonesian Standard Industrial Classification), as the majority of reporting systems in the Financial Services Sector continue to utilize the 2017 KBLI. Nevertheless, in order to simplify the utilization of TKBI, a mapping of KBLI 2017 to KBLI 2020 is included in TKBI Version 2 Appendix 3 for each pertinent sector. In the future, this mapping will be modified in accordance with the advancements of KBLI.

10. Is it possible to apply TKBI to both consumptive and productive activities?

TKBI is applicable to both consumptive and productive activities, with different assessment methodologies. The previous TKBI assessment framework (assessment of EO and EC) applies in the evaluation of productive loan/financing/insurance activities. The evaluation of consumptive loan, financing, and insurance activities, or similar activities, can be conducted from the perspective of the "product" that consumers purchase.

- The product may be classified as "Green" or "Transition" if it satisfies the "Green" or "Transition" Environmental Objectives (EO) criteria.
- As loan is intended for individual or non-individual activities for consumptive purposes, the Essential Criteria (EC) assessment for the entity level is not conducted.

Both consumptive and productive activities may be reported as sustainability financing in the Sustainability Report. Appendix 8 of TKBI Version 2 provides additional information regarding the consumptive loan assessment approach.

11. How frequently is the TKBI assessment conducted?

The TKBI assessment is conducted according to the needs of its users. Users of the TKBI must guarantee that the criteria are consistently met. The TKBI classification must be reassessed and modified if there are changes in conditions that result in changes in the fulfilment of an economic activity against the criteria in TKBI. The TKBI assessment is conducted at least once a year or as needed depending on the reporting period and the time frame established by relevant stakeholders (e.g., creditors or investors). As a result, the outcomes of the TKBI assessment might vary based upon the circumstances at the time of the assessment.

Reporting may be based on the taxonomic assessment of the activity from the previous year if internal monitoring and compliance systems indicate that there have been no material changes in the environmental impacts of the economic activity (e.g., that result from changes in production processes, sources of materials and energy, or geographic location of the activity) and if there have been no changes in the legal requirements applicable to the activity that would affect the results of the taxonomic assessment of the activity.

12. What benefits do TKBI offer for MSMEs?

The TKBI will provide MSMEs with the opportunity to access alternative sources of sustainable funding, both domestically and internationally, in addition to traditional funding and investment sources. This will further support sustainable initiatives, such as sectors that support energy transition.

13. How is TKBI implemented for MSMEs?

One of the strategic objectives of TKBI is to broaden the scope of the taxonomy user scale to encompass MSMEs in addition to corporations, large companies, and non-MSMEs. To ensure the readiness of MSMEs to implement TKBI, the implementation of TKBI will be conducted in stages starting from **Medium Enterprises** and expanding in accordance with the industry readiness.

14. Do the impacts considered during the DNSH and Social Aspects assessments refer to current or future impacts?

The impact is assessed at the time of the TKBI, considering the current conditions and potential future impacts on an Activity.

15. What is the relationship between TKBI and the Grievance Mechanism in terms of the management of complaints and grievances from communities in the vicinity that have been impacted by an economic activity?

Grievance Mechanism is a means of handling complaints and complaints from stakeholders related to the negative environmental and social impacts of an economic activity on the surrounding environment/community. In general, TKBI has included social aspects as one of the assessment aspects, the criteria of which is the assessment of the impact of activities on communities living close to the location of economic activities. In the implementation of the assessment, users can ascertain whether an economic activity has a negative environmental and social impact to the surroundings by looking at complaints and grievances from the surrounding community against the economic activity. In addition, the *grievance mechanism* has been incorporated into the *sustainability disclosure requirement* framework (e.g. *GRI - Disclosure 103-2*).

16. Do sanctions or fines exist for failing to implement TKBI?

Currently, the use of TKBI is not mandatory or binding; therefore, there are no provisions regarding sanctions or fines for users who have not implemented TKBI. However, the utilization of TKBI is implemented through a piloting approach that is gradually expanded in order to prepare users. The taxonomy will serve as the primary reference for evaluating the sustainability performance of the Sustainability Report in the future.

17. Can the classification results of "Transition" or "Unqualified " be interpreted as a negative list (business activities that are not eligible for financing/investment)?

The results of the TKBI assessment cannot be directly translated as a negative list of financing/investment. TKBI is a classification of economic activities that contribute to Indonesia's targets and the SDGs, which encompass economic, environmental, and social aspects. The TKBI classification results can be utilized as a reference to enhance sustainable financing and capital allocation in order to facilitate the achievement of net zero emission objectives. Therefore, **TKBI is** essentially ***sustainability guidance*** **rather than** ***investment guidance***.

18. Does the Sector-agnostic Decision Tree scoring mechanism for MSMEs exclusively apply to economic activities in TKBI or does it also include economic activities in THI?

For now, *the Sector-agnostic Decision Tree* scoring mechanism is only applicable to economic activities that fall under the scope of TKBI.

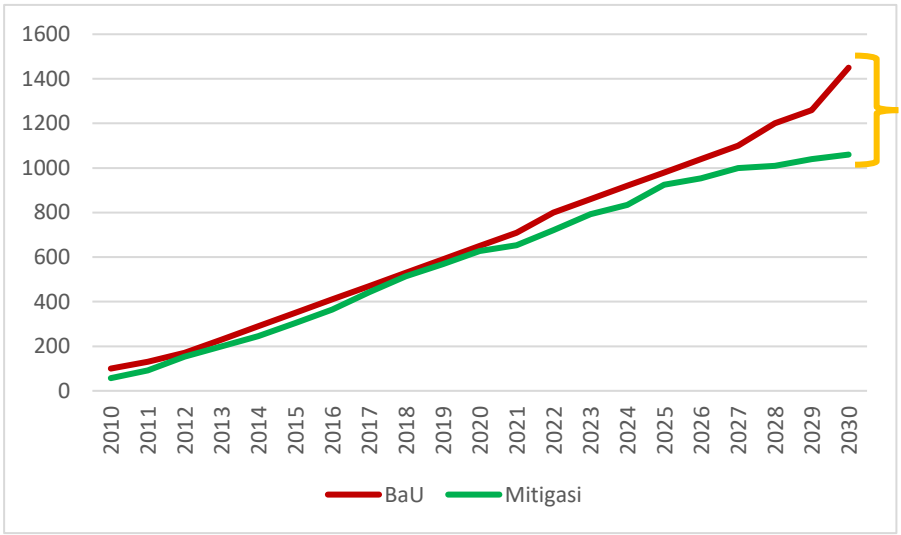
19. Is the "Transition" classification in TKBI a combination of the "Yellow" and "Red" classifications in THI?

The "Transition" classification in TKBI is defined differently from the "Red" and "Yellow" classifications in THI, meaning that they cannot be equated. The "Transition" classification in TKBI describes activities that are not currently in line with commitments to maintain global temperature rise (Paris Agreement) or are not yet on the NZE (*Net Zero Emission Pathway*), but meet the Social Aspects and one of the following criteria:

- Moving towards a "Green" classification within a certain predetermined timeframe;
- Promoting significant emission reductions in the short or medium term with a specific time limit; **or**
- Supporting other activities in the implementation of sustainable activities.

20. What is the methodology for determining the emission reductions from Business as Usual in 2030?

The emission reduction from Business as Usual in 2030 is calculated by first determining the emissions produced by the production process of an economic activity for the Business as Usual scenario until 2030. This estimate is then compared to the emission reduction target until 2030, which can be achieved by implementing a variety of mitigation measures (e.g., the use of environmentally friendly technology, the limitation of emission expenditures, etc.).



Verification/validation of emission reduction calculation results is necessary to guarantee the credibility of emission reduction.

21. Can carbon offsets be used to fulfil emission limitation criteria or emission reduction targets in TKBI?

A potential alternative method of meeting the emission criteria or emission reduction targets in TKBI is the use of carbon offsets from carbon credits obtained through carbon trading. Nevertheless, carbon offsets are a last resort that can be implemented after all mitigation measures have been implemented in an effort to reduce emissions. The initial step for each Activity is to demonstrate its best efforts to reduce emissions, such as through the implementation of environmentally friendly technology, energy efficiency, and other measures.

Example:

- An activity has Green and Transition criteria as per the table below.
- If a geothermal power generation company has emissions of **350gCO2/kWh, it can use *carbon offsets* as one of the emission reduction factors** to achieve an EO1-Green classification of **<100gCO2e/kWh** as specified in the taxonomy. However, the company must fulfil the specified requirements.

Activities	EO 1 – Green	EO 1 - Transition
Energy Sector		
[35101] Electric Power Generation:		
• **Geothermal**	• *Lifecycle emissions* from all power generation facilities **<100gCO2e/kWh** over the term of the *Power Purchase Agreement* (PPA).	• *Lifecycle emissions* from all power generation facilities **≥100gCO2e/kWh and <510gCO2e/kWh** over the term of the PPA.

Currently, the use of carbon offsets in TKBI is still pending subject to the development of policies related to the trade and use of carbon units, including limits on the use of carbon offsets allowed, the scope of the use of carbon offsets for cross-sectors, particularly in hard to abate sectors, and so on.

22. How do TKBI users evaluate the EC-Social Aspect?

The criteria outlined in Appendix 7 of the TKBI book are used to evaluate the social aspects of economic activities conducted by corporate and MSME businesses. The criteria in Appendix 7 are principle-based and include detailed provisions that are referred to in Appendix 11 (a non-exhaustive list).

Some of the criteria set out in Annex 7 are basic principles that are fundamental principles that are generally accepted in Indonesia, and are minimum requirements for the fulfilment of sustainability aspects in TKBI. In its application, it can be adjusted to local conditions and applicable provisions and the assessment is complemented by related documents (*document-based*).

23. Does the EC-Social Aspects include provisions on child labour?

The EC on social aspect, among others, refers to Law Number 13 of 2003 concerning Manpower, which allows business actors to employ children as long as they meet the requirements and provisions regulated by laws and regulations. Based on Law No. 13/2003 on Manpower (Manpower Law), children aged 13 to 15 years old can do light work as long as it does not interfere with physical, mental and social health with conditions:

a. Obtained written permission from parents/guardians;
b. Employment agreement between employers and parents/guardians;
c. Maximum working time is 3 hours;
d. Conducted during the day & does not interfere with school;
e. Occupational safety and health;
f. There is a clear working relationship; and
g. Receive wages in accordance with applicable regulations.

Items a, b, f, and g are exempted for children who work in their family business.

The Labour Law prohibits the performance and involvement of child labour in the following occupations:

a. any work in the form of slavery or similar;
b. any work that utilizes, provides, or offers children for prostitution, pornographic production, pornographic performances, or gambling;
c. any work that utilizes, provides, or involves children for the production and trade of alcohol, narcotics, psychotropic substances, and other addictive substances; and/or;
d. any work that jeopardizes the health, safety, or morals of the child.

Furthermore, children are not allowed to do work that endangers the child's health, safety or morals, namely:

1. Types of Work that Endanger Children's Health and Safety:
    a. Work related to machinery, aircraft, installations, and other equipment;
    b. Work performed in a hazardous work environment (physical hazards, biological hazards, chemical hazards);
    c. Work that involves certain hazardous properties and conditions:
        1) Construction work on buildings, bridges, irrigation or roads;

2) Work carried out in wood processing companies such as logging, transportation and loading and unloading;
3) Manual lifting and transporting work above 12 kg for boys and above 10 kg for girls;
4) Work in a locked workplace building;
5) Fishing work conducted offshore or in deep sea waters;
6) Work carried out in isolated and remote areas;
7) Work on the ship;
8) Work performed in the disposal and processing of waste or recycling of used goods;
9) Work carried out between 18:00 and 06:00.

2. Types of Jobs that Harm Children's Morals

a. Employment in bars, discotheques, karaoke, bocce ball, movie theatres, massage parlours or locations that can be used as places of prostitution;
b. Employment as a model for the promotion of alcohol, sexually stimulating drugs and/or cigarettes.

Further provisions are regulated in the Decree of the Minister of Manpower and Transmigration of the Republic of Indonesia Number KEP-235/MEN/2003 of 2003 concerning types of work that endanger the health, safety or morals of children.

Question and Answer on TKBI Implementation *Pilot Project*

1. Which organisations where involved in the TKBI pilot project?
The pilot project is currently being conducted by financial institutions, specifically banks. The pilot project participants will be expanded to other sectors in accordance with the readiness of each industry.

2. What is the purpose of the pilot project?
The pilot project was implemented to promote industry readiness for future sustainability performance reporting. This step is critical to enhance the understanding of the TKBI assessment procedures and supporting tools for assessment. The pilot project serves as a bridging mechanism for the preparation of reporting and disclosure obligations which will be further regulated in the amendment to POJK No. 51/POJK .03/2017 concerning the Implementation of Sustainable Finance for Financial Services Institutions, Issuers, and Public Companies. In the future, TKBI reporting may be included as one of the metric that needs to be reported to the public as part of the sustainability performance.

3. What is the procedure for submitting the TKBI implementation pilot project reporting?
The TKBI pilot project report and the reporting mechanism conducted on THI are submitted by the entity using OJK's APOLO application. The pilot project is submitted using APOLO as a platform with the intention of expanding its implementation to other financial services sectors in the future. This is consistent with the objective of establishing the APOLO application at OJK as a comprehensive online reporting application.

4. What is the mechanism of the THI reporting *pilot project* after the publication of TKBI?

The fundamentals of taxonomy reporting by FIs to OJK are not altered by the TKBI. The APOLO application continues to be employed for reporting, with the same format. The economic sector code remains unchanged, as both TKBI and THI utilize the 2017 KBLI. The assessment stages conducted by taxonomy users are adjusted by the TKBI. The same mechanism is used to conduct reporting after the assessment results are obtained. The TKBI classification utilizes the same classification code as the THI in the reporting application, as indicated below:

THI		Post TKBI Issuance	
Code	**Label**	**Code**	**Label**
1	Red	1	Red/Unqualified
2	Yellow	2	Yellow/Transition
3	Green	3	Green
4	Has no category yet	4	Has no category yet

For reporting purposes during the pilot project period, "Red" (THI) labelling is reported using the same coding as "Unqualified" (TKBI). The same applies for "Yellow" (THI) and "Transition" (TKBI).

5. Is it necessary to revaluate economic activities that have been assessed using the THI?

With the publication of TKBI, the TKBI approach will be employed to evaluate all energy sector debtors that are included in the scope of TKBI. Meanwhile, THI continues to be implemented in other sectors. Economic activity in the energy sector that has been previously assessed using THI must be reassessed using the TKBI approach.

6. In the event that one debtor has multiple accounts (e.g. loan accounts), do all accounts need to be reported or just one?

The reporter (Bank) needs to assess and report on all accounts of these debtors. Therefore, if at one stage of the period that requires the reporter to report the 100 largest debtors, there is a possibility that the data reported is more than 100 lines of data (in the event that there is one debtor who has more than one account).

7. **Is the documentary evidence of the assessment required to be reported to OJK in addition to the taxonomy classification results?**
Supporting documents are necessary to be submitted by the reporter to be able to confirm the results of the assessment carried out. Currently, the documentary evidence can be administered independently by the reporter. In the future, in the event that THI reporting is included in the scope of supervisory by the OJK, the reporter can provide proof of the document.

8. **Does the ceiling value or outstanding loan determine the number of debtors reported per tranche? What about revolving loans?**
The limit on the number of debtors is established by the outstanding financing balance at the current reporting position.

9. **Are there any resources available to assist TKBI users in the TKBI assessment?**
OJK is currently improving the Sustainable Finance Information Hub (SFIH) minisite as an integrated dissemination platform on sustainable finance. The enhancement of SFIH includes improving the design and existing features so that SFIH is in line with the needs of FIs and other stakeholders. OJK is also developing the **Taxonomy Navigator** to support users in understanding and utilising the TKBI, which includes several main features, namely Overview, Explorer (containing a list of economic activities and detailed criteria), Simulator (simulation of the TKBI assessment with instructions to guide the procedure for conducting the assessment), and Frequently Asked Questions (FAQ). The Taxonomy Navigator is targeted for use in 2026. SFIH can be accessed in the following website https://keuanganberkelanjutan.ojk.go.id/keuanganberkelanjutan

Question and Answer – Energy Sector

1. Are direct emission measures or lifecycle emission measures applied in the evaluation of emission threshold in TKBI?
Emission threshold in TKBI are evaluated using lifecycle emission measures that are consistent with the ASEAN Taxonomy. During the initial stage, businesses that have not yet met the measurement of lifecycle emissions are granted a transition period until December 31, 2027 (or earlier) to utilize Scope 1 - direct emission measurements, taking into account the current readiness of the industry in Indonesia, particularly in terms of emission measurement.

2. What are the considerations for including coal fired power plants activities in TKBI and how are they classified?
Coal Fired Power Plants (PLTU) are the primary source of electrical energy in the ASEAN region. The ASEAN Center for Energy reported in its 2023 report, ASEAN Power Updates, that the number of active power plants in ASEAN had reached 106.3 GW by the end of 2022, representing a 15.1 GW increase in new capacity from the previous two years. The majority of the capacity additions were driven by the completion of pending power projects, including those in the Philippines, Vietnam, and Indonesia. The power plant fleet of ASEAN is the youngest in the world, with an average age of 11.8 years, on a regional scale. In the second quarter of 2023, PLTU continued to dominate the source of electricity in Indonesia, with an installed capacity of 51.06 GW or 52% of the total installed electricity capacity (ADB, 2023). Meanwhile, the average direct emission of PLTU in Indonesia is 800-1200 kgCO2e/MWh (IESR, 2022). The Ministry of Energy and Mineral Resources of the Republic of Indonesia anticipates that peak emissions will occur in 2039 at 706 million tons of CO2e, followed by a substantial decline in emissions after 2040, as fossil generation contracts (including PLTU) are completed. This decline will continue until the NZE scenario is achieved in 2060. PLTU remains a fundamental component of numerous industries, including the clean energy technology manufacturing industry, where it plays a significant role in the supply chain (e.g., electric vehicle batteries, solar panels). This is due to the competitive prices, the certainty and stability of PLTU energy supply, and the limited availability of electricity networks and new renewable energy sources, particularly in Disadvantaged, Frontier, and Outermost (3T) regions. To promote the energy transition in the electricity sector, the government has issued Presidential Regulation of the Republic of Indonesia Number 112 of 2022 concerning the Acceleration of Renewable Energy Development for Electricity Supply (Perpres

112/2022) which marks the beginning of the era of low-emission and environmentally friendly power plant development as well as a ban on the construction of new power plants, but without disrupting existing power plants. Perpres 112/2022 prohibits the development of new PLTU except for the PLTU that has been determined in the Electricity Supply Business Plan (RUPTL) prior to the enactment of the Perpres 112/2022, and the PLTU that meets the requirements, among others:

1) Integrated with industries that are built 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) Committed to reducing greenhouse gas emissions by at least 35% (thirty-five percent) within a period of 10 (ten) years since the PLTU operates compared to the average PLTU emissions in Indonesia 2021 through technology development, *carbon offsets*, and/or Renewable Energy mix; and
3) Operate until 2050 at the latest.

ATSF, as one of the references for TKBI, is the world's first regional taxonomy that has thoroughly considered efforts to accelerate *coal phase-out*, which can play a role in decarbonization to support the goals of the *Paris Agreement*, and become a tool to support transition. ATSF classifies these activities into "*Green*", "*Amber Tier 2*" and "*Amber Tier 3*" with stringent criteria.

In the transition period towards NZE and an equitable energy transition, fossil energy still has an important role and will be utilized as a temporary energy source. This has been recognized by TKBI, requiring the support of numerous activities that are crucial during the transition period, such as PLTU and its early retirement in accordance with the ATSF criteria and Perpres 112/2022. Consequently, TKBI divides the PLTU activities into the following categories:

1. Activities that support the early retirement PLTU with TSC and ATSF classification ("Green" and "Amber"); and
2. New or Existing PLTU activities with TSC are in line with Perpres 112/2022 and the highest classification possible is "Transition". The PLTU operational period allowed in Perpres 112/2022 is a maximum operational until 2050 which is in line with the "*Amber*" criteria for *coal phase-out* activities in the ATSF. In addition, new or *existing* PLTU activities are also in line with the definition of "Transition", one of which facilitates emission reductions in the short or medium term with a certain time limit and encourages other activities to be sustainable.

Further explanation can be found in the TKBI Version 1 Book Chapter 2.A. and TSC in Appendix 3.

3. What are the considerations for including critical mineral mining and quarrying activities in TKBI and how are they classified?

Indonesia's economic growth, which accounted for 12.22% of GDP in 2022, is significantly influenced by mining and quarrying activities (BPS, 2022). Nevertheless, the environment is also influenced by mining and quarrying activities. Consequently, it is imperative to implement a gradual transition in the mining and quarrying sector in order to achieve NZE Indonesia.

A global dynamic has emerged and initiated a discussion on the critical role of activities that drive the energy transition, including critical minerals, in the pursuit of decarbonization targets and sustainable economic growth. The demand for critical minerals has been significantly increased by the rapid adoption of clean energy technologies as part of the energy transition, as comprehensively explained by the IEA in its 2021 report titled "The Role of Critical Minerals in Clean Energy Transition." Additionally, the Energy Transition Commission (ETC) clarified in its July 2023 report, "Material and Resource Requirements for the Energy Transition," that the energy transition requires a substantial amount of clean energy technology. Additionally, certain mining and quarrying operations play a crucial and irreplaceable role in the development of clean energy technologies, including electric vehicles and solar panels.

This is also consistent with the 2023 COP28 in Dubai, which resulted in an agreement 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 and transitional energy technologies, the NZE targets are difficult to achieve. The NZE targets are challenging to achieve in the absence of specific critical minerals that serve as raw materials for clean and transitional energy technologies.

However, there is no global taxonomy that incorporates mining and quarrying activities in the taxonomy, and discussions on this matter are still ongoing. In Indonesia, a Decree of the Minister of Energy and Mineral Resources of the Republic of Indonesia No. 296.K/MB.01/MEM.B/2023 on the Determination of Commodity Types Included in the Classification of Critical Minerals has been issued, which regulates the **definition of critical minerals**, namely minerals that have important uses for the national economy and national security defense that have the potential for supply disruptions and have no feasible substitutes. Furthermore, based on a study from the Indonesia Ministry of Energy and Mineral Resources, critical minerals that support clean energy technology and the transition to NZE (*green metals*) include Aluminum, Galena, Cobalt, Copper, Iron, Manganese, Nickel, Zinc, Silica, Lithium, Rare Earth Metals, Platinum, Cadmium, Gallium, and Tellurium.

TKBI seeks to balance policy with national interests and the principle of credibility in taxonomy development. Considering the nature of mining and quarrying activities, the significance of the role in supporting clean technology, and in line with the definition of the "Transition" classification, among others, encouraging other activities to be sustainable, TKBI currently includes critical mineral activities that encourage clean technology and transition to NZE (*green metals*) based on these studies with the **highest possible classification of "Transition"** with stringent requirements. Meanwhile, other mining and quarrying activities will be further reviewed in line with the development of discussions at the national and global levels and pay attention to various efforts that have been / are being made by the mining and quarrying industry in order to encourage sustainable efforts and emission reductions (details in Appendix 3).

4.	**Is financing/investment in the activity of coal phase out the same as financing/investment in the activity of CFPP?**

The coal phase-out activity is an activity involving the combustion of coal in the power sector, such as PLTU, that is phased out or ending earlier than its operating period with the aim of reducing GHG emissions. TKBI can be used to assess whether an activity to accelerate the end of the PLTU operational period can be classified as "Green" or "Transition".

Some examples of the types of financing for these activities include, **but are not limited to,** refinancing debt assuming the project is on a path to accelerate the termination of the PLTU's operational life; funding activities related to the early retirement of the PLTU (e.g., disconnection of electricity, demolition of facilities, and site remediation); or any costs during the commissioning period aimed at enhance the environmental aspect of the project.

Questions and Answers - *Construction & Real Estate* (C&RE) Sector

1. How is the rating of Green Building (BGH) evaluated in accordance with the Minister of PUPR Regulation No. 21/2021?

BGH's performance assessment is conducted in four stages, namely: 1) Programming and planning, 2) Construction implementation, 3) Utilization, and 4) Demolition. A BGH certificate can be obtained at each stage.

The BGH ratings are as follows for both new building construction and existing/renovated buildings:

- Main rating (Utama) is obtained if it reaches a score of >80%,
- Intermediate rating (Madya) is obtained if it reaches a score of 65% - 80%, and
- Primary rating (Pratama) is obtained if it reaches a score of 45% - 65%,

out of a total assessment score of 165 points.

For new buildings, the aspects assessed are:

1. Site Management
2. Energy Use Efficiency
3. Water Use Efficiency
4. Indoor Air Quality
5. Use of Environmentally Friendly Materials
6. Waste Management
7. Wastewater Management

As for existing/renovated buildings, the aspects assessed are:

1. BGH Organization and Governance
2. Custom Construction Process
3. BGH Performance Maintenance during the Utilization Period
4. Role of BGH Residents/Users

2. Who has the authority to issue Building Green Building (BGH) certificates?

The regency (*kabupaten*)/city government is responsible for issuing the Green Building Certificate (BGH). The regency/city government establishes a Professional Expert Team (TPA) to conduct the BGH performance assessment. After the BGH performance assessment checklist and evidentiary documents are uploaded into the Building Management Information System (SIMBG) by the building owner or a party appointed by the building owner, this assessment is conducted. The BGH certificate is issued electronically.

3. What is the duration of the BGH certificate's validity?

The BGH certificate has a validity period of 5 years and must be recertified for buildings with mandatory categories in accordance with the Minister of PUPR Regulation No. 21 of 2021.

4. What is a Building Approval (PBG)? What is the procedure to obtain PBG?

A Approval (PBG) is a permit issued by the regency/city government to intiate, modify, maintain, or renovate a building. PBG is valid for the lifetime of the building.
The regency/city government is responsible for the issuance of PBGs. Several stages are involved in the issuance of PBG, including:

1. Registration: Applicants register through the Building Management Information System (SIMBG);
2. Document inspection: Documents will be examined a maximum of 5 times;
3. Planning consultation: The applicant will consult with the Technical Assessment Team (TPT) for residential houses or the Professional Expert Team (TPA) for other buildings
4. Determination of technical recommendation and retribution: The Investment and One-Stop Integrated Services Agency (DPMPTSP) will determine the value of the regional retribution and issue a Regional Retribution Determination Letter (SKRD);
5. Payment of local retribution: The applicant is responsible for the local retribution;
6. Issuance of PBG: DPMPTSP will issue the PBG upon the completion of the process.

5. What is a Certificate of Fitness for Purpose (SLF)? What is the procedure of obtaining SLF?

A Certificate of Fitness for Purpose (SLF) is a document which certifies that a building has met the safety and legality standards for its intended use prior to its use. SLF is issued by the local government or central government for special function building categories such as airports.

Depending on the specifications and classification of the building, the requirements for applying for an SLF may differ. Documents that are typically required include:

1. Declaration of inspection for fitness for purpose;
2. SLF application letter;
3. Copy of National ID card or KITAS;
4. Copy of proof of land ownership;
5. Copy of PBG documents;
6. Minutes confirming the completion of the construction;
7. Hardcopy and softcopy of as-built drawing.

The process of obtaining SLF involves:

1. Prepare application files in accordance with the requirements;
2. Submit the application file to the authorized agency
3. The authorized agency checks the completeness of the file. If no further document is required, proceed to building data collection. If the application file is incomplete, the file will be returned;
4. Once the file is complete, wait until the SLF is issued.

6. What is the validity duration of the SLF for a building?

SLF is valid for 5 years for public buildings, and 20 years for residential buildings, and needs to be recertified. The building owner must submit an application for an SLF extension no later than 60 days prior to the expiration of the validity period.

7. What is the definition of an advanced level of certification?

Advanced level of certification refers to a higher level in the *Green Building Certification* (GBC) program. For schemes with a tiered rating system, a higher level of certification is included, although it is not necessarily the "highest level" as long as the building can demonstrate improvements to generally accepted practices.

Examples of advanced certification levels include:

- "Gold" and "Platinum" Greenship certificates;
- EDGE certificate for "Zero Carbon building" rating;
- "Gold" and "Platinum" LEED certificates;
- "GoldPlus" and "Platinum" Green Mark certificates.

8. Does TKBI C&RE sector only recognize Green Building Certification (GBC) as per Table 5 - Credible and recognized GBC programs?

Credible and recognized GBC programs include GBC programs that are credible, recognized, and applicable in the climate in Indonesia. However, there is potential to incorporate GBC programs as they evolve, however it is imperative to demonstrate that the additional GBC is credible, recognized, and applicable in Indonesia.

9. How long is the validity period of other green building certificates such as LEED, Greenship, Green Mark and EDGE?

It is advisable to consult the most recent provisions at each institution that issues the certificate as the validity period of each green building certificate varies:

- LEED certificates must be recertified every 3 years through the LEED *for Building Operations and Maintenance* (LEED O+M) rating system.
- Green Mark certificates for new buildings are valid for 5 years, and for *existing* buildings, recertification is required every 3 years.
- The validity period of an EDGE certificate varies depending on the level. For level 1 (EDGE *Standard Certification*) it is valid 36 months after issuance or 12 months after project completion, whichever comes first. For level 2 (EDGE *Advanced Certification*) there is no expiry period, and for level 3 (EDGE *Zero Carbon Building Certification*) it expires after four years if the project meets the criteria entirely on-site, or after two years if the project meets the criteria by purchasing carbon offsets or renewable electricity off-site.
- The Greenship certificate is valid for 3 years.

Source:

a. LEED Certificate: https://support.usgbc.org/hc/en-us/articles/4582055108755-Maintaining-certification
b. Green mark: https://www1.bca.gov.sg/docs/default-source/docs-corp-buildsg/sustainability/faq-nrbrb.pdf
c. EDGE: https://edgebuildings.com/certify/certification/
d. Greenship: https://gbcindonesia.org/files/resource/ca41425f-7b30-40d0-8639-9d1080c90496/Greenship%20Introduction%20on%20NZ.pdf

10. Is it sufficient to obtain a BGH certificate or other recognized certificate for a new building during the planning stage?

BGH certificates or other recognized certificates for new buildings must be presented not only during the planning stage, but also at the construction implementation stage. This is intended to demonstrate that green buildings are not only compliant from the design aspect, but that the design must also be in alignment with the construction of the building.

11. What is the TOE unit? How is the method of measurement for energy consumption in buildings?

Tonne of Oil Equivalent (TOE) is a mass ratio number of a type of energy that can generate energy equivalent to combustion of one ton of crude oil.

Buildings that consume a minimum of 500 TOE of energy in a year are required to implement energy management in accordance with the regulations outlined in Government Regulation No. 33 of 2023 concerning Energy Conservation.

The method to measure TOE energy consumption in buildings involves the collection of electricity bills and other energy bills, which are then then converted into TOE. The value of 1 kWh of electricity consumed by the building is equivalent to 0.0000860 TOE.

12. How to measure the reduction of Energy Usage Intensity (EUI) in existing/renovated buildings to qualify for either Green or Transition classification in TKBI?

In accordance with the Indonesian National Work Competency Standard (SKKNI) No. 53/2018 on Energy Audit, a certified energy auditor is required to conduct the measurement of energy usage intensity (EUI). An energy audit will be conducted by the energy auditor to assess the current building's energy consumption and compare it to the performance of energy consumption after the building is improved. This will demonstrate the efforts to reduce EUI.
The energy audit report issued by a certified energy auditor may serve as a reference for EUI reduction efforts. The EUI value is determined by dividing the total energy consumed by a building in a year by its total gross floor area and is expressed in Kwh/m2 units.

13. How to access the list of Certified Energy Auditors according to SKKNI No. 53 of 2018?

The list of certified energy auditors according to SKKNI No. 53 of 2018 can be seen on the following page of the Ministry of Energy and Human Resources: https://simebtke.esdm.go.id/sinergi/page/auditor

14. What is an example of implementing enabling activities in the C&RE sector to classify as Green?

An example of enabling activities in KBLI 41020 Construction of Prefabricated Buildings can be classified as Green if the activity supports the construction of buildings that have been certified with a BGH certificate rated "Main/*Utama*" or international certificates such as Greenship, LEED, EDGE, or Green Mark that rated "*Advanced level of certification*".

Questions and Answers - Transportation & Storage (T&S) Sector

1. What is the rationale begind the determination of TSC in the T&S sector in TKBI?
TSC is established in accordance with the ATSF version 3, principles of EU Taxonomy, and national policies to promote decarbonization, sustainable capital allocation, and compliance with international best practices

2. Does TKBI provide emission threshold for vehicle operations?
TKBI is a classification of sustainable activities that aims to improve capital allocation and sustainable financing. Emission threshold are set by the Ministry of Environment and Ministry of Transportation. For this reason, TSC in TKBI implements global and ASEAN regional emission threshold with reference to national policies and regulations.

3. What is the definition of zero direct tailpipe? Does it include emissions generated by the energy source?
Zero direct tailpipe refers to a vehicle that does not produce tailpipe and has no internal combustion engine, such as electric vehicle (EV) which does not emit direct exhaust emissions such as carbon dioxide (CO2), nitrogen oxides (NOx), or particulate matter (PM). However, the term "zero direct tailpipe" only refers to emissions generated during the vehicle's operation, not those that are associated with the vehicle's entire life cycle. This implies that even if the vehicle produces no direct tailpipe emissions, emissions from energy sources used to charge the vehicle (such as power plants) or emissions associated with the vehicle manufacturing process (including batteries) are not included in this category. Guidelines from international organizations, such as the EU Green Deal, and publications from the International Council on Clean Transportation (ICCT) are reference documents that can be employed to design zero emission tailpipes. https://theicct.org/sites/default/files/publications/EU-vehicle-standards-green-deal-mar21.pdf

4. What are the zero direct tailpipe energy?
Zero direct tailpipe energy refers to energy sources or systems that generate no exhaust emissions during operation. These systems eliminate fossil fuel combustion at the end-use stage and typically rely on renewable energy or other clean technologies. Examples of zero direct tailpipe energy sources: • Electricity: Electric vehicles (EVs) that operate on batteries, such as electric cars or electric boats, produce no emissions from the exhaust pipe.

- Green Hydrogen: Hydrogen that is generated through electrolysis using renewable energy. This type of hydrogen is used in fuel cells that only produce water vapor as a by-product.
- Green Ammonia: Ammonia produced using green hydrogen and nitrogen, which can be used as a clean alternative fuel for the transportation sector or other sectors.

5. What are "Alternative Fuels"?

Alternative fuels are materials or substances that can be used as fossil fuel substitutes, generate no CO2 exhaust emissions **or** less emissions than fossil fuels. These fuels include biofuels, gaseous fossil fuels (propane, natural gas, methane, and ammonia, green hydrogen), and ethanol.

a. Table 75 of the Fourth IMO GHG Study (2020) contains a list of alternative fuels https://wwwcdn.imo.org/localresources/en/OurWork/Environment/Documents/Fourth%20IMO%20GHG%20Study%202020%20-%20Full%20report%20and%20annexes.pdf; **or**

b. EU definition of alternative fuels: https://alternative-fuels-observatory.ec.europa.eu/general-information/alternative-fuels

This term does not yet include carbon emission avoidance achieved through *onboard carbon capture and storage* (OCCS). However, it will be incorporated into TKBI in the future when the technology is available and in use (in line with ATSF version 3).

6. What is the basis of emissions data in the transportation sector?

The Ministry of Transportation test centers provide new vehicle emission data, while local governments provide periodic emission test data. The following regulations are relevant:

- Minister of Finance Regulation No. 138 of 2021 concerning Types and Tariffs on Types of Non-Tax State Revenue that are Volatile and Urgent Applicable to the Ministry of Transportation.
- Regulation of the Minister of Transportation Number PM 44 of 2020 concerning Physical Type Testing of Motor Vehicles with Electric Motors.
- Regulation of the Minister of Environment and Forestry Number P.20/MENLHK/SETJEN/KUM.1/3/2017 concerning Quality Standards for Exhaust Gas Emissions of New Type Motor Vehicles Category M, Category N, and Category O.
- Regulation of the Minister of Environment and Forestry No. 8 of 2023 on the Implementation of Emission Quality Standards for Motor Vehicles of Category M, Category N, Category O, and Category L.

7. What does 'dedicated to the transport of fossil fuel' mean?

Land, water and air transport are not reserved only for the transportation of fossil fuels. Furthermore, in the context of water transportation, there are certain conditions that refer to **excluded** vessels as follows:

Vessels that are excluded due to being "dedicated to the transport of fossil fuels"

Activities	Green Classification	Transition Classification
Crude Oil Tankers	*Excluded in all cases*	*Excluded in all cases*
LNG Tankers	● Until December 31, 2030: excluded if more than 25% of the cargo tonnage annually is used for "*non-Green*" facilities. ● From January 1, 2031: exclusion will be reviewed, in accordance with applicable technology standards and market practices.	*Not excluded*
Dry bulk carriers	● Until December 31, 2030: excluded if more than 25% of the tonnage loaded each year is fossil fuel consumed in "*non-Green*" facilities. ● From January 1, 2031: excluded if the tonnage loaded each year is fossil fuel consumed at a "*non-Green*" facility.	● Until December 31, 2030: excluded if more than 25% of the tonnage loaded each year is fossil fuel consumed at "non-Transition" facilities. ● From January 1, 2031: excluded if the tonnage loaded each year is fossil fuel consumed at a "non-Transition" facility.

Note:

- "*Non-Green* facility" in this context means a facility (e.g. power plant) that does not meet for the TSC "Green" classification as per TKBI. Assessors are not expected to conduct a comprehensive TKBI assessment of a facility that is intended to be the final destination of the transported fuel, unless an individual classification is also expected for the facility. Nevertheles, the assessors should, at a minimum, expect to see evidence that the destination facility will meet the TSC "Green" classification.

7. What does 'dedicated to the transport of fossil fuel' mean?

- "Non-Transition facility" have a similar definition to "*non-Green* facility" except that they are associated with TSC classification "Transition".

Source: ASEAN Taxonomy for Sustainable Finance version 3, Appendix C

8. What are the categories of vehicles designated as M, N, and L?

The table below provides a breakdown of the M, N, and L vehicle categories based on the Regulation of the Minister of Environment and Forestry No. P.20/MENLHK/SETJEN/KUM.1/3/2017 concerning the Quality Standard for Exhaust Gas Emissions of New Type Motor Vehicles Category M, N, O) and Regulation of the Minister of Environment and Forestry No. 8 of 2023 on the Application of the Quality Standard for Motor Vehicle Emissions Category M, N, O, and L).

Category	Subcategory	Description	Example
M	M1	A motor vehicle that is designed for the transportation of individuals and has a maximum of eight seats, excluding the driver's seat.	Sedan, Hatchback, MPV, SUV, Private car
	M2	Motor vehicle that is designed for transportation of individuals and has more than eight seats, excluding the driver's seat and have a gross vehicle weight (GVW) of up to five tons.	Minibus, Van, Small passenger transport vehicle
	M3	Motor vehicle that is designed for transportation of individuals and has more than eight seats, excluding the driver's seat and have a gross vehicle weight (GVW) of more than five tons.	Large bus, City bus, Inter-city bus
N	N1	Vehicles for transporting goods and have a total weight of no more than 3.5 tons	Small truck, Van, Pickup
	N2	Vehicles for transporting goods and have a total weight of more than 3.5 tons but less than or equal to 12 tons.	Medium truck, Medium

8. What are the categories of vehicles designated as M, N, and L?

			size goods transport truck
	N3	Vehicles for transporting goods and have a total weight more than 12 tons.	Heavy trucks, Trailer trucks, Large freight vehicles
L	L1	Two-wheeled vehicles for one or two people with engine capacity of ≤50 cc.	Light motorcycle, Scooter
	L2	Two-wheeled vehicles with engine capacity of >50 cc and ≤150 cc	Motor with medium engine capacity
	L3	Two-wheeled vehicles with engine capacity of >150 cc.	Big motorcycles, Sports bikes
	L4	Three-wheeled vehicles for passengers, with engine capacity of >50 cc.	Bajaj, Tuk-tuk
	L5	Three-wheeled vehicles for goods with engine capacity of >50 cc.	Three-wheeled vehicle transporting goods

9. How is the overview of land transportation CO2 emissions?

- Hybrid vehicles, which run on conventional engines, do not have plug-in charging capabilities and continue to consume petrol fuel in general. Additionally, Hybrid vehicles also generate electricity through passive charging of the conventional engine. CO2 emissions produced range from 70-80 grams/km.

9. How is the overview of land transportation CO2 emissions?

- *Plug in hybrid* vehicle are a combination of a conventional engine with a small electric motor and *a small high voltage battery*. These type of vehicles use both petrol fuel and electric batteries. CO2 emissions produced range from 45-50 grams/km.
- *Electric Vehicle*, powered entirely by electricity, stored in electric batteries that require periodic recharged. CO2 emissions produced range from 0-5 grams/km.

Source: https://www.esdm.go.id/id/media-center/news-archives/mengenal-jenis-dan-tingkat-emisi-mobil-listrik

10. What is the legal basis for measuring vehicle exhaust emissions and what is subject to measurement?

Below is a table of the regulations and the subject of measurement to determine vehicle exhaust emissions:

Regulation	Measurements	Description
Minister of Transportation Regulation Number PM 44 of 2020	Physical Type Testing of Motor Vehicles with Electric Drive Motors	Physical type testing of motor vehicles using electric motors. This test includes various technical parameters of the vehicle, such as: • Vehicle dimensions • Battery and electric motor capacity • Electric vehicle safety and performance (including power and speed tests).
• Minister of Environment and Forestry Regulation Number P.20/MENLHK/SETJEN/KUM.1/3/2017 • Regulation of the Minister of Environment and Forestry No. 8 of 2023 on the Implementation of Quality Standards for	Quality Standard for Exhaust Gas Emission of Motor Vehicles	Measurement of exhaust emissions of new-type motor vehicles for categories M, N, and O, including: • CO (Carbon Monoxide) Emissions • HC (Hydrocarbon) Emissions • NOx (Nitrogen Oxide) Emissions • Particles (PM) in category M (passenger), N (freight), and O (towing

10. What is the legal basis for measuring vehicle exhaust emissions and what is subject to measurement?		
Motor Vehicle Emissions Category M, N, O, and L		vehicles) vehicles. This test aims to ensure that the vehicles produced meet the emission standards.
Decree of the Minister of Transportation Number KM 123 Year 2022	Service Standards at the Roadworthiness Testing and Certification Centre for Motor Vehicles	Measurement and testing of: • physical testing of motor vehicles; • physical inspection of the design of special road transportation facilities in the DKI Jakarta Province area; • motor vehicle sample test; • conversion motor vehicle testing; • modification testing; • CO2 emission and/or fuel consumption testing of motor vehicles; and • testing of motor vehicle technology prototype development.
Minister of Finance Regulation Number 138 of 2021	Non-tax State Revenue (PNBP)	Measurement of types and rates of volatile and urgent types of PNBP applicable to the Ministry of Transportation, for example related to vehicle testing or other transportation services.

11. What is the IMO GHG Strategy 2030?
The IMO GHG Strategy 2030, published in 2023, targets a 20% reduction in emissions by 2030 as a transitional step towards net zero by 2050. This target can be used as a reference in the development of Indonesia's shipping sector net zero roadmap. However, higher standards, such as the CBI, could be adopted to drive greater ambition, depending on national policies and government support for green infrastructure in the maritime sector. More information on the IMO strategy can be found in :

https://www.imo.org/en/OurWork/Environment/Pages/2023-IMO-Strategy-on-Reduction-of-GHG-Emissions-from-Ships.aspx

12. Are IMO standards used in the TSC TKBI sector T&S Water-Sea Transport Activities?

TKBI refers to the ATSF and IMO standards as a reference to establish the TSC TKBI T&S sector for Water-Sea Transportation Activities; however, these standards are not the final limit. Standards such as EEDI and EEXI of the IMO are the basic frameworks for the entire shipping industry to commence emission reduction. TKBI aims to support an activity towards sustainability and beyond business-as-usual, which is more stringent than the current EEDI and EEXI standards.

13. What is the definition of ship retrofit?

Ship retrofitting is the process of modifying a ship to enhance its environmental performance, particularly in terms of energy efficiency and emissions reduction. These improvements aim to align ships with sustainability goals and Paris Agreement targets. The main elements of ship retrofitting include:

- Energy Efficiency Improvements: improvements such as hull optimization, energy-saving devices, and advanced coatings to reduce fuel consumption.
- Emission Reduction Technology: installation of systems such as *scrubbers*, *Selective Catalytic Reduction* (SCR) units, or air lubrication systems to reduce GHG emissions and air pollutants.
- Fuel System Adaptation: converting engines to support low- or zero-carbon fuels, such as LNG, green hydrogen, ammonia, or biofuels.
- Environmental Objective compliance: ensuring improvements contribute significantly to climate mitigation while complying with the DNSH principle.

In order to qualify for retrofit eligibility, retrofits must exhibit quantifiable improvements, such as the reduction of carbon intensity in accordance with the IMO's CII or the improvement of EEXI. Additionally, quantitative approach or comparable methodologies must be implemented to verify improvement.

Source: https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/341/view

14. Is there certification for ship retrofit activities?

Ship retrofit certifications are issued by the Directorate of Shipping and Maritime Affairs, Ministry of Transportation, including certifications for energy efficiency, air pollution prevention, and other measurements.

15. What are the definitions of AER, EEOI, EEDI and EEXI according to IMO?

AER, EEOI, EEDI, and EEXI are ship performance indicators based on energy performance with the following details:

Term	Definition	Key Objectives	Application
AER (*Annual Efficiency Ratio*)	An annual ratio that measures a ship's carbon emissions intensity based on CO2 emissions (grams) per cargo capacity (*deadweight tons*) per distance traveled (nautical miles).	Assess the ship's annual emissions performance for compliance with IMO regulations, such as CII.	Used to evaluate the carbon efficiency of the ship in annual operations.
EEOI (*Energy Efficiency Operational Indicator*)	An indicator of the energy efficiency of ship operations, which is calculated based on actual CO2 emissions compared to the amount of cargo transported and distance traveled.	Monitor energy efficiency during ship operations and support overall emissions reduction.	Internal management tools to improve vessel operational efficiency.
EEDI (*Energy Efficiency Design Index*)	An index that measures the energy efficiency of new ship designs based on the amount of CO2 produced per cargo capacity and distance traveled, with the minimum standard depending on the ship type.	Encourage more energy-efficient and low-emission ship designs for new ships.	Applicable to vessels built after January 1, 2013, according to vessel type and size.
EEXI (*Energy Efficiency Existing Ship Index*)	An index that assesses the energy efficiency of *existing* ships, using an approach similar to the EEDI but applied to ships already in operation.	Ensure existing ships meet new energy efficiency standards, in line with IMO targets.	Applicable from 2023 for all ships of a certain size according to IMO regulations.

Notes:

- AER: Used primarily in the calculation of the Carbon Intensity Indicator (CII).

15. What are the definitions of AER, EEOI, EEDI and EEXI according to IMO?

- EEOI: Serves as a monitoring tool for ship operators but is not required by IMO.
- EEDI & EEXI: Part of the MARPOL Annex VI regulations that aim to reduce emissions from ships.

16. Does TSC TKBI apply to ship under 5,000 GT?

Currently, the TSC TKBI for ship transportation applies generally to all types of vessels. However, at the implementation level, there are no specific provisions both at the national and international level in the context of taxonomy for vessels under 5000 GT. Furthermore, it will be covered in the future development of TKBI, subject to to the availability of national or international standards or regulations.

17. What is Sustainable Aviation Fuel (SAF)?

SAF is an aviation fuel produced from renewable and environmentally friendly sources, such as biomass, waste or algae oil, that can replace traditional fossil-based aircraft fuel (Jet A-1). SAF is designed to reduce carbon dioxide (CO2) emissions resulting from aviation, and support the aviation industry in achieving global emissions reduction targets. SAF feedstocks must meet applicable sustainability certifications in the AFOLU sector.

18. How will the SAF usage policy be implemented in Indonesia on international and domestic flights from 2030 to 2049, and at which airports?

- The SAF implementation policy in Indonesia will be carried out in stages. In 2030 to 2034 (Phase 1), the SAF blending mandate for international flights from major airports such as Soekarno-Hatta and Ngurah Rai is 7.5%, which will increase to 15% in the period 2035 to 2039 (Phase 2). SAF demand is estimated to reach 166 million liters in 2030 and will increase to 397 million liters in 2035. This policy is projected to increase international flight ticket prices by approximately 3.2% in Phase 1 and 6.4% in Phase 2, considering that SAF prices are 2.2 times the price of conventional fuel.
- Starting in 2040, the use of SAF will be expanded to cover all flights, both international and domestic, from major airports such as Soekarno-Hatta, Ngurah Rai, Kualanamu, Juanda and Sultan Hasanuddin. The initial phase mandate (2040-2044) requires 15% SAF usage, which will increase to 25% in the next phase (2045-2049).

Source: Sustainable Aviation Fuel (SAF) Industry Roadmap Ministry of Maritime Coordination and Investment Republic of Indonesia (September, 2024).

19. What are the raw materials recognized by ICAO in the CORSIA framework for SAF production and what is the certification status of their use in Indonesia?

In Indonesia, SAF production uses palm oil and used cooking oil as the main production input. Furthermore, SAF producers in Indonesia plan to diversify into other feedstocks such as *palm oil mill effluent* (POME) and other waste oils. Based on the CORSIA certification framework, only SAF used for international flights needs to meet this standard. The percentage of SAF usage in Indonesia's aviation roadmap is subject to change in line with infrastructure development and market demand. Indonesia's aircraft are anticipated to operate with a minimum of 1% SAF by 2027, with the goal of increasing this to 20% by 2045 and reaching 50% by 2060.

The following is a table of SAF feedstocks recognized by ICAO within the CORSIA framework:

SAF Raw Materials	Classification	ICAO Reference
Palm Fatty Acid Distillate	By-products	Table 1, ICAO Document "Actual LCA Methodology"
Palm Oil	Main products	Table 2, ICAO document "Default LCA values"
Palm Oil Mill Effluent (POME)	Residue	Table 1, ICAO Document "Actual LCA Methodology"
Used Cooking Oil	Waste	Table 1, ICAO Document "Actual LCA Methodology" and Table 2 "Default LCA values"

The table above only identifies SAF feedstocks related to palm oil and used cooking oil as the main sources used in Indonesia. However, ICAO through the CORSIA framework has also recognized a number of other feedstocks as internationally valid sources of SAF (https://www.icao.int/environmental-protection/Pages/SAF_Feedstocks.aspx).

Technical corn oil, tallow, jatropha oil, and a variety of agricultural and forestry waste are additional examples. The ICAO's acknowledgement of these feedstocks is indicative of the global initiative to offer a broader range of sustainable and diverse aviation fuel alternatives, which is consistent with the aviation sector's carbon emission reduction objectives.

20. Can private jets be assessed using TSC of T&S Sector in TKBI?

TKBI establish the TSC that an activity needs to meet in order to be classified as "Green" or "Transition". The TSC in TKBI does not distinguish whether the activity is a private jet or not as long as it meets the criteria for the "Green" or "Transition" classification.

21. What is multimodal transportation?

According to PP No. 8/2011 on Multimodal Transportation:

- Multimodal Transport is the transportation of goods using at least 2 (two) different modes of transport on the basis of 1 (one) contract as a multimodal transport document from one place of receipt of goods by a multimodal transport business entity to a place specified for the delivery of goods to the recipient of multimodal transport goods.
- Multimodal transportation activities include activities that commence with the receipt of goods by multimodal transportation business entities from multimodal transportation service users until the delivery of goods to the recipient of goods from multimodal transportation business entities in accordance with the terms of the multimodal transportation document.

Questions and Answers - Agriculture, Forestry and Other Land Uses (AFOLU) Sector

1. What businesses are included in the Timber Forest Product Utilization category?

As stipulated in Article 145 paragraphs (1) and (2) of Government Regulation of the Republic of Indonesia Number 23 of 2021 concerning the Implementation of Forestry, the business activities of Timber Forest Product Utilization include:

1. Natural Grown Timber Forest
    a. logging/harvesting;
    b. enrichment;
    c. nursery;
    d. planting;
    e. maintenance;
    f. security;
    g. processing; and
    h. marketing
2. Cultivated Timber Forest
    a. land preparation;
    b. nursery;
    c. planting;
    d. maintenance;
    e. security;
    f. harvesting;
    g. processing; and
    h. marketing.

Activities regulated under TKBI in the AFOLU sector are points 1.a. to 1.f. and 2.a. to 2.f. Activities 1.c. and 2.b. are regulated in a separate TSC, while activities 1.g., 1.h., 2.g. and 2.h. are more relevant for activities in the Industrial Process and Product Use (IPPU) sector or other related sectors.

2. What is the difference between Utilization and Gathering of Timber Forest Products?

Timber Forest Product Utilization can be defined as an activity to utilize and cultivate forest products in the form of wood without damaging the environment and not reducing its main function. Meanwhile, Timber Forest Product Gathering is an activity to gather/collect timber forest products directly from natural forests. The activity of Timber Forest Product Gathering in Production Forests is not included in the TKBI of the AFOLU Sector because this activity is not commercial in nature and is intended to meet the needs of local communities (Article 160 of the Regulation of the Minister of Environment

and Forestry of the Republic of Indonesia Number 8 of 2021 concerning Forest Administration and Preparation of Forest Management Plans, and Forest Utilization in Protected Forests and Production Forests).

3. What businesses are included in the Non-Timber Forest Product Utilization category?

As stipulated in Article 146 paragraph (1) of Government Regulation of the Republic of Indonesia Number 23 of 2021 concerning the Implementation of Forestry, Utilization of Non-Timber Forest Products in Production Forests is at least in the form of utilization:

a) rattan, sago, nipa, palm, bamboo;
b) sap, bark, leaves, fruit or seeds, agarwood;
c) biofuel raw material development commodities (bioenergy); and/or
d) food crop development commodities,

which includes enrichment/planting, maintenance, harvesting, processing, and/or marketing activities.

4. What businesses are included in the Non-Timber Forest Product Gathering category?

As stipulated in Article 131 paragraph (1) of Government Regulation of the Republic of Indonesia Number 23 of 2021 concerning the Implementation of Forestry, Gathering of Non-Timber Forest Products in Protected Forests in the form of:

a) Rattan
b) Honey
c) Getah
d) Fruit
e) Seeds
f) Mushrooms
g) Leaves
h) Flowers
i) Swallow's nest; and/or
j) Other Non-Timber Forest Products.

5. What is the difference between Utilization and Gathering of Non-Timber Forest Products?

Utilization of Non-Timber Forest Products can be defined as an activity to utilize and cultivate non-timber forest products without damaging the environment and not reducing their basic functions. Meanwhile, Timber Forest Product Gathering is an activity

to collect non-timber forest products directly from natural forests. The activity of Non-Timber Forest Product Gathering in Production Forests is not included in the AFOLU Sector TKBI because this activity may only be carried out by communities around the forest (Article 148 paragraph (1) of Government Regulation of the Republic of Indonesia Number 23 of 2021 concerning the Implementation of Forestry).

6. Is forestry plant seed business conducted in Other Use Areas (APL) included in this business category?

The forestry plant seed business regulated in the AFOLU sector TKBI is only limited to activities carried out in Production Forests, Protected Forests, and Conservation Forests (Article 9 paragraph (1) of the Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.3/MENLHK/SETJEN/KUM.1/1/2020 concerning the Implementation of Forest Plant Seeds).

7. What is a Certificate of Origin (COO)? What distinguishes a COO from a Seed Source Certificate?

Both *Certificate of Origin* (COO) and Seed Source Certificate are a form of recognition of the source of seed breeding aimed at avoiding the purchase of inferior or fake seeds by consumers. COO applies to cross-border seed circulation, while Seed Source Certificate applies to domestic seed circulation.

8. What is a Certificate of Quality (COQ)? What distinguishes a COQ from a Seed Quality Certificate?

Certificate of Quality (COQ) and Seed Quality Certificate contain information on the genetic status, purity, germination, and quality of the seeds in circulation. COQs and Seed Quality Certificates are instruments used to ensure that seeds can grow properly at the planting site. COQ is relevant for cross-border seed circulation, while the Seed Quality Certificate is relevant for domestic seed circulation.

9. How does TKBI treat business entities holding expired national and/or international Sustainable Forest Management Certificates?

Expired national and international Sustainable Forest Management Certificates cannot be used as the basis for TKBI assessment. Therefore, business entities holding such certificates cannot obtain a "Green" or "Transition" classification.

10. What are the criteria for the results of periodic monitoring or evaluation in the TSC of Other Forestry Business activities and seedling/nursery activities? Who is authorized to issue the results?

Other Forestry Business

The results of periodic supervision or evaluation as criteria in Other Forestry Business activities refer to the results of routine (or incidental) supervision conducted by the Director General, Head of the Provincial Service, Head of the Technical Implementation Unit (UPT), Head of the Provincial Technical Implementation Unit (UPTD), or Head of the Regency / City UPTD in accordance with their authority. The procedure for this supervision is regulated in the 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 Environment and Forestry Sector, Regulations of the Director General of Forest Protection and Nature Conservation, Regulations of the Director General of Natural Resources and Ecosystem Conservation and its amendments. The elements of the assessment that strengthen the relevance of periodic supervision results as TKBI criteria for the AFOLU sector are

- Conformity of Activity business area with management plan
- Remote sensing map of the activity area
- Field validation to ensure that the perpetrator is active:
  - No tree cutting
  - Conduct mandatory ecosystem restoration

This periodic supervision or evaluation document is provided by the competent authority to each business that it supervises.

Seed/Nursery Business

Seed/nursery supervision is carried out by the Provincial and Central Offices according to their authority.

Central Authority (i.e. Ministry of Forestry):

1. Importation of forest plant seeds and/or seedlings from abroad
2. The export of forest plant seeds and/or seedlings abroad; and
3. Business actors procuring and distributing seeds and/or seedlings from Foreign Investment (PMA) applicants;

Authority of the Provincial Office (Forestry Service or Provincial Forest Plant Seed UPTD): Procurement and distribution of forest plant seeds and/or seedlings from Domestic Investment (PMDN) applicants.

As for agencies at the district/city level, they do not have the authority related to seeds/nurseries.

This periodic supervision or evaluation document is provided by the competent authority to each business that it supervises.

11. How does TKBI treat business actors who have not obtained the results of periodic supervision or evaluation by the competent authority?

Businesses that have not yet obtained the results of periodic supervision or evaluation from the competent authority cannot be classified as "Green" or "Transition".

12. How is the assessment of High Conservation Value Areas (HCVA) and High Carbon Stock Areas (HCSA) ensured in the oil palm plantation criteria?

Each Activity actor is required to have documents identifying High Conservation Value Areas (HCV Areas) in the Activity actor's concession area, GHG emission source inventory documents, and Activity actor policy documents related to the protection of forest areas and peat areas. Activity actors' policy documents related to the protection of forest areas and peat areas can be treated as a representation of the assessment of High Carbon Stock Areas.

All sustainable palm certification instruments that are criteria in the Palm Oil Plantation Activity shall make the above three documents as administrative requirements. Activity actors need to provide separately if one or more of the above documents is not yet an administrative requirement of the selected sustainable palm oil certification instrument.

13. Who has to sign the Sustainability Policy or Environmental Policy document that is one of the prerequisites in the TSC for Oil Palm Plantations?

Both documents must be signed by the Board of Directors/Board of Directors-level officials of the business entity.

14. What should be included in the Sustainability Policy or Environmental Policy document that is one of the prerequisites in the TSC for Oil Palm Plantations?

Both documents should at least contain commitments or short action plans consistent with *No Deforestation, No Peat and No Exploitation* (NDPE) principles, such as:

- Contribute to the protection of high biodiversity (*HCV*) areas, *high carbon stock* (*HCS*) areas, and peatlands.
- No new development on peatland.
- Encourage the use of best practices in existing plantations on peatlands.

- Reduction of Greenhouse Gas (GHG) emissions from plantations.
- Building a transparent palm oil supply chain.
- Respect the rights of indigenous peoples, workers, and local communities

15. What is the concept of sunset date in the AFOLU sector TKBI and when does it apply?

Sunset date is a concept commonly used in taxonomies to provide a time dimension/limit for TSC, where the "Transition" classification will only apply for a certain period of time. This concept seeks to encourage taxonomy users to continuously improve the sustainability of their business activities so that they move towards the "Green" classification and do not remain in the "Transition" classification for a long time. The availability of *sunset date* information can enhance the credibility and interoperability of taxonomies, and has been applied to various global taxonomies (e.g. Singapore-Asia Taxonomy for Sustainable Finance, Thailand Taxonomy, etc.).

The AFOLU sector TKBI sets December 31, 2030 as the *sunset date* for all "Transition" criteria. The date selection refers to the Indonesia FOLU *Net Sink* 2030 target, which is included in the *Long-Term Strategy for Low Carbon and Climate Resilience 2050* (LTS-LCCR 2050) document. *The sunset date* is excluded for Social Forestry Business Groups as well as actors in Community Forests because the business scale of these two entities is relatively much smaller than other commercial actors

16. What are the Environmental Objectives relevant to the AFOLU Sector and what are the criteria for other activities in AFOLU (such as agriculture, fisheries, livestock and other activities)?

Currently, TKBI Version 2 focuses on EO1-Climate *Change Mitigation* as is also applicable in other global taxonomies (e.g. EU Taxonomy, Singapore Taxonomy, etc.). However, along with the development of ASEAN Taxonomy for Sustainable Finance Version 4, in the future it is possible to develop criteria for other EOs, for example EO3-Protection *of Healthy Ecosystem and Biodiversity*.

Furthermore, in TKBI version 2, only part of the *Agriculture* sector has available assessment criteria (i.e. Palm Oil Plantation Activities). **Other *Agriculture* activities such as fisheries, livestock, and plantations are planned to be included in the scope of TKBI Version 3.**

17.Why are private forest and social forest not included in TSC in TKBI?

AFOLU sector business activities such as Social Forestry Management Agreements and Forest Rights (either Cultivated Timber or Natural Growth Timber) generally fall into the MSME segment, so the relevant assessment methodology to use at this time is using SDT (not TSC).

18.Does TKBI incorporate the concept of forest conservation and rehabilitation into its assessment framework?

The concepts of forest conservation, rehabilitation and restoration can basically be viewed as environmental restoration activities that are already the direct responsibility of the owner of the Forest Utilization Business License (*Perizinan Berusaha Pemanfaatan Hutan*/PBPH), which in TKBI is assessed using a sustainable forest management certificate assessment framework, such as SVLK.