

Consultative Paper

Indonesia Taxonomy for Sustainable Finance (TKBI) version 3 Professional, Scientific and Technical Sector (PST)

The Indonesia Taxonomy for Sustainable Finance (TKBI) is a classification of economic activities that support Indonesia's Sustainable Development Goals and efforts, encompassing economic, environmental, and social aspects. The taxonomy is used as a guidance to increase the allocation of capital and sustainable financing to support the achievement of Indonesia's net-zero emissions target.

This Consultative Paper will serve as an update to Annex 3 – Technical Screening Criteria for the Indonesia Taxonomy for Sustainable Finance and will form an integral part of the TKBI Book, which was published on 11 February 2025 and can be accessed via <http://gapura.ojk.go.id/tkbi2025>.

The series of Public Consultations will be held starting October 11, 2025 to November 21, 2025. Responses can be submitted via: <https://gapura.ojk.go.id/TanggapanCPTKBIV3> or sustainablefinance@ojk.go.id

Annex 3 – Technical Screening Criteria for the Indonesia Taxonomy for Sustainable Finance

[Sub Cover]

Professional, Scientific and Technical (PST)

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Consultation Scope and Approach

The Indonesia Taxonomy for Sustainable Finance (*Taksonomi untuk Keuangan Berkelanjutan Indonesia*/TKBI) is a classification of economic activities that support Indonesia's Sustainable Development Goals (SDGs) and efforts, encompassing economic, environmental, and social aspects. TKBI is used as a guidance to increase the allocation of capital and sustainable financing to support the achievement of Indonesia's net-zero emission target.

To achieve these objectives, OJK, in collaboration with various Ministries/Agencies and relevant stakeholders, will issue TKBI version 3, which is further development of TKBI versions 1 and 2. TKBI version 3 will cover focus sectors comprising Agriculture, Forestry, and Fishing (AFF) – Continued, Manufacturing/IPPU, and Water Supply, Sewerage and Waste Management (WSSWM), as well as enabling sectors comprising Information and Communication and Professional, Scientific and Technical (PST) sectors.

OJK, together with Ministries/Agencies and relevant stakeholders, held a kick-off meeting on May 26, 2025 to discuss the development of all Technical Screening Criteria (TSC). Each activity has undergone further discussions through closed consultations with the Ministries/Agencies and to obtain views on TSC development and their implementation feasibility.

OJK recognizes that development of TKBI cannot be done without involving public perspectives; therefore, we specifically encourage the public to provide input through the Public Consultation process. Through this process, OJK aims to:

- Gather relevant technical input to optimize the taxonomy design in accordance with the core principles of taxonomy, namely interoperability, credibility, usability, and science-based;
- Ensure that all stakeholders in the development of TKBI version 3 have the opportunity to provide input; and
- Disseminate the taxonomy to various stakeholder groups while enhancing broader understanding of its functions.

The Public Consultation is part of the development process of TKBI version 3, which will be published in February 2026, with the scope of discussion covering:

- TSC for EO1 - Climate Change Mitigation, EO2 - Climate Change Adaptation, EO3 - Protection of Healthy Ecosystems and Biodiversity, and EO 4 - Resource Resilience and the Transition to a Circular Economy (EO1–EO4) for the five industrial sectors that are the focus of discussion in TKBI version 3;
- Sunset and Grandfathering mechanisms; and
- TKBI assessment using the entity and portfolio assessment approach.

Description	Sectoral Scope
Technical Screening Criteria for EO1 – EO4 TSC are applied to each activity covered by the taxonomy. The TSC are the requirements that must be met for an activity to be assessed as making a substantial contribution to EO1 – EO4.	Focus Sector ➤ Agriculture, Forestry, and Fishing (AFF) ➤ Manufacturing/IPPU ➤ Water Supply, Sewerage and Waste Management (WSSWM) Enabling Sector ➤ Information and Communication ➤ Professional, Scientific and Technical activities (PST)

Sunsetting Mechanism

Sunsetting is the process by which a TSC for a particular classification expires and can no longer be used from a specified year. For example, the “Transition” TSC for the Electricity Generation Activity with life-cycle emissions of 510 gCO₂/kWh **is no longer valid in 2040, because based on developments in science, technology, and applicable policy, the activity has transitioned toward the 1.5°C pathway.** Sunsetting aims to prevent transition activities from being permanently labeled “sustainable,” avoid greenwashing, and provide certainty to investors and issuers regarding planned changes to the requirements, thereby preventing stranded assets.

Grandfathering Mechanism

Grandfathering is a mechanism that sets out how the classification of financial instruments, used to finance certain activities or assets, retains its 'financial instrument classification' when changes occur in the TSC and result in the lower classification of those activities compared to the initial classification based on the previous TSC. Grandfathering also aims to preserve market stability or minimize market disruption following the review and update of the TSC, encourage more effective capital flows to support decarbonization, and facilitate monitoring of the classification of financial instruments throughout their **lifespan**.

Entity Level Assessment

Entity-level assessment is relevant for evaluating companies that have multiple distinct activities. The assessment is conducted by assessing how each activity is Taxonomy-aligned*, followed by aggregating contributions using the percentage of total revenue, capital expenditure (CapEx), or operational expenditure (OpEx).

Portfolio Level Assessment

Portfolio-level assessment is relevant for evaluating a portfolio managed by an institution that consists of multiple financial assets (such as equity and debt instruments). The assessment is conducted by assessing how each investment in different companies is Taxonomy-aligned*, followed by aggregating the contributions of each company using the percentage of total revenue, capital expenditure (CapEx), or operational expenditure (OpEx).

*) **Taxonomy-aligned:** Activities that meet the requirements of TKBI classification as “Green” or “Transition”

Guidelines for Participation in Public Consultation Process

The Public Consultation process will be held from October 11, 2025 to November 21, 2025.

OJK will consider all input from all stakeholders through responses submitted at the following link <https://gapura.ojk.go.id/TanggapanCPTKBIV3>

Input received during this round of Public Consultation will be used to refine TKBI version 3 which is currently under development and will be published in February 2026.

OJK extends its gratitude for your participation in the development of TKBI version 3.

A. Sectoral Context

The Professional, Scientific and Technical Activities sector (the “PST sector”) plays a crucial role in the development of the green economy, especially in developing the innovations, expertise, and technical solutions necessary for sustainable growth. Activities in this sector include consultancy, research, professional services, and consultancy services including functions such as technical planning, environmental audits, impact assessments, and innovation development. UNESCO stated that the PST sector is critical to achieving global sustainable development goals, particularly in addressing climate challenges, building resilient infrastructure, and promoting inclusive growth.¹ Through activities such as climate risk assessment, energy audits and energy efficiency optimizations, sustainability strategy development, and environmental impact modeling, the PST sector can drive efficiency in focus sectors. Focus sectors are prioritized sectors in TKBI that directly contribute to reducing emissions and achieving national climate targets, such as Energy, Transportation and Storage, Construction and Real Estate, Agriculture, Forestry, and Fishing (AFF), Manufacturing, and Water Supply, Sewerage, and Waste Management (WSSWM). The European Economic and Social Committee also emphasized the importance of the specialized skills of the professional sector to maintain the quality and safety of the development and implementation of sustainable technologies needed in both energy and green transition.²

Emission Share

Globally, the PST sector, which is categorized as Commercial Services by the OECD, has a relatively low intensity of fossil fuel use and greenhouse gas (GHG) emission levels.³ However, this sector plays a highly strategic role as an enabler in reducing emissions in the focus sector, which tends to be carbon intensive.

In Indonesia, with only about 1 MtCO₂e of emissions in 2022, the PST sector accounts for less than 0.3% of total national GHG emissions.⁴ Activities in the PST sector, such as research and development, technical consultancy, professional engineering, and environmental audit services, can help activities in the focus sectors in effectively identifying and implementing sustainable practices. Thus, the PST sector is one of the key pillars in green transition and sustainable development efforts in Indonesia. As reported in the IESR Indonesia Energy Transition Outlook 2025, Energy Service Companies (ESCO) are one of the key factors for a successful energy transition in Indonesia in the long term.⁵

Alignment with National Policies and Strategies

Currently, there is no specific national strategy or policy focused on decarbonization in the PST sector. However, there are regulations that stipulate the need for activities in the PST sector to encourage the focus sectors towards sustainability, including the achievement of Nationally Determined Contributions (NDC). These regulations include but are not limited to:

1. Law Number 7 of 2021 concerning Harmonization of Tax Regulations mandates a carbon tax of IDR 30 per kg of carbon emissions and encourages the use of new and renewable energy in commercial buildings that will require relevant technical activities and consultancy.⁶
2. Government Regulation Number 33 of 2023 concerning Energy Conservation regulates energy conservation governance, including the implementation of energy audits as part of efficiency efforts, and specifies the types of energy conservation services that provide the basis for ESCO.⁷
3. Presidential Regulation Number 98 of 2021 concerning Implementation of Carbon Economic Value for Target Achievement on Nationally Determined Contribution and the Control of Greenhouse Gas Emission in National

¹ UNESCO. “Engineering for Sustainable Development: Executive Summary”, UNESCO. 2021. [Online]. Available at: <https://unesdoc.unesco.org/ark:/48223/pf0000375634>.

² European Economic and Social Committee. “Opinion EESC: Professional Services in Green Transition”. EESC. 2024. [Online]. Available at: <https://www.eesc.europa.eu/en/our-work/opinions-information-reports/opinions/professional-services-green-transition>.

³ OECD. “Assessing Greenhouse Gas Emissions and Energy Consumption in SMEs”, OECD Publishing. 2023. [Online]. Available at: https://www.oecd.org/content/dam/oecd/en/publications/reports/2023/10/assessing-greenhouse-gas-emissions-and-energy-consumption-in-smes_002d1637/ac8e6450-en.pdf.

⁴ International Energy Agency (IEA), “Indonesia - Emissions”, IEA, [Online]. Available at: <https://www.iea.org/countries/indonesia/emissions>.

⁵ Institute for Essential Services Reform. “Indonesia Energy Transition Outlook”. IESR, 2024. [Online]. Available at: [Indonesia-Energy-Transition-Outlook-2025-Digital-Version.pdf](https://iesr.id/Indonesia-Energy-Transition-Outlook-2025-Digital-Version.pdf).

⁶ Government of the Republic of Indonesia. Law Number 7 of 2021 concerning Harmonization of Tax Regulations. Jakarta, 2021. [Online]. Available at: <https://peraturan.bpk.go.id/details/185162/uu-no-7-tahun-2021>.

⁷ Government of the Republic of Indonesia. Government Regulation Number 33 of 2023 concerning Energy Conservation. Jakarta, 2023. [Online]. Available at: <https://peraturan.bpk.go.id/Details/252083>.

Development provides a framework for GHG emission certification with the principles, procedures, and provisions of international standards and/or Indonesian National Standards in accordance with ISO 14064 and ISO 14065.⁸

4. Presidential Regulation Number 14 of 2024 concerning the Implementation of Carbon Capture and Storage Activities stipulates that the implementation of Carbon Capture Storage (CCS) activities must meet a number of technical requirements, such as the preparation of an exploration work plan for the Injection Target Zone (ZTI), leak potential studies, well drilling, formation injectability tests, and measurement, reporting, and verification (MRV) activities to ensure the accuracy and reliability of carbon storage. This opens opportunities for the PST sector to contribute through the provision of technical consulting services as well as research, development, and innovation for direct carbon capture.⁹
5. Regulation of the Minister of Energy and Mineral Resources Number 9 of 2023 concerning Amendment to Regulation of the Minister of Energy and Mineral Resources Number 16 of 2020 concerning Strategic Plan of the Ministry of Energy and Mineral Resources of 2020-2024 states that the development of the ESCO business is one of the strategies to increase the efficiency of energy and electricity use.¹⁰
6. Regulation of the Minister of Public Works and Public Housing Number 21 of 2021 concerning Performance Assessment on Green Building Construction mandates buildings >5,000 m² to have a green building performance assessment, and for building managers to conduct energy audits.¹¹

Examples of Professional, Scientific and Technical Activity Roles in Supporting TKBI's Focus Sectors

Indirect contributions from the PST sector include the development of new technologies in renewable energy, environmental monitoring, and resource management that can reduce carbon footprints and minimize ecological impact. In addition, professionals in this field enable evidence-based policymaking that aligns economic development and environmental sustainability through scientific research, environmental impact assessments, and strategic planning. The following are some examples of use cases where the PST sector enables the focus sectors to achieve various Environmental Objectives (EO).

The **Energy sector** is one of the main priorities in sustainable development, particularly with plans to accelerate the transition to clean energy and net zero emissions (NZE) target by 2060 or earlier. As Indonesia accelerates energy transition, integration of scientific expertise and technical innovation will be crucial to achieve the government's strategic targets while promoting long-term economic resilience and environmental sustainability. Some examples of the PST sector's role as a strategic partner for the Energy sector are shown in the following table.

Table 1. Role of the PST Sector in Supporting the Energy Sector

Focus Sector: Energy		
EO		Examples of PST Sector Roles
EO1	Climate Change Mitigation	Research and development of Carbon, Capture, and Storage (CSS) and Direct Airborne Carbon Capture technologies to support decarbonization.
EO2	Climate Change Adaptation	Engineering design for climate-resilient power plants and transmission lines.
EO3	Protection of Healthy Ecosystems and Biodiversity	Technical impact assessment of renewable energy projects on the ecosystem, including solar (<i>Pembangkit Listrik Tenaga Surya</i> / PLTS), (<i>Pembangkit Listrik Tenaga Bayu</i> / PLTB), and microhydro (<i>Pembangkit Listrik Tenaga Mikrohidrol</i> PLTMH).

⁸ Ministry of Environment and Forestry of the Republic of Indonesia. Presidential Regulation Number 98 of 2021 concerning Implementation of Carbon Economic Value. Jakarta: Ministry of Environment and Forestry, 2021. [Online]. Available at: <https://peraturan.bpk.go.id/Details/187122/perpres-no-98-tahun-2021>.

⁹ President of the Republic of Indonesia. Presidential Regulation Number 14 of 2024 concerning the Implementation of Carbon Capture and Storage Activities. Jakarta: State Secretariat, 2024. [Online]. Available: <https://peraturan.bpk.go.id/Details/276843/perpres-no-14-tahun-2024>.

¹⁰ Ministry of Energy and Mineral Resources of the Republic of Indonesia. Regulation of the Minister of Energy and Mineral Resources Number 9 of 2023 concerning Amendment to Regulation Number 16 of 2020. Jakarta: Ministry of Energy and Mineral Resources, 2023. [Online] Available at: <https://peraturan.bpk.go.id/Details/265976/permen-esdm-no-9-tahun-2023>.

¹¹ Ministry of Public Works and Public Housing of the Republic of Indonesia. Regulation of the Minister of Public Works and Public Housing Number 21 of 2021 concerning Performance Assessment on Green Building Construction. Jakarta: Ministry of Public Works and Public Housing, 2021. [Online]. Available at: <https://peraturan.bpk.go.id/Details/217002/permen-pupr-no-21-tahun-2021>.

EO4	Resource Resilience and the Transitions to a Circular Economy	A circular business model assessment to encourage 3R practices (Reduce, Reuse, and Recycle) in energy assets.
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The **Construction and Real Estate sector** holds significant potential to contribute to decarbonization and the transition to a circular economy by improving energy efficiency in buildings and reusing the construction waste. To emphasize the focus on the development of energy-efficient buildings, the Indonesian government has developed a Green Building Implementation Roadmap (BGH), and activities in the PST sector have the potential to become a catalyst for such transformation. Some examples on how the activities in the PST sector can support the Construction and Real Estate sector are shown in the following table.

Table 2. Role of the PST Sector in Supporting the Construction and Real Estate Sector

Focus Sector: Construction and Real Estate		
EO		Examples of PST Sector Roles
EO1	Climate Change Mitigation	Technical analysis of energy efficiency and carbon emissions throughout the building lifecycle.
EO2	Climate Change Adaptation	Urban planning and low-carbon building consultancy to improve climate resilience.
EO3	Protection of Healthy Ecosystems and Biodiversity	Technical impact assessment of building construction or renovation on the local ecosystem.
EO4	Resource Resilience and the Transitions to a Circular Economy	Life Cycle Assessment (LCA) to measure environmental impact from the design, construction, to demolition stages, as well as research and development of reusable building materials.

As the backbone of national connectivity and mobility, the **Transportation and Storage sector** plays a crucial role in enabling economic growth, regional development, and environmental sustainability. The Indonesian Government has committed to achieving Net Zero Emissions by 2060, with mitigation efforts in the transportation sector emphasizing on energy efficiency and the utilization of new and renewable energy (NRE).¹² The PST sector has significant potential as a catalyst for innovation and for strengthening technical capacity to enable the sustainable transportation agenda. Some examples of how the activities in the PST sector can support the Transportation and Storage sector are shown in the following table.

Table 3. Role of the PST Sector in Supporting the Transportation and Storage Sector

Focus Sector: Transportation and Storage		
EO		Examples of PST Sector Roles
EO1	Climate Change Mitigation	Research and development of low-emission transportation technologies, such as electric propulsion systems, hydrogen, and biofuel.
EO2	Climate Change Adaptation	Conduct climate risk assessments on transportation infrastructure, such as analysis of the vulnerability of road networks, ports, and logistics systems to flooding.
EO3	Protection of Healthy Ecosystems and Biodiversity	Conducting a Transit-Oriented Development (TOD) and Green Infrastructure planning study to integrate transportation systems in an environmentally friendly spatial planning.
EO4	Resource Resilience and the Transitions to a Circular Economy	Design of sustainable transportation infrastructure, including green terminals, bicycle lanes, and digital-based logistics systems.

The **Agriculture, Forestry, and Fishing (AFF) sector** is pivotal in Indonesia's commitment to achieving emission reduction targets of 31.89% (unconditional) and 43.2% (conditional with international support) by 2030, as stated in Indonesia's Updated NDC (2022).¹³ Given the agriculture and forestry sector's significant contribution to national GDP and GHG emissions, transformation in this sector requires the support of scientific knowledge, technical innovation, and

¹² Ministry of Transportation of the Republic of Indonesia. Decision of the Minister of Transportation Number KM 8 of 2023 concerning Stipulation of Climate Change Mitigation Actions in the Transportation Sector for the Achievement of Nationally Determined Contribution Targets. Jakarta, 2023. [Online]. Available at: <https://peraturan.bpk.go.id/Details/283402/permenhub-no-8-tahun-2023>.

¹³ Ministry of Environment and Forestry of the Republic of Indonesia. "Updated NDC Indonesia 2022". Jakarta: Ministry of Environment and Forestry, 2022. [Online]. Available at: <https://kehutanan.go.id/program/INDONESIA-FOLU-NET-SINK-2030>.

evidence-based management. Some examples of how the activities in the PST sector can support the AFF sector are shown in the following table

Table 4. Role of the PST Sector Supporting the Agriculture, Forestry, and Fishing (AFF) Sector

Focus Sector: Agriculture, Forestry, and Fishing (AFF)		
EO		Examples of PST Sector Roles
EO1	Climate Change Mitigation	Development of Climate Change Mitigation Action Plan (<i>Dokumen Rancangan Aksi Mitigasi Perubahan Iklim/</i> DRAM) Document for carbon sequestration in social forestry areas.
EO2	Climate Change Adaptation	Research and innovation for sustainable practices in Natural Forest Conservation, Restoration and Maintenance activities to improve climate resilience.
EO3	Protection of Healthy Ecosystems and Biodiversity	Conducting biodiversity studies and mapping critical ecosystems to support forest areas and agricultural land conversation planning.
EO4	Resource Resilience and the Transitions to a Circular Economy	Prepare technical studies and business models for the use of agricultural and forestry waste as raw materials for bioenergy, compost, or other value-added products.

Transformation of Indonesia's **Manufacturing sector** toward sustainability has become an increasingly concrete national strategic agenda, marked by the decarbonization roadmap for the manufacturing sector as a whole and the establishment of green industry standards for various manufacturing sub-sectors. Professional, scientific, technical, and engineering experts are crucial partners in helping the manufacturing sector achieve environmental objectives. Some examples of how the activities in the PST sector can support the Manufacturing sector are shown in the following table.

Table 5. Role of the PST Sector in supporting the Manufacturing Sector

Focus Sector: Manufacturing		
EO		Examples of PST Sector Roles
EO1	Climate Change Mitigation	Energy audit and technical engineering to improve energy efficiency for the cement industry.
EO2	Climate Change Adaptation	Engineering of manufacturing facilities and development of sea-based food processing facilities that have climate resilience.
EO3	Protection of Healthy Ecosystems and Biodiversity	A biodiversity impact study of the animal-based food processing industry.
EO4	Resource Resilience and the Transitions to a Circular Economy	Research and development of environmentally friendly substitution materials (bio-based materials) for sustainable textile industry.

In relation to the **Water Supply, Sewerage, and Waste Management (WSSWM) sector**, there is a national target of 30% waste reduction and 70% waste management by 2025 as stipulated in the National Policies and Strategies on Waste.¹⁴ This aligns with the circular economy ambitions in the National Circular Economy Roadmap 2025–2045, which emphasizes e-waste management through the implementation of the Extended Producer Responsibility (EPR) principle, strengthening regulations, and developing recycling facilities.¹⁵ PST sector is essential to support EPR implementation, such as meeting producers' obligations to reduce, collect, and recycle post-consumption packaging.¹⁶ Some examples of how the activities in the PST sector can support the WSSWM sector are shown in the following table.

¹⁴ President of the Republic of Indonesia. Presidential Regulation Number 97 of 2017 concerning National Policies and Strategies for the Management of Domestic Waste. Jakarta: Ministry of State Secretariat, 2017. [Online]. Available at: <https://peraturan.bpk.go.id/Download/63709/Perpres%20Nomor%2097%20Tahun%202017.pdf>.

¹⁵ Bappenas. *Peta Jalan and Rencana Aksi Nasional Ekonomi Sirkular Indonesia 2025–2045*. Jakarta: Ministry of National Development Planning/National Development Planning Agency (Bappenas), 2024. [Online]. Available at: <https://lcdi-indonesia.id/wp-content/uploads/2024/07/RAN-ES-2025-2045.pdf>.

¹⁶ Ministry of Environment and Forestry of the Republic of Indonesia. Regulation of the Minister of Environment and Forestry Number 75 of 2019 concerning Roadmap to Waste Reduction by Producers. Jakarta: Ministry of Environment and Forestry, 2019. [Online]. Available at: <https://peraturan.bpk.go.id/Details/312182/permen-lhk-no-75-tahun-2019>.

Table 6 Role of the PST Sector in Supporting the WSSWM Sector

Focus Sector: Water Supply, Sewerage and Waste Management (WSSWM)		
EO		Examples of PST Sector Roles
EO1	Climate Change Mitigation	Consultancy activities to design a financing scheme, conduct technical design of recycling and waste treatment with low-emission technology facilities.
EO2	Climate Change Adaptation	Design of climate-resilient drainage systems, Wastewater Treatment Plant (<i>Instalasi Pengolahan Air Limbah/ IPAL</i>), and clean water networks.
EO3	Protection of Healthy Ecosystems and Biodiversity	Environmental Impact Analysis (EIA) from the capture and utilization of landfill gases.
EO4	Resource Resilience and the Transitions to a Circular Economy	Conducting technical studies and planning of wastewater recycling systems as well as material recovery from solid waste, such as plastics, metals, and organics.

B. Approach

B.1. Rationale for Selecting TSC Activities in the Professional, Scientific and Technical (PST) Sector

Activities within the PST sector are enabling, meaning they support activities in the focus sectors in directly achieving Environmental Objectives (EO). Additionally, activities in this sector play a critical role in economic growth in Indonesia by:

1. enhancing innovation, productivity, and competitiveness across various industries;
2. creating high-skilled, high-paying jobs that contribute to job growth and poverty reduction;
3. developing technological innovations, including new solutions and enhancements to existing technologies;
4. improving healthcare, education, and infrastructure, resulting in a better quality of life for citizens;
5. increasing global competitiveness to attract foreign investment and promote exports.

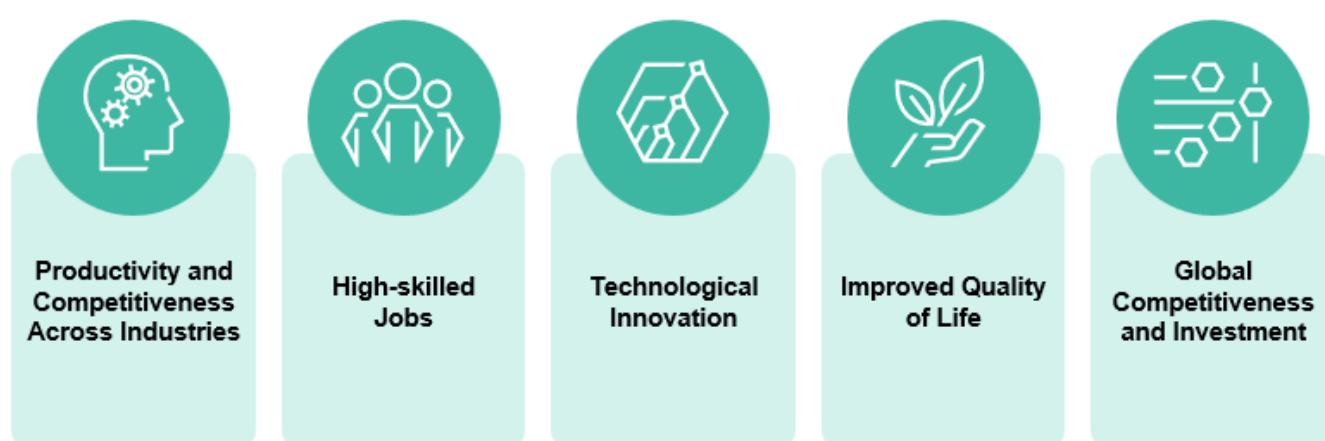


Figure 1. Role of the Professional, Scientific and Technical (PST) Sector in Economic Growth

The activity coverage in this sector includes those covered by the ASEAN Taxonomy for Sustainable Finance (ATSF) and aligns with other international taxonomies, such as the EU Taxonomy. Considering their relevance to the context of Indonesia, the following activities will be covered in TKBI according to the activity groups of the Indonesian Standard Industrial Classification (KBLI):

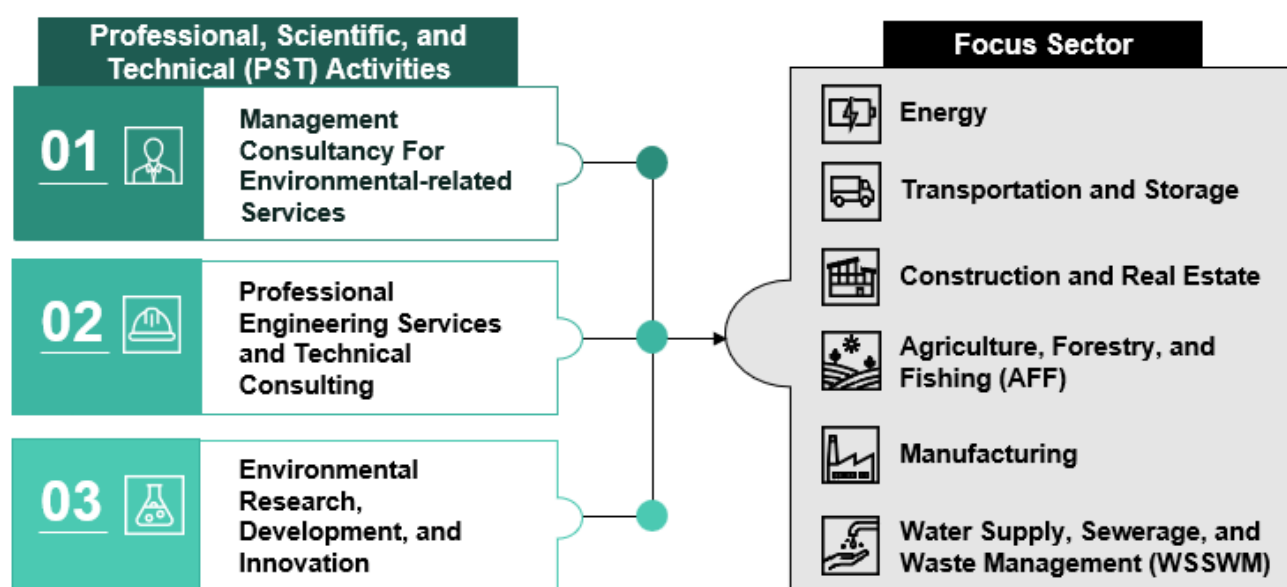


Figure 2.1 Scope of Professional, Scientific and Technical Activity Sectors

1. **Management Consultancy for Environmental-Related Services** explicitly enables risk strategy and management related to climate mitigation, climate adaptation, biodiversity, and resource resilience. In the energy sector, the 2023 Performance Report of the Ministry of Environment and Forestry (MoEF) notes that most large energy companies have partnered with professional environmental consultants to support carbon emission reporting and sustainable energy transition strategies.¹⁷
2. **Professional Engineering and Related Technical Consultancy Services for Environmental-Related Services and Energy Performance of Industries** align with climate mitigation goals and contribute to climate adaptation as well as biodiversity and resource resilience solutions. Examples of projects include climate adaptation endeavors such as flood defense design, resilient infrastructure, and water management systems. According to the Ministry of Energy and Mineral Resources (MEMR), there were more than 700 renewable energy projects involving engineering consultants in design and technical supervision as of 2024.¹⁸ The Strategic Plan of the Ministry of Energy and Mineral Resources for 2020-2024 outlines the development of ESCO businesses, namely companies providing comprehensive energy efficiency services, as one of the strategies for energy and electricity efficiency improvement.¹⁹ National policy on energy conservation includes energy management practices and types of energy conservation service businesses which are foundational to establishing ESCO.²⁰ Currently, discussions regarding the Green Industry Service Company (GISCO), a green industry support ecosystem serving as a liaison between industry players and green financing providers, are underway.
3. **Research, Development, And Innovation Related to the Environment and Direct Air Carbon Capture** through direct application of solutions or innovations that emphasize activities nearing commercialization stage and have rapid implementation capabilities in climate mitigation and adaptation, as well as biodiversity and resource resilience. This includes research on cutting-edge technologies for carbon capture and GHG emission reduction, directly supporting climate mitigation.

To support the emission reduction commitment, the Government of Indonesia continues to encourage the development and implementation of CCS and Carbon Capture Utilization and Storage (CCUS). The Ministry of Energy and Mineral Resources has noted that as of 2024, there were approximately 15 potential CCS/CCUS projects, with a target of operation from 2026 to 2030.²¹ Challenges in implementing CCS/CCUS in Indonesia include commercial feasibility and the lack of first-mover projects.²² Recognizing the essential role of carbon capture research, development, and innovation in advancing CCS/CCUS projects, the Ministry of Research, Technology, and Higher Education, in cooperation with the Ministry of Energy and Mineral Resources and the Ministry of Environment, established a "Center of Excellence" for CCS/CCUS at one of the national universities.²³

¹⁷ Ministry of Environment and Forestry. "Laporan Kinerja 2023: Produktivitas tapak hutan dan lingkungan hidup untuk transformasi Indonesia". Jakarta: Ministry of Environment and Forestry, 2023. [Online]. Available at: <https://www.menlhk.go.id/work-plan/laporan-kinerja-2023-klhk/>.

¹⁸ Directorate General of Electricity of the Ministry of Energy and Mineral Resources. "INFOGATRIK: Buletin Ditjen Ketenagalistrikan Edisi IV, Vol XX". Jakarta: Ministry of Energy and Mineral Resources, 2024. [Online]. Available at: https://gatrik.esdm.go.id/assets/uploads/buletin/files/ae8d0-buletin_infogatrik-edisi-desember-2024_digital-ver.pdf.

¹⁹ Ministry of Energy and Mineral Resources. Regulation of the Minister of Energy and Mineral Resources Number 9 of 2023 concerning Amendment to Regulation of the Minister of Energy and Mineral Resources Number 16 of 2020 concerning Strategic Plan of the Ministry of Energy and Mineral Resources of 2020-2024, Jakarta: Ministry of Energy and Mineral Resources, 2023. [Online]. Available at: <https://peraturan.bpk.go.id/Details/265976/permen-esdm-no-9-tahun-2023>.

²⁰ Government of the Republic of Indonesia. Government Regulation Number 33 of 2023 concerning Energy Conservation, Jakarta: Government of the Republic of Indonesia, 2023. [Online]. Available at: <https://peraturan.bpk.go.id/Home/Details/252083/pp-no-33-tahun-2023>.

²¹ Ministry of Energy and Mineral Resources. "Pemerintah targetkan 15 proyek CCS/CCUS onstream tahun 2030", Ministry of Energy and Mineral Resources, 2024. [Online]. Available at: <https://www.esdm.go.id/id/media-center/arsip-berita/pemerintah-targetkan-15-proyek-ccs-ccus-onstream-tahun-2030>.

²² Suryani, A. S. "Potensi dan tantangan implementasi Carbon Capture and Storage di Indonesia". Jakarta: Center for Research, Parliamentary Expertise Agency, General Secretariat of the House of Representatives of the Republic of Indonesia, 2024. [Online]. Available at: https://berkas.dpr.go.id/pusaka/files/info_singkat/Info%20Singkat-XVI-1-I-P3DI-Januari-2024-236.pdf.

²³ Institut Teknologi Bandung. (n.d.). "Indonesia Center of Excellence for CCS and CCUS". Program PUI PT – Ministry of Research, Technology, and Higher Education. [Online]. Available at: <https://ccs-coe.ftm.itb.ac.id/>.

In the PST sector, there is only a "Green" classification, in line with the widely accepted international taxonomies (in line with interoperability principles).

Table 7. List of Activity Mapping

No.	Activity	Green	Transition	Note*
1	Management Consultancy for Environment-Related Services	X	N/A	
2	Professional Engineering and Technical Consultancy Services Related to the Environment and Energy Performance of Industries	X	N/A	
3	Research, Development, and Innovation Related to the Environment and Direct Air Carbon Capture	X	N/A	
4	Legal and Accounting Activities	-	-	Excluded
5	Advertising and Market Research	-	-	Excluded
6	Other Scientific and Technical Professional Activities	-	-	Excluded
7	Animal Health Activities	-	-	Excluded

Note:

X indicates that the activity has the relevant classification

N/A indicates that the activity is not applicable or does not have the relevant classification

*) Some activities have different treatment and further explanation on the note column for each of these activities as follows.

Excluded Activities in the TKBI Activity List

This category includes activities that have previously been considered for inclusion in the development of the ATSF and TKBI but are excluded for specific reasons.

a. Legal and Accounting Activities

The role of legal and accounting activities is to provide administrative and compliance support, such as contract drafting, legal due diligence, and financial audit services. While crucial for project governance, the environmental impacts of these activities are indirect and difficult to measure in terms of quantitative emissions reductions per activity. Thus, these activities are excluded from this sector, which focuses on activities with a direct, measurable, and attributable environmental contribution to the indicators. This exclusion is also consistent with the scope of activities in this sector as defined by other international taxonomies.

b. Advertising and Market Research

In addition to holding significant economic value, advertising and market research activities are rapidly growing in Indonesia and contribute to the creative economy and domestic consumption. However, there is no clear, direct evidence of these activities enabling the focus sector activities to contribute to the EOs such as GHG emission reductions. This exclusion is also consistent with the scope of activities in this sector as defined by other international taxonomies.

c. Other Professional, Scientific and Technical Activities

This category includes various and heterogeneous scientific and technical services without any specific scope. The exclusion of these activities is also consistent with the scope of activities in this sector in other international taxonomies.

d. Animal Healthcare Activities

These activities involve animal healthcare and monitoring activities for livestock and pets, typically carried out by veterinarians. While activities related to pets are not included in the focus of EO contributions, such as GHG emission reductions, enabling activities related to livestock are covered under livestock production activity, as part of the AFF sector.

B.2. General Principles for Setting TSC

This section outlines the basis and considerations in setting Technical Screening Criteria (TSC) for each Environmental Objective (EO) for each activity in the PST sector.

EO1: Climate Change Mitigation

Classification	Description
Green	1. The Technical Screening Criteria (TSC) are designed to ensure activities enable: a. Defined GHG emissions reductions, which reference credible, 1.5°C-aligned science-based pathways, consistent with the Paris Agreement; OR b. The decarbonization of high-emitting sectors through credible and time-bound transition plans that are aligned or aligning with science-based pathways in accordance with the ASEAN Transition Finance Guidance (ATFG) or presently applicable national transition plan guidelines.
Transition	N/A

EO2: Climate Change Adaptation

Classification	Description
Green	1. The Technical Screening Criteria (TSC) are designed for activities which implement measures to ensure own resilience to climate change and thereby contribute to overall local, national, or regional resilience; OR 2. The activity enables other activities to increase resilience to climate change; AND 3. The activities demonstrate the level of Greenness as follow: a. Comprehensive; AND b. Significant impact; AND c. High impact advocacy.
Transition	N/A

EO3: Protection of Healthy Ecosystem and Biodiversity

Classification	Description
Green	1. The Technical Screening Criteria (TSC) are designed to ensure activities enable other activities to enhance their environmental sustainability and minimize their negative impacts on biodiversity, thereby contributing to the protection of healthy ecosystems; AND 2. The activities demonstrate the level of Greenness as follow;; a. Significant enabling of biodiversity conservation; AND b. Supporting conservation research and innovation.
Transition	N/A

EO4: Resource Resilience and the Transition to a Circular Economy

Classification	Description
Green	1. The Technical Screening Criteria (TSC) are designed to ensure activities enable other activities to transition towards a circular economy by promoting resource efficiency, minimizing waste generation, and maximizing resource recovery and reuse, thereby contributing to resource resilience; AND 2. The activities demonstrate a strong integration of circular economy .

EO4: Resource Resilience and the Transition to a Circular Economy

Classification	Description
Transition	N/A

B.3. Rationale for Selecting Environmental Objectives (EO)

Activities covered in this sector contribute to diverse environmental objectives, as specified in the section “Examples of the role of enabling sectors in supporting TKBI’s focus sectors.” The selection of EO for each activity is based on the principle of substantial contribution to the most relevant environmental objectives, considering the impact of each activity on 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).

Table 8. List of Selected Environmental Objectives

Activity	Selected EO	Rationale for Selecting EO
Management Consultancy for Environmental-Related Services	EO1, EO2, EO3, EO4	EO1, EO2, EO3, and EO4 are relevant due to direct role of these three activities in enabling the focus sectors to mitigate and adapt to climate change, protect biodiversity, and encourage resource resilience and transition to a circular economy. This is achieved through management consulting services, professional engineering and technical consulting services, as well as research, development and innovation related to the environment. The selection of all four EOs for this activity is also in line with the ATSF.
Engineering Activities and Related Technical Consultancy for Environmental-Related Services		
Close to Market Research, Development and Innovation		
Professional Services Related to Energy Performance of Industries	EO1	EO1 is relevant for professional services related to energy performance of industries and research and innovation for direct air carbon capture, contributing directly to energy consumption and GHG emissions, thereby presenting significant potential in supporting climate change mitigation efforts through energy efficiency and carbon capture technology.
Research, Development, and Innovation for Direct Air Carbon Capture		
		EO2, EO3, and EO4 are not applicable because both activities were irrelevant to the objectives of climate change adaptation, protection or restoration of ecosystems and biodiversity, or transition to a circular economy or resource resilience.

B.4. Rationale for Setting Technical Screening Criteria (TSC)

The TSC development is based on the draft ATSF version 4, using a comprehensive approach that focuses on the nature of the activity and qualitative factors. The TSC for the PST sector are developed by considering the activity potential in enabling the focus sectors to contribute to the relevant EO for each activity. The following section describes the rationale for the defined indicators.

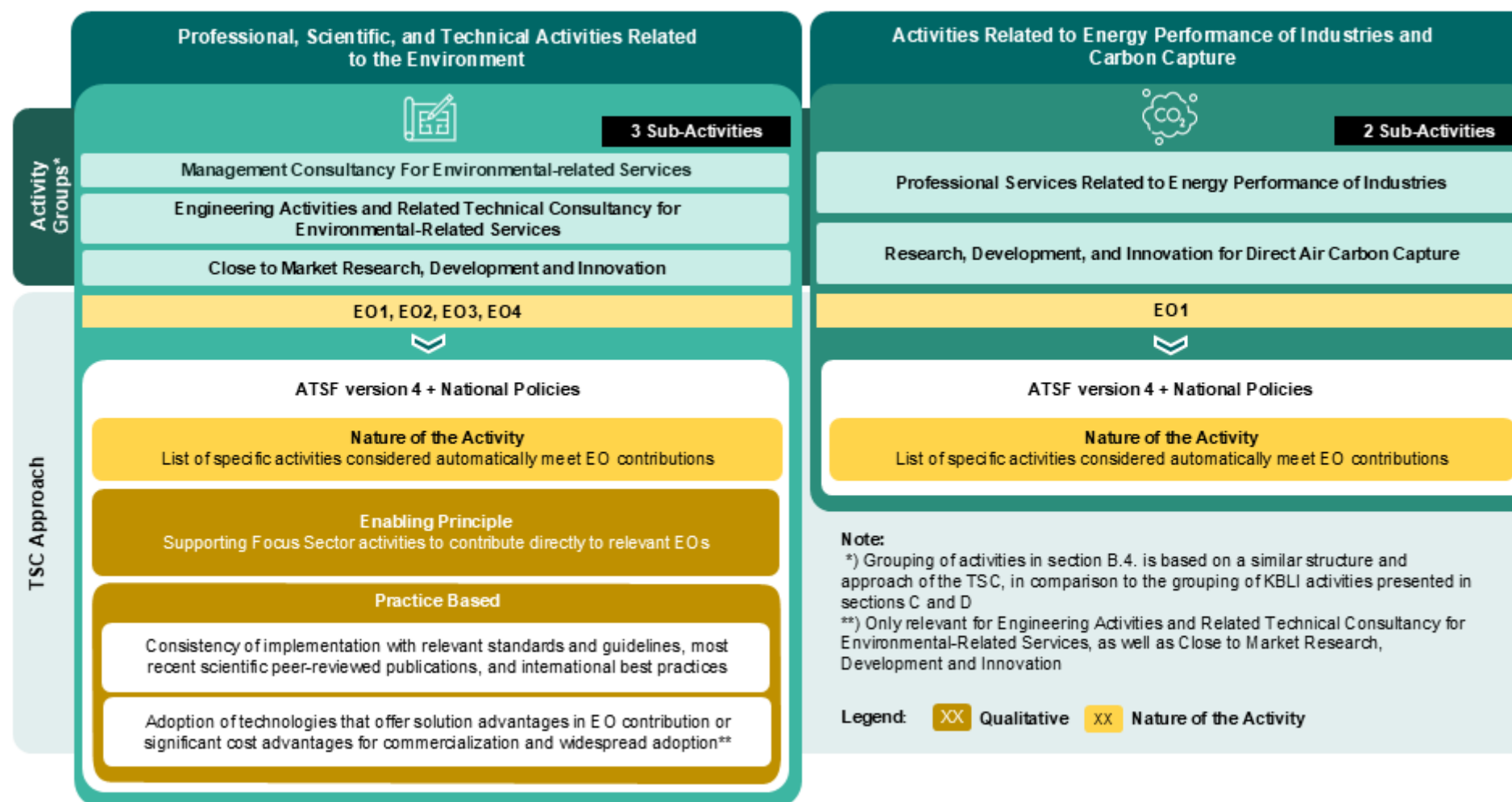


Figure 3. TSC Development Approach for the PST Activity Sector (Non-exhaustive)

To facilitate the review of the TSC selection list, the activities in this section are grouped based on a similar structure and approach to the TSC. This grouping differs from the activity grouping in parts C and D, which are based on KBLI activities.

1. Professional, Scientific and Technical Activities Related to the Environment

This group consists of three sub-activities: (a) Management Consultancy Activities for Environmental-Related Services activity, (b) Engineering Activities and Related Technical Consultancy for Environmental-Related Services activity, and (c) Close to Market Research, Development and Innovation activity. These activities cover the same EOs, which are EO1 – Climate Change Mitigation, EO2 – Climate Change Adaptation, EO3 – Protection of Healthy Ecosystems and Biodiversity, and EO4 – Resource Resilience and the Transition to a Circular Economy.

In general, the TSC emphasizes the **Enabling Principle**, emphasizing the sector's role in enabling the focus sectors through the development, implementation, engineering, operation, and effective use of technology, information, and capacity, with the goal of direct contribution to relevant EO.

Additionally, with **nature of the activity** approach, the TSC explicitly detail the provision or procurement of specific activities, listing examples of specific services applicable existing in the market. The implementation of these activities can be seen as enabling focus sector activities to directly fulfill EO contributions, thus automatically being considered as "Green."

In the **Practice-Based** approach, the TSC focuses on impact on the activities in the focus sectors which are consistent with the relevant standards and guidelines in relation to the environmental objectives. Without enforcing strict procedural compliance, the TSC include examples of how to present credible evidence of EO contributions, consistent with implementation through relevant standards, guidelines, peer-reviewed scientific publications, and international best practices.

For Engineering Activities and Related Technical Consultancy for Environmental-Related Services activity, as well as Close to Market Research, Development and Innovation activity, the TSC require that these activities enable the focus sectors through adoption of technologies delivering solution excellence in EO contribution or significant cost efficiency. This approach prioritizes enhancing effectiveness and efficiency, thereby driving commercialization and widespread adoption over current alternatives.

Reference for Setting TSC

In developing the TSC from the ATSF, applicable and relevant national policies serve as references for harmonizing definitions and related terms, such as:

- a. Law Number 11 of 2019 concerning National System of Science and Technology
- b. Government Regulation Number 33 of 2023 concerning Energy Conservation
- c. Presidential Regulation Number 14 of 2024 concerning Implementation of Carbon Capture and Storage Activities
- d. Regulation of the Minister of Energy and Mineral Resources Number 2 of 2023 concerning Carbon Capture and Storage, as well as Carbon Capture, Utilization, and Storage in Upstream Oil and Natural Gas Business Activities with the scope of CCS and CCUS implementation

International standards referenced in the TSC are recognized and commonly applied in Indonesia, such as:

- a. **ISO 14064** is widely used by market players in Indonesia, and the Indonesian National Standard (SNI) on ISO 14064 is available and referenced in national policies.^{24 25}
- b. **ISO 14001** provides a structured framework for identifying, controlling, and reducing environmental risks associated with business activities. In Indonesia, SNI ISO 14001 is available. BPS-Statistics Indonesia reported that in 2021, 2,729 companies have implemented SNI ISO 14001 certification.²⁶
- c. **ISO 14040** and **ISO 14044** provide a framework and guidelines for Life Cycle Assessment (LCA). The SNI for both standards are available and referenced in the Guidelines for Preparing LCA Reports published by the Ministry of Environment.

²⁴ Government of the Republic of Indonesia. Presidential Regulation Number 98 of 2021 concerning Implementation of Carbon Economic Value for Target Achievement on Nationally Determined Contribution and the Control of Greenhouse Gas Emission in National Development. Jakarta: Government of the Republic of Indonesia, 2021. [Online]. Available at: <https://peraturan.bpk.go.id/Details/187122/perpres-no-98-tahun-2021>.

²⁵ Ministry of Environment and Forestry. Regulation of the Minister of Environment and Forestry Number 21 of 2022 concerning Administrative Procedure for the Application of Carbon Economic Value. Jakarta: Ministry of Environment and Forestry, 2022. [Online]. Available at: <https://peraturan.bpk.go.id/Details/235421/permen-lhk-no-21-tahun-2022>.

²⁶ BPS-Statistics Indonesia. "Jumlah Perusahaan yang Menerapkan Sertifikasi SNI ISO 14001". 2021. [Online]. Available at: <https://www.bps.go.id/id/statistics-table/2/MTc0NCMy/jumlah-perusahaan-yang-menerapkan-sertifikasi-sni-iso-14001.html>.

- d. **ISO 59020** provides a methodology for measuring and assessing circularity levels at organizational, product, and value chain levels. ISO 59020 has been adopted as SNI ISO 59020.

In the process of local contextualization, several documents and national guidelines are also included as sample evidence or reference for comparing contributions to EO3 and EO4, such as:

- a. **Indonesian Biodiversity Strategy and Action Plan (IBSAP) 2025-2045 Bappenas** serves as a policymaking and planning reference for biodiversity management in Indonesia for government and non-government sectors. The IBSAP outlines biodiversity management strategies on the national scale that were cascaded into sub-national levels, action plans complemented by policy directions, performance indicators, and ideal and minimum prerequisites for effective implementation;
- b. **Indonesian National Roadmap and Action Plan for Circular Economy 2025-2045 Bappenas** outlines strategies, actions, and targets for the circular economy in Indonesia, based on the 9R framework (Refuse, Rethink, Reduce, Reuse, Repair, Refurbish, Remanufacture, Repurpose, Recycle, and Recover). This document is the product of extensive discussions with Ministries/Agencies, regional governments, business actors, associations, and development partners; and
- c. **Guidelines for Preparing Life Cycle Assessment (LCA) Reports Ministry of Environment and Forestry (MoEF)** provide a practical reporting framework and structured reporting evaluation system. These guidelines serve as a reference for LCA report developers, particularly for participants in the Public Disclosure Program for Environmental Compliance (*Program Penilaian Peringkat Kinerja Perusahaan dalam Pengelolaan Lingkungan Hidup* / PROPER).

2. Activities Related to Energy Performance of Industries and Carbon Capture

This activity group consists of two activities: (a) Professional Services Related to Energy Performance of Industries activity, and (b) Research, Development, and Innovation Related for Direct Air Carbon Capture activity, both of which cover the same EO, namely EO1 – Climate Change Mitigation.

With an approach based on the **nature of the activity**, the TSC explicitly outline specific activities or services considered capable of directly enabling focus sector activities in fulfilling EO contributions. When undertaken, these activities are automatically classified as "Green."

Professional services related to energy management and conservation play a crucial role in improving the energy performance of industries. The TSC includes a list of energy efficiency service activities that can support the enhancement of the energy performance of industries, aligned with national policies²⁷ on energy conservation and the activities mentioned in ATSF version 4.

Research, development, and innovation play an essential role in enabling the implementation of carbon capture, especially in addressing operational feasibility and commercialization challenges. This foundation underlines the TSC that emphasize on technologies, products, or solutions dedicated to carbon capture, where the application of these technologies, products, or solutions has the potential for reducing GHG emissions post-commercialization.

²⁷ Ministry of Energy and Mineral Resources. Government Regulation Number 33 of 2023 concerning Energy Conservation. Jakarta: Ministry of Energy and Mineral Resources, 2023. [Online]. Available at: <https://peraturan.bpk.go.id/Details/252083/pp-no-33-tahun-2023.html>.

B.5. Definitions of Terminology Related to the TSC

This section will explain the definitions of terminologies used in the TSC of some of the activities. Definitions applicable for various activities are provided in this section to facilitate easier reference.

Table 9. Terminologies Used In TSC

Terminology	Description
Better performance	Improved effectiveness, efficiency, or impact of solutions, technologies, products, processes, or business models that enhance the EO. It involves achieving superior outcomes, such as greater ecological benefits or increased resilience, compared to existing standards.
Critical for broader commercialization	Significant cost advantages provided by technologies that enable wider adoption and market uptake of activities classified as “Green”. These advantages accelerate the transition to a greener economy by making emission-reducing solutions more economically viable and scalable.
Ellen MacArthur Foundation's principles for a circular economy	Principles for a circular economy which emphasize designing products and systems to eliminate waste and pollution, maximize the reuse and recycling of materials, and restore natural ecosystems, fostering a sustainable economy that minimizes resource depletion and environmental harm.
Improved solutions	Enhanced or newly developed technologies, products, processes, or business models, including nature-based solutions, that increase the effectiveness or efficiency of activities which contribute to the EO. These solutions build on existing Green activities to deliver superior outcomes, such as better ecological impact or cost-effectiveness.
Carbon	Carbon Emissions are GHG emissions in the form of carbon dioxide and other GHGs that can be converted into carbon dioxide equivalent, in accordance with the Regulation of the Minister of Energy and Mineral Resources Number 2 of 2023. <i>(Regulation of the Minister of Energy and Mineral Resources Number 2 of 2023 concerning the Implementation of Carbon Capture and Storage, as well as Carbon Capture, Utilization, and Storage in Upstream Oil and Gas Business Activities)</i>
Carbon capture and storage	Carbon Capture and Storage, hereinafter abbreviated as CCS, is an activity to reduce GHG Emissions which includes capturing Carbon Emissions and/or transporting captured Carbon Emissions, and storing them to the Injection Target Zone safely and permanently in accordance with good engineering principles, in accordance with the Regulation of the Minister of Energy and Mineral Resources Number 2 of 2023. <i>(Regulation of the Minister of Energy and Mineral Resources Number 2 of 2023 concerning the Implementation of Carbon Capture and Storage, as well as Carbon Capture, Utilization, and Storage in Upstream Oil and Gas Business Activities)</i>
Carbon capture	Carbon Capture is a business activity of capturing and processing Carbon with certain specifications to be transported by certain modes of transportation in accordance with Presidential Regulation Number 14 of 2024. <i>(Presidential Regulation Number 14 of 2024 concerning the Implementation of Carbon Capture and Storage Activities)</i>
Less immediate or dramatic gains	Modest or gradual improvements in resource efficiency or circularity offered by certain technologies or practices compared to established alternatives. These approaches, while less transformative in the short term, support the objectives of the EO by enabling broader adoption through significant cost advantages.

Terminology	Description
Lower immediate emission reduction capabilities	Technologies that achieve less significant greenhouse gas emission reductions in the short term compared to established alternatives. These technologies support the objectives of the EO by offering cost advantages that enable broader commercialization and adoption, accelerating the transition to a greener economy.
Lower-emission alternatives	Technologies or practices that achieve reduced greenhouse gas emissions compared to conventional options, though they may offer less immediate or significant reductions than other established solutions. These alternatives support the objectives of the EO by providing cost advantages that facilitate broader commercialization and adoption, contributing to a greener economy.
Nature-based solutions	Solutions harnessing and enhancing natural ecosystems, nature-based solutions tackle societal challenges like climate change, biodiversity loss, and water management by protecting, restoring, or sustainably managing environments to deliver benefits for both people and nature.
Potentially offering less immediate or dramatic improvements	Technologies or practices that provide more gradual or modest enhancements in climate resilience compared to established alternatives. These approaches support the objectives of the EO by enabling broader adoption through cost advantages, contributing to long-term community and infrastructure resilience to climate change impacts.
Significant advantages / significant cost advantage	Substantial benefits, such as lower costs or enhanced feasibility, provided by low- or lower-emission alternatives compared to existing technologies or solutions. These benefits support the objectives of the EO by facilitating broader adoption and scalability of decarbonization efforts in high-emitting sectors.
Substantial contribution	1. For EO1: the enablement of emissions reduction through associated focus sector activities that directly contribute to the EO. This can be demonstrated through quantitative or qualitative evidence. 2. For EO2: the enablement of climate change adaptation and resilience through associated focus sector activities that directly contribute to the EO. This can be demonstrated through quantitative or qualitative evidence. 3. For EO3: the enablement of ecosystem protection and biodiversity conservation through associated focus sector activities that directly contribute to the EO. This can be demonstrated through quantitative or qualitative evidence. 4. For EO4: the enablement of resource resilience and transition to a circular economy through associated focus sector activities that directly contribute to the EO. This can be demonstrated through quantitative or qualitative evidence.
Technical consultations	Specialized advisory services, such as energy consultations, simulations, project management, and dedicated training, aimed at enhancing the energy performance of industries. These services support the objectives of the EO by providing expertise to improve efficiency and reduce energy consumption in industrial processes.
Widespread implementation	Broad adoption and accessibility of technologies or practices that enhance climate adaptation and resilience across communities and infrastructure. It is facilitated by significant cost advantages, enabling scalable deployment to support the objectives of the EO in strengthening long-term resilience to climate change impacts.

C.List of Professional, Scientific and Technical (PST) Sector Activities

This section maps the TSC available for the 2017 and 2020 KBLI codes that are covered within the PST sector in TKBI. As the first step, taxonomy users can identify economic activities in accordance with the list of KBLI Activities. For example, if the economic activity is Engineering and Technical Consulting Related Activities with the KBLI code 71102, then the user can look for the equivalent of activities in TKBI such as the Engineering Professional Services and Technical Consulting activity groups related to the Environment and Industrial Energy Performance. As a next step, taxonomy users can refer to section D to assess the TSCs that are relevant to the respective activity group.

Table 10. List of Professional, Scientific and Technical (PST) Sector Activities

KBLI 2017		KBLI 2020		Remarks
Code	Activity	Code	Activity	
1. Management Consultancy for Environmental-Related Services				
70209	Industrial Management Consulting Activities	70204	Industrial Management Consulting Activities	Using TSC for Draft ATSF version 4 Management consultancy for environmental-related services and national policies EO1, EO2, EO3, EO4: “Green”
		70209	Other Management Consulting Activities	
2. Professional Engineering Services and Related Technical Consultancy for Environmental-Related Services and Energy Performance of Industries				
71101	Architectural Activities	71101	Architectural Activities	Using TSC for Draft ATSF version 4 and national policies • Engineering Activities and Related Technical Consultancy for Environmental-Related Services EO1, EO2, EO3, EO4: “Green” • Professional Services Related to Energy Performance of Industries EO1: “Green” EO2, EO3, EO4: N/A
71102	Engineering and Technical Consultancy Related Activities	71102	Engineering and Technical Consultancy Related Activities	
71203	Periodic Inspection Services	71203	Periodic Inspection Services	
71204	Technical Installation Inspection Services	71204	Technical Installation Inspection Services	
74100	Specialized Design Activities	74111	Transportation and Machinery Design Activities	
		74114	Strategic and Defense Industrial Design Activities	
		74115	Communication and Electronics Equipment Design Activities	
		74118	Packaging Design Activities	
		74119	Other Industrial Design Activities	
3. Research, Development, and Innovation related to the Environment and Direct Air Carbon Capture				

KBLI 2017		KBLI 2020		Remarks
Code	Activity	Code	Activity	
72101	Research and Development in Natural Sciences	72101	Research and Development in Natural Sciences	Using TSC for Draft ATSF version 4 and national policies • Close To Market Research, Development and Innovation EO1, EO2, EO3, EO4: “Green” • Research, Development and Innovation for Direct Air Carbon Capture EO1: “Green” EO2, EO3, EO4: N/A
72102	Research and Development in Technology and Engineering	72102	Research and Development in Technology and Engineering	
72104	Research and Development in Biotechnology	72104	Research and Development in Biotechnology	
72105	Research and Development in Agriculture and Livestock Sciences	72105	Research and Development in Agriculture, Livestock, and Forestry Sciences	
72106	Research and Development in Fisheries and Marine Sciences	72106	Research and Development in Fisheries and Marine Sciences	
72109	Research and Development in Natural Sciences and Other Engineering Technologies	72107	Nuclear Energy Research and Development	
		72109	Research and Development in Other Natural Sciences and Engineering Technologies	
72201	Research and Development in Social Sciences	72201	Research and Development in Social Sciences	

Discussion Points

1	General	Are there any other activities not covered in the activity list table above that are relevant to consider for inclusion in the activity list? If so, please specify the activity (if possible, mention the related KBLI code), along with the reason why it is important to include.
2	General	Is the mapping and grouping of these activities appropriate? If not, please provide recommendations for more relevant activity grouping along with its justification.

D.TSC for Professional, Scientific and Technical (PST) Sector

This section outlines TSC for Activities within the PST sector. Here are some guidelines to navigate this section.

- Once the corresponding activity group is identified using the mapping in section C, taxonomy users can determine the specific activity that is relevant by double-checking the scope of the activity in the activity note section. For example, if the user has identified KBLI 71102 and seeks to apply the taxonomy for Engineering and Technical Consulting Related Activities, then the user only needs to refer to the TSC for the Engineering Activities and Related Technical Consultancy for Environmental-Related Services.
- Furthermore, taxonomy users can determine the most relevant entry point EO or the one with the primary contribution to the economic activity, based on the available EOs. For example, for Engineering Activities and Related Technical Consultancy for Environmental-Related Services activities, users can determine whether EO1-Climate Change Mitigation, EO2-Climate Change Adaptation, EO3-Protection of Healthy Ecosystems and Biodiversity, or EO4-Resource Resilience and the Transition to a Circular Economy is more relevant.
- Based on the selected EO, users can evaluate economic activity or related assets by using the available TSC for the "Green" or "Transition" classification. During this, users may refer to the list of national regulations cited as references in each TSC table. Since the references in the TSC tables apply to the entire activity group, users can refer back to the activity notes to identify the relevant references for the specific activity criteria selected. It is important to note that these regulations are not the basis for forming the TSC but rather serve as references to ensure alignment with applicable national policies.

1. Management Consultancy for Environmental-Related Services Activity

Management Consultancy for Environmental-Related Services Activity	
KBLI 2017	Description
M	Professional, scientific and technical activities
70	Activities of head offices; management consultancy activities
702	Management Consultancy Activities
7020	Management consultancy activities
70209	Other Management Consulting Activities
	This group includes provisions for advisory assistance, guidance and business operations and other organizational and management issues, such as strategic and organizational planning; decisions related to finance; marketing objectives and policies; human resource planning, practices and policies; Planning, scheduling, and production control. The provision of these business services can include advisory assistance, guidance and operations of various management functions, consulting on agronomist and agricultural economist management in the field of agriculture and the like, design of accounting methods and procedures, cost accounting programs, expenditure budget supervision procedures, provision of advice and assistance for businesses and community services in planning, organizing, efficiency and supervision, management information and others.

Activity Notes

Includes:

The provision or the contracting of consultancy activities enabling businesses or organizations for environmental-related services including service providers across the Environmental, Social, and Governance (ESG) value chain, including consultancy, risk and impact assessment, reporting, assurance services, and the development of rating tools.

Table 11. TSC for Management Consultancy for Environmental-Related Services

Classification	Technical Screening Criteria (TSC)	Reference
EO1: Climate Change Mitigation		
Green	- The provision or the contracting of consultancy activities that support or facilitate businesses or organizations in delivering environmental-related services, including service providers across the ESG value chain, including consultancy, risk and impact assessment, reporting, assurance services, and the development of rating tools. This enabling activity may include, but not necessarily limited to, the following services: - Carbon Footprint Analysis and Reduction Strategies - Energy Efficiency Audits and Optimization - Renewable Energy Integration and Planning - Sustainable Transportation Solutions - Green Building Design and Certification - Climate Change Mitigation Policy Advisory - Emission Reduction Project Development - Corporate Climate Strategy Development - Carbon Offset and Trading Advisory - Sustainable Supply Chain Management; AND - The enabling activity supports the development, deployment, operation, and effective use of information, technology, or capacity to enable GHG emissions reduction; AND - The enabling activity ensures that the Focus Sector activity is consistent with: - Best practice and available guidance on climate change mitigation, in line with the most recent scientific peer-reviewed publications, international best practices, and available database; AND - Standards and guidelines on climate change mitigation, such as the calculation of GHG emissions using the ISO 14064 series, as well as other relevant national and international climate policies and regulations.	- Draft ATSF version 4 - Law Number 11 of 2019 concerning the National System of Science and Technology - Presidential Regulation Number 98 of 2021 concerning the implementation of Carbon Economic Value (NEK) for the achievement of Nationally Determined Contributions (NDCs) and Greenhouse Gas Emission (GHG) control in national development - Regulation of the Minister of Environment and Forestry Number 21 of 2022 concerning the Implementation of Carbon Economic Value (NEK) - Regulation of the Minister of Environment and Forestry Number 12 of 2024 concerning the Implementation of Nationally

Classification	Technical Screening Criteria (TSC)	Reference
EO1: Climate Change Mitigation		
Transition	N/A	Determined Contributions (NDCs) in Handling Climate Change

Classification	Technical Screening Criteria (TSC)	Reference
EO2: Climate Change Adaptation		
Green	- The provision or the contracting of consultancy activities that support or facilitate businesses or organizations in delivering environmental-related services, including service providers across the ESG value chain, including consultancy, risk and impact assessment, reporting, assurance services, and the development of rating tools. This enabling activity may include, but not necessarily limited to, the following services: - Climate Risk and Vulnerability Assessments - Resilience Planning and Implementation - Water Resource Management and Adaptation - Infrastructure and Built Environment Resilience Advisory - Ecosystem-Based Adaptation Strategy Development - Climate Adaptation Policy and Governance Advisory - Climate Adaptation Strategy Consulting - Business Continuity and Disaster Recovery Planning Consulting - Climate Adaptation Financing and Investment Strategy Advisory - Climate-Smart Agriculture and Food Security; AND - The enabling activity supports the development, deployment, operation, and effective use of information, technology, or capacity to enable climate adaptation and resilience; AND - The enabling activity ensures that the Focus Sector activity is consistent with the requirements of a climate risk and vulnerability assessment (CRVA) as described in Annex 12.	- Draft ATSF version 4 - Law Number 11 of 2019 concerning the National System of Science and Technology
Transition	N/A	

Classification	Technical Screening Criteria (TSC)	Reference
EO3: Protection of Healthy Ecosystems and Biodiversity		
Green	The provision or the contracting of consultancy activities that support or facilitate businesses or organizations in delivering environmental-related services, including service providers across the ESG	Draft ATSF version 4

Classification	Technical Screening Criteria (TSC)	Reference
EO3: Protection of Healthy Ecosystems and Biodiversity		
	value chain, including consultancy, risk and impact assessment, reporting, assurance services, and the development of rating tools. This enabling activity may include, but not necessarily limited to, the following services: - Environmental and Social Impact Assessments (ESIA) - Biodiversity and Ecosystem Services Assessments - Habitat Restoration and Conservation Planning - Wildlife and Endangered Species Management - Invasive Species Control and Management - Sustainable Land Use and Landscape Planning - Ecological Monitoring and Reporting - Natural Resource Management and Conservation - Environmental Impact Mitigation Strategies - Marine and Coastal Ecosystem Management; AND - The enabling activity supports the development, deployment, operation, and effective use of information, technology, or capacity to enable the protection of healthy ecosystems and biodiversity; AND - The enabling activity ensures that the Focus Sector activity is consistent with: - Best practice and available guidance for biodiversity conservation and ecosystem management, in line with the most recent scientific peer-reviewed publications, international best practices, and available databases; AND - Standards and guidelines on biodiversity conservation and ecosystem management such as ISO14001 on environmental management systems, the CBD guidelines, the IUCN Red List criteria, and Indonesian Biodiversity Strategy and Action Plan (IBSAP) 2025 – 2045 Bappenas.	- Law Number 11 of 2019 concerning the National System of Science and Technology - Indonesian Biodiversity Strategy and Action Plan (IBSAP) 2025 – 2045 Bappenas
Transition	N/A	

Classification	Technical Screening Criteria (TSC)	Reference
EO4: Resource Resilience and the Transition to a Circular Economy		
Green	- The provision or the contracting of consultancy activities that support or facilitate businesses or organizations in delivering environmental-related services, including service providers across the ESG value chain, including consultancy, risk and impact assessment, reporting, assurance services, and the development of rating tools. This enabling activity may include, but not necessarily limited to, the following services: - Material Flow Analysis (MFA) and Mapping	- Draft ATSF version 4 - Law Number 11 of 2019 concerning the National System of Science and Technology

Classification	Technical Screening Criteria (TSC)	Reference
EO4: Resource Resilience and the Transition to a Circular Economy		
	b. Waste Stream Characterization and Valorization Assessments c. Circular Product Design and Development Planning d. Lifecycle Assessment (LCA) Services e. Industrial Symbiosis and By-Product Exchange Facilitation f. Sustainable Material Sourcing and Supply Chain Optimization g. Resource Efficiency Auditing and Performance Monitoring h. Circular Economy Infrastructure Development and Planning i. Circular Economy Implementation and Mitigation Strategies j. Extended Producer Responsibility (EPR) and Product Stewardship Planning; AND 2. The enabling activity supports the development, deployment, operation, and effective use of information, technology, or capacity contribution to resource resilience and the transition to a circular economy; AND 3. The enabling activity ensures that the Focus Sector activity is consistent with: a. Best practice and available guidance on lifecycle assessment, material flow analysis, resource efficiency, and circular economy transitions; AND b. The most recent scientific peer-reviewed publications, international best practices, and available databases; AND c. Standards and guidelines on resource management, circular economy, and waste management, such as ISO 14040, ISO 14044, ISO 14001, ISO 59020, the Ellen MacArthur Foundation's principles for a circular economy, National Roadmap and Action Plan Circular Economy Indonesia 2025–2045 Bappenas, and Life Cycle Assessments (LCA) report guidelines MoEF.	• National Roadmap and Action Plan Circular Economy Indonesia 2025–2045
Transition	N/A	

Discussion Points

3	General	Are the proposed TSC credible and science-based to demonstrate contributions to the Environmental Objectives (EO)? If not, please provide input or alternative approaches that are more relevant, along with supporting scientific or technical references. (Example: EO1 – Climate Change Mitigation aligned with the Paris Agreement target)
4	General	Are the TSC for this activity clear, objective, and easy to understand? If not, please explain the parts that need improvement and provide suggestions to enhance understanding of these TSC.

5	General	Are there specific terms in these TSC that are difficult to understand? If yes, please provide alternative terms that are easier to understand.
6	General	Are there challenges to implement these TSC on the ground? If yes, please provide TSC recommendations based on industry practice, along with their justification.
7	General	Are there differences between the TSC and widely adopted international taxonomies? Please provide recommendations to make the TSC approach more interoperable.
8	“...standards and guidelines on biodiversity conservation and ecosystem management such as ISO14001 on environmental management systems, the CBD guidelines, the IUCN Red List criteria, and Indonesian Biodiversity Strategy and Action Plan (IBSAP) 2025 – 2045 Bappenas.”	Are the criteria consistent with standards and guidelines on biodiversity conservation and ecosystem management that are commonly practiced by the industry? If not, please provide input and alternative approaches that are more relevant.
9	“...standards and guidelines on resource management, circular economy, and waste management, such as ISO 14040, ISO 14044, ISO 14001, ISO 59020, the Ellen MacArthur Foundation’s principles for a circular economy, National Roadmap and Action Plan Circular Economy Indonesia 2025–2045 Bappenas, and Life Cycle Assessments (LCA) report guidelines MoEF.”	Are the criteria consistent with standards and guidelines on resource management, circular economy, and waste management that are commonly practiced by the industry? If not, please provide input and alternative approaches that are more relevant.

2. Engineering Activities and Related Technical Consultancy for Environmental-Related Services and Energy Performance of Industries Activity

Engineering Activities and Related Technical Consultancy for Environmental-Related Services and Energy Performance of Industries Activity	
KBLI 2017	Description
M	Professional, scientific and technical activities
71	Architectural and engineering activities; technical testing and analysis
711	Architectural and engineering activities and related technical consultancy
7110	Architectural and engineering activities and related technical consultancy
71101	Architectural Activities This group includes the provision of architectural consulting services, such as architectural services for building design and drafting, architectural services for urban planning and landscape architecture, architectural services for the restoration of historic buildings, including building or building inspection services.
71102	Engineering and Technical Consulting Related Activities group includes engineering design and consulting activities, such as machinery, plant and industrial processes; projects involving civil engineering, hydraulic engineering, traffic engineering; expansion and realization of projects related to electrical and electrical engineering, mining engineering, chemical engineering, mechanical, industrial engineering and systems engineering and safety engineering; water management projects; and related project management activities with construction; project expansion activities using air conditioning, refrigeration, hygiene and pollution control techniques, acoustic engineering and others; geophysical, geological survey activities and seismic surveys or earthquakes; Geodetic survey activities include boundary and soil survey activities, hydrological surveys, subsurface state surveys and spatial information and cartography activities including mapping activities.
712	Technical testing and analysis
7120	Technical testing and analysis
71203	Periodic Inspection Services This group includes the inspection of a product, product, service and process design. The activities covered in this activity are such as inspection, press equipment, pre-shipment, production process, maintenance or maintenance, periodic checks regarding the safety of motor vehicles. Excluding building or structure inspection services (71100).
71204	Technical Installation Inspection Services This group includes inspection activities of an installation design and installation process, for example, inspection of electrical power installations, and other installations.
74	Other Professional, Scientific and Technical Activities
741	Specialized Design Activities
7410	Specialized Design Activities
74100	Specialized Design Activities This group includes activities of providing special design services, such as fashion design related to textiles, apparel, shoes, jewelry, furniture and other interior decoration as well as other fashion items as well as personal or household goods; industrial designer, i.e. the creation and development of designs and specifications that optimize the use, value and appearance of products, including the determination of materials, construction, mechanisms, shapes, colors and

final surface finishes of products, approaches to human needs and characteristics, safety, market recognition and efficiency in production, distribution, use and production; graphic design activities, interior designer activities and interior decorator activities.

Activity Notes

A. Engineering Activities and Related Technical Consultancy for Environmental-Related Services Activity

Includes:

Engineering activities and related technical consultancy dedicated to environmental-related services.

B. Professional Services Related to Energy Performance of Industries Activity

Includes:

Professional services related to energy performance of industries.

Table 12. TSC for Professional Engineering Services and Related Technical Consultancy for Environmental-Related Services and Energy Performance of Industries

Classification	Technical Screening Criteria (TSC)	Reference
EO1: Climate Change Mitigation		
Green	Engineering Activities and Related Technical Consultancy for Environmental-Related Services: 1. Engineering activities and related technical consultancy dedicated to environmental-related services. This enabling activity may include, but not necessarily limited to, the following services: a. Engineering Design and Development b. Technical Consulting and Advisory c. Project Management and Execution d. Construction and Infrastructure Services e. Environmental and Sustainability Consulting f. Energy and Utilities Consulting g. Automation and Industrial Engineering h. Testing, Inspection and Certification i. Maintenance and Asset Management j. IT and Digital Engineering Solutions; AND Activity meets criteria (2) AND (3) AND ((4a) OR (4b)) 2. The enabling activity supports the development, deployment, operation, and effective use of information, technology, or capacity to enable GHG emissions reduction; AND 3. The enabling activity enables a Focus Sector activity to be consistent with standards and guidelines on climate change mitigation, such as the calculation of GHG emissions using the ISO 14064 series, as well as relevant national and international climate policies and regulations; AND 4. The enabling activity enables a Focus Sector activity to adopt technologies that:	• Draft ATSF version 4 • Law Number 11 of 2019 concerning the National System of Science and Technology • Government Regulation of the Republic of Indonesia Number 33 of 2023 concerning Energy Conservation • Presidential Regulation Number 98 of 2021 concerning the implementation of Carbon Economic Value (NEK) for the achievement of Nationally Determined Contributions (NDCs) and Greenhouse Gas Emission (GHG) control in national development • Regulation of the Minister of Environment and Forestry Number 21 of 2022 concerning the Implementation of Carbon Economic Value (NEK)

Classification	Technical Screening Criteria (TSC)	Reference
EO1: Climate Change Mitigation		
	a. Exhibit improved GHG emissions reduction compared to current established alternatives; OR b. Provide significant cost advantages that are critical for making Focus Sector activity more economically viable for broader commercialization and widespread adoption. Professional Services Related to Energy Performance of Industries: Perform one of the following services/services: 1. Implementation of Investment Grade Energy Audit; OR 2. Financing of energy efficiency projects; OR 3. Implementation of installation and/or construction work as well as monitoring and supervision of energy efficiency projects; OR 4. Operation, maintenance, and repair of energy installations; OR 5. Measurement and verification of energy performance; OR 6. Building performance assessment; OR 7. Other technical consultancy, including specialized training related to improving industrial energy performance; OR 8. The services provided by energy service company (ESCO) dan Green Industry Service Company (GISCO) focused on energy.	• Regulation of the Minister of Environment and Forestry Number 12 of 2024 concerning the Implementation of Nationally Determined Contributions (NDCs) in Handling Climate Change
Transition	N/A	

Classification	Technical Screening Criteria (TSC)	Reference
EO2: Climate Change Adaptation		
Green	Engineering Activities and Related Technical Consultancy for Environmental-Related Services: 1. Engineering activities and related technical consultancy dedicated to environmental-related services. This enabling activity may include, but not necessarily limited to, the following services: a. Climate-Resilient Infrastructure Design and Analysis b. Flood Defense System Design and Engineering c. Water Resource Engineering for Drought and Flood Management d. Coastal Erosion Protection and Stabilization Engineering e. Climate-Adaptive Building Design and Retrofitting f. Stormwater Management and Drainage System Engineering g. Climate-Resilient Transportation Infrastructure Engineering	• Draft ATSF version 4 • Law Number 11 of 2019 concerning the National System of Science and Technology

Classification	Technical Screening Criteria (TSC)	Reference
EO2: Climate Change Adaptation		
	h. Ecosystem Restoration and Engineering for Climate Adaptation i. Climate Data Analysis and Modelling for Engineering Applications j. Climate-Resilient Material Selection and Testing; AND Activity meets criteria (2) AND (3) AND ((4a) OR (4b)) 2. The enabling activity supports the development, deployment, operation, and effective use of information, technology, or capacity to enable climate adaptation and resilience; AND 3. The enabling activity enables a Focus Sector activity to be consistent with the requirements of a climate risk and vulnerability assessment (CRVA) as described in Annex 12; AND 4. The enabling activity enables a Focus Sector activity to adopt technologies that: a. exhibit improved climate adaptation and resilience compared to current established alternatives; OR b. provide significant cost advantages that are critical for making Focus Sector activity more economically viable for broader commercialization and widespread adoption.	
Transition	N/A	

Classification	Technical Screening Criteria (TSC)	Reference
EO3: Protection of Healthy Ecosystems and Biodiversity		
Green	Engineering Activities and Related Technical Consultancy for Environmental-Related Services: 1. Engineering activities and related technical consultancy dedicated to environmental-related services. This enabling activity may include, but not necessarily limited to, the following services: a. Engineering Design and Development b. Technical Consulting and Advisory c. Project Management and Execution d. Construction and Infrastructure Services e. Environmental and Sustainability Consulting f. Energy and Utilities Consulting g. Automation and Industrial Engineering h. Testing, Inspection and Certification i. Maintenance and Asset Management j. IT and Digital Engineering Solutions; AND	• Draft ATSF version 4 • Law Number 11 of 2019 concerning the National System of Science and Technology • Indonesian Biodiversity Strategy and Action Plan (IBSAP) 2025 – 2045 Bappenas

Classification	Technical Screening Criteria (TSC)	Reference
EO3: Protection of Healthy Ecosystems and Biodiversity		
	Activity meets criteria (2) AND (3) AND ((4a) OR (4b)) 2. The enabling activity supports the development, deployment, operation, and effective use of information, technology, or capacity to enable the protection of healthy ecosystems and biodiversity; AND 3. The enabling activity enables a Focus Sector activity to be consistent with: a. best practice and available guidance for biodiversity conservation and ecosystem management, in line with the most recent scientific peer-reviewed publications, international best practices, and available databases; AND b. standards and guidelines on biodiversity conservation and ecosystem management such as ISO14001 on environmental management systems, the CBD guidelines, the IUCN Red List criteria, and Indonesian Biodiversity Strategy and Action Plan (IBSAP) 2025 – 2045 Bappenas; AND 4. The enabling activity enables a Focus Sector activity to adopt technologies that a. exhibit improved ecosystem health or biodiversity compared to current established alternatives; OR b. provide significant cost advantages that are critical for making Focus Sector activity more economically viable for broader commercialization and widespread adoption.	
Transition	N/A	

Classification	Technical Screening Criteria (TSC)	Reference
EO4: Resource Resilience and the Transition to a Circular Economy		
Green	Engineering Activities and Related Technical Consultancy for Environmental-Related Services: 1. Engineering activities and related technical consultancy dedicated to environmental-related services. This enabling activity may include, but not necessarily limited to, the following services: a. Engineering Design and Development b. Technical Consulting and Advisory c. Project Management and Execution d. Construction and Infrastructure Services e. Environmental and Sustainability Consulting f. Energy and Utilities Consulting g. Automation and Industrial Engineering h. Testing, Inspection and Certification i. Maintenance and Asset Management j. IT and Digital Engineering Solutions; AND	• Draft ATSF version 4 • Law Number 11 of 2019 concerning the National System of Science and Technology • National Roadmap and Action Plan Circular Economy Indonesia 2025–2045 Bappenas

Classification	Technical Screening Criteria (TSC)	Reference
EO4: Resource Resilience and the Transition to a Circular Economy		
	Activity meets criteria (2) AND (3) AND ((4a) OR (4b)) 2. The enabling activity supports the development, deployment, operation, and effective use of information, technology, or capacity contribution to resource resilience and the transition to a circular economy; AND 3. The enabling activity enables a Focus Sector activity to be consistent with: a. best practice and available guidance on lifecycle assessment, material flow analysis, resource efficiency, and circular economy transitions; AND b. the most recent scientific peer-reviewed publications, international best practices, and available databases; AND c. standards and guidelines on resource management, circular economy, and waste management, such as ISO 14040, ISO 14044, ISO 14001, ISO 59020, the Ellen MacArthur Foundation's principles for a circular economy, National Roadmap and Action Plan Circular Economy Indonesia 2025–2045 Bappenas, and Life Cycle Assessments (LCA) report guidelines MoEF; AND 4. The enabling activity enables a Focus Sector activity to adopt technologies that a. exhibit improvement in resource efficiency or circularity compared to current established alternatives; OR b. provide significant cost advantages that are critical for making Focus Sector activity more economically viable for broader commercialization and widespread adoption.	
Transition	N/A	

Discussion Points

10	General	Are the proposed TSC credible and science-based to demonstrate contributions to the Environmental Objectives (EO)? If not, please provide input or alternative approaches that are more relevant, along with supporting scientific or technical references. (Example: EO1 – Climate Change Mitigation aligned with the Paris Agreement target)
11	General	Are the TSC for this activity clear, objective, and easy to understand? If not, please explain the parts that need improvement and provide suggestions to enhance understanding of these TSC.

12	General	Are there specific terms in these TSC that are difficult to understand? If yes, please provide alternative terms that are easier to understand.
13	General	Are there challenges to implement these TSC on the ground? If yes, please provide TSC recommendations based on industry practice, along with their justification.
14	General	Are there differences between the TSC and widely adopted international taxonomies? Please provide recommendations to make the TSC approach more interoperable.
15	“...the ISO 14064 series, as well as relevant national and international climate policies and regulations.”	Are the criteria consistent with standards and guidelines on climate change mitigation that are commonly practiced by the industry? If not, please provide input and alternative approaches that are more relevant.
16	“...standards and guidelines on biodiversity conservation and ecosystem management such as ISO14001 on environmental management systems, the CBD guidelines, the IUCN Red List criteria, and Indonesian Biodiversity Strategy and Action Plan (IBSAP) 2025 – 2045 Bappenas.”	Are the criteria consistent with standards and guidelines on biodiversity conservation and ecosystem management that are commonly practiced by the industry? If not, please provide input and alternative approaches that are more relevant.
17	“...standards and guidelines on resource management, circular economy, and waste management, such as ISO 14040, ISO 14044, ISO 14001, ISO 59020, the Ellen MacArthur Foundation's principles for a circular economy, National Roadmap and Action Plan Circular Economy Indonesia 2025–2045 Bappenas, and Life Cycle Assessments (LCA) report guidelines MoEF.”	Are the criteria consistent with standards and guidelines on resource management, circular economy, and waste management that are commonly practiced by the industry? If not, please provide input and alternative approaches that are more relevant.

3. Research, Development, and Innovation related to the Environment and Direct Air Carbon Capture Activity

Research, Development, and Innovation related to the Environment and Direct Air Carbon Capture Activity	
KBLI 2017	Description
M	Professional, scientific and technical activities
72	Research and development of science
721	Research and experimental development on natural sciences and engineering
7210	Research and experimental development on natural sciences and engineering
72101	Research and Development in Natural Sciences This group includes research and development efforts carried out regularly (systematically), organized by the private sector related to the natural sciences, such as research and development of mathematics, physics, biology, chemistry, astronomy, geology, botany, zoology, and others.
72102	Research and Development in Technology and Engineering This group includes research and development efforts carried out regularly (systematically), organized by the private sector, related to technology and engineering. The activities covered by this group are research and development of engineering and technology, as well as between branches of science, especially natural sciences and engineering.
72104	Research and Development in Biotechnology This group includes research and development efforts carried out regularly (systematically), organized by the private sector, related to biotechnology.
72105	Research and Development in Agriculture and Livestock Sciences This group includes research and development efforts carried out regularly (systematically), organized by the private sector, related to agricultural and animal husbandry sciences.
72106	Research and Development in Fisheries and Marine Sciences This group includes research and development efforts carried out regularly (systematically), organized by the private sector, related to fisheries and marine sciences.
72109	Research and Development in Natural Sciences and Other Engineering Technologies This group includes research and development efforts carried out regularly (systematically), organized by the private sector, related to technology and other engineering.
722	Research and experimental development on social sciences and humanities
7220	Research and experimental development on social sciences and humanities
72201	Research and Development in Social Sciences This group includes research and development efforts carried out regularly (systematically), organized by the private sector, related to social sciences, such as research and development of economics, sociology, anthropology, politics, law, government, education, trade, communication, customs, traditions, and others.

Activity Notes

A. Close to Market Research, Development and Innovation Activity

Includes:

Research, applied research, and experimental development (R&D) of solutions, processes, technologies, business models, and other products dedicated to Climate Change Mitigation (EO1); Climate Change Adaptation (EO2); Protection of Healthy Ecosystems and Biodiversity (EO3); Resource Resilience and the Transition to a Circular Economy (EO4) in the target economic activities has at least been demonstrated in a relevant environment, corresponding to at least a fully functional prototype or representational model.

B. Research, Development, and Innovation for Direct Air Carbon Capture Activity

Includes:

Research, applied research and experimental development of solutions, processes, technologies, business models and other products dedicated to the direct air capture of carbon in the atmosphere.

Table 13. TSC for Research, Development, and Innovation related to the Environment and Direct Air Carbon Capture

Classification	Technical Screening Criteria (TSC)	Reference
	EO1: Climate Change Mitigation	
Green	Close to Market Research, Development and Innovation Activity: Activity meets (1) AND (2) AND ((3.a) OR (3.b)) 1. The enabling activity researches, innovates, or develops solutions, technologies, products, processes, or business models, including nature-based solutions to enable GHG emission reduction; AND 2. The enabling activity enables a Focus Sector activity to be consistent with standards and guidelines on climate change mitigation, such as the calculation of GHG emissions using the ISO 14064 series, as well as relevant national and international climate policies and regulations; AND 3. The enabling activity enables a Focus Sector activity to adopt technologies which may potentially meet the following criteria: a. Exhibit improved lifecycle GHG emissions reduction compared to current established alternatives; OR b. Provide significant cost advantages that are critical for making Focus Sector activity more economically viable for broader commercialization and widespread adoption. Research, Development and Innovation for Direct Air Carbon Capture Activity: 1. The enabling activity researches, develops or provides innovation for technologies, products or other solutions that are dedicated to the direct air capture of carbon in the atmosphere; AND	• Draft ATSF version 4 • Law Number 11 of 2019 concerning the National System of Science and Technology • Presidential Regulation Number 14 of 2024 concerning the Implementation of Carbon Capture and Storage Activities • Regulation of the Minister of Energy and Mineral Resources Number 2 of 2023 concerning the Implementation of Carbon Capture and Storage, as well as Carbon Capture, Utilization, and Storage in Upstream Oil and Gas Business Activities within the scope of CCS and CCUS implementation

Classification	Technical Screening Criteria (TSC)	Reference
EO1: Climate Change Mitigation		
	2. The implementation of the technologies, products or other solutions being researched for the direct air carbon capture in the atmosphere has the potential to result in overall net GHG emissions reductions once commercialized.	• Presidential Regulation Number 98 of 2021 concerning the implementation of Carbon Economic Value (NEK) for the achievement of Nationally Determined Contributions (NDCs) and Greenhouse Gas Emission (GHG) control in national development • Regulation of the Minister of Environment and Forestry Number 21 of 2022 concerning the Implementation of Carbon Economic Value (NEK) • Regulation of the Minister of Environment and Forestry Number 12 of 2024 concerning the Implementation of Nationally Determined Contributions (NDCs) in Handling Climate Change
Transition	N/A	

Classification	Technical Screening Criteria (TSC)	Reference
EO2: Climate Change Adaptation		
Green	Close to Market Research, Development and Innovation Activity: Activity meets (1) AND (2) AND ((3.a) OR (3.b)) 1. The enabling activity researches, innovates, or develops and introduces new or improved solutions, technologies, products, processes, or business models, including nature-based solutions, to enable climate adaptation and resilience; AND 2. The enabling activity enables a Focus Sector activity to be consistent with the requirements of a climate risk and vulnerability assessment (CRVA) as described in Annex 12; AND 3. The enabling activity enables a Focus Sector activity to adopt technologies which may potentially meet the following criteria:	• Draft ATSF version 4 • Law Number 11 of 2019 concerning the National System of Science and Technology

Classification	Technical Screening Criteria (TSC)	Reference
EO2: Climate Change Adaptation		
	a. Exhibit improved climate adaptation and resilience compared to current established alternatives; OR b. Provide significant cost advantages that are critical for making Focus Sector activity more economically viable for broader commercialization and widespread adoption.	
Transition	N/A	

Classification	Technical Screening Criteria (TSC)	Reference
EO3: Protection of Healthy Ecosystems and Biodiversity		
Green	Close to Market Research, Development and Innovation Activity: Activity meets (1) AND (2) AND ((3.a) OR (3.b)) 1. The enabling activity researches, innovates, or develops and introduces new or improved solutions, technologies, products, processes, or business models, including nature-based solutions, to enable the protection of healthy ecosystems and biodiversity; AND 2. The enabling activity enables enhancement of biodiversity conservation and ecosystem restoration by introducing new or improved solutions, technologies, products, processes, or business models, including nature-based solutions; AND 3. The enabling activity enables a Focus Sector activity to be consistent with: a. Best practice and available guidance for biodiversity conservation and ecosystem management, in line with the most recent scientific peer-reviewed publications, international best practices, and available databases; AND b. Standards and guidelines on biodiversity conservation and ecosystem management such as ISO14001 on environmental management systems, the CBD guidelines, the IUCN Red List criteria, and Indonesian Biodiversity Strategy and Action Plan (IBSAP) 2025 – 2045 Bappenas; AND 4. The enabling activity enables a Focus Sector activity to adopt technologies which may potentially meet the following criteria: a. Exhibit improved ecosystem health or biodiversity compared to current established alternatives; OR b. Provide significant cost advantages that are critical for making Focus Sector activity more economically viable for broader commercialization and widespread adoption.	• Draft ATSF version 4 • Law Number 11 of 2019 concerning the National System of Science and Technology • Indonesian Biodiversity Strategy and Action Plan (IBSAP) 2025 – 2045 Bappenas
Transition	N/A	

Classification	Technical Screening Criteria (TSC)	Reference
EO4: Resource Resilience and the Transition to a Circular Economy		
Green	Close to Market Research, Development and Innovation Activity: Activity meets (1) AND (2) AND ((3.a) OR (3.b)) 1. The enabling activity researches, innovates, or develops solutions, technologies, products, processes, or business models for resource resilience and the transition to a circular economy; AND 2. The enabling activity enables a Focus Sector activity to be consistent with: a. Best practice and available guidance on lifecycle assessment, material flow analysis, resource efficiency, and circular economy transitions; AND b. The most recent scientific peer-reviewed publications, international best practices, and available databases; AND c. Standards and guidelines on resource management, circular economy, and waste management, such as ISO 14040, ISO 14044, ISO 14001, ISO 59020, the Ellen MacArthur Foundation's principles for a circular economy, National Roadmap and Action Plan Circular Economy Indonesia 2025–2045 Bappenas, and Life Cycle Assessments (LCA) report guidelines MoEF; AND 3. The enabling activity enables a Focus Sector activity to adopt technologies which may potentially meet the following criteria: a. Exhibit improvement in resource efficiency or circularity compared to current established alternatives; OR b. Provide significant cost advantages that are critical for making Focus Sector activity more economically viable for broader commercialization and widespread adoption.	• Draft ATSF version 4 • Law Number 11 of 2019 concerning the National System of Science and Technology • National Roadmap and Action Plan Circular Economy Indonesia 2025–2045 Bappenas
Transition	N/A	

Discussion Points

18	General	Are the proposed TSC credible and science-based to demonstrate contributions to the Environmental Objectives (EO)? If not, please provide input or alternative approaches that are more relevant, along with supporting scientific or technical references. (Example: EO1 – Climate Change Mitigation aligned with the Paris Agreement target)
19	General	Are the TSC for this activity clear, objective, and easy to understand? If not, please explain the parts that need improvement and provide suggestions to enhance understanding of these TSC.

20	General	Are there specific terms in these TSC that are difficult to understand? If yes, please provide alternative terms that are easier to understand.
21	General	Are there challenges to implement these TSC on the ground? If yes, please provide TSC recommendations based on industry practice, along with their justification.
22	General	Are there differences between the TSC and widely adopted international taxonomies? Please provide recommendations to make the TSC approach more interoperable.
23	“...standards and guidelines on climate change mitigation, such as the calculation of GHG emissions using the ISO 14064 series, as well as relevant national and international climate policies and regulations.”	Are the criteria consistent with standards and guidelines on climate change mitigation that are commonly practiced by the industry? If not, please provide input and alternative approaches that are more relevant.
24	“...standards and guidelines on biodiversity conservation and ecosystem management such as ISO14001 on environmental management systems, the CBD guidelines, the IUCN Red List criteria, and Indonesian Biodiversity Strategy and Action Plan (IBSAP) 2025 – 2045 Bappenas.”	Are the criteria consistent with standards and guidelines on biodiversity conservation and ecosystem management that are commonly practiced by the industry? If not, please provide input and alternative approaches that are more relevant.
25	“...standards and guidelines on resource management, circular economy, and waste management, such as ISO 14040, ISO 14044, ISO 14001, ISO 59020, the Ellen MacArthur Foundation's principles for a circular economy, National Roadmap and Action Plan Circular Economy Indonesia 2025–2045 Bappenas, and Life Cycle Assessments (LCA) report guidelines MoEF.”	Are the criteria consistent with standards and guidelines on resource management, circular economy, and waste management that are commonly practiced by the industry? If not, please provide input and alternative approaches that are more relevant.

E. Appendix

E.1. Relevant Government Regulations

Table 14. List of Relevant Government Regulations

No.	KBLI 2017	Activities	Relevant Provisions (non-exhaustive list)
1	70209	Industry Management Consulting Activities	Law Number 7 of 2021 concerning Harmonization of Tax Regulations Law Number 11 of 2019 concerning National System of Science and Technology Law Number 32 of 2024 concerning Amendment to Law Number 5 of 1990 concerning Conservation of Biological Natural Resources and Their Ecosystems Regulation of the Minister of Finance Number 81 of 2024 concerning Taxation Provisions in the Context of the Implementation of the Core Tax Administration System Regulation of the Minister of Environment and Forestry Number 56 of 2017 concerning Standards and Competency Testing for Functional Position of Environmental Impact Controller Regulation of the Minister of Industry Number 25 of 2021 concerning Guideline and Procedure for the Supervision and Control of Industry Decree of the Minister of Industry Number 24 of 2019 concerning the Establishment of the Indonesian National Work Competency Standards (SKKNI) for the Field of Industrial Consultant Expertise Decision of Deputy I LKPP Number 2 of 2025 concerning the Model Procurement Document for Sustainable Construction Design Consulting Services
2	71101	Architectural Activities	Law Number 6 of 2017 concerning Architects Law Number 11 of 2019 concerning National System of Science and Technology Government Regulation Number 15 of 2021 concerning Implementing Regulation of Law Number 6 of 2017 concerning Architects Government Regulation Number 33 of 2023 concerning Energy Conservation Presidential Regulation Number 14 of 2024 concerning Implementation of Carbon Capture and Storage Activities Regulation of the Minister of Public Works and Public Housing Number 21 of 2021 concerning Performance Assessment on Green Building Construction Regulation of the Minister of Industry Number 25 of 2021 concerning Guideline and Procedure for the Supervision and Control of Industry Regulation of the Minister of Energy and Mineral Resources Number 2 of 2023 concerning Carbon Capture and Storage, as well as Carbon Capture, Utilization, and Storage in Upstream Oil and Natural Gas Business Activities Regulation of the Minister of Energy and Mineral Resources Number 9 of 2023 concerning Amendment to Regulation of the Minister of Energy and Mineral Resources Number 16 of 2020 concerning Strategic Plan of the Ministry of Energy and Mineral Resources of 2020-2024 Decree of the Minister of Industry Number 24 of 2019 concerning the Establishment of the Indonesian National Work Competency Standards (SKKNI) for the Field of Industrial Consultant Expertise

No.	KBLI 2017	Activities	Relevant Provisions (non-exhaustive list)
			Decision of Deputy I LKPP Number 2 of 2025 concerning the Model Procurement Document for Sustainable Construction Design Consulting Services
3	71102	Engineering Activities and Related Technical Consulting	Law Number 11 of 2014 concerning Engineering Law Number 7 of 2021 concerning Harmonization of Tax Regulations Law Number 11 of 2019 concerning National System of Science and Technology Government Regulation Number 25 of 2019 concerning Implementing Regulation of Law Number 11 of 2014 concerning Engineering Presidential Regulation Number 14 of 2024 concerning Implementation of Carbon Capture and Storage Activities Government Regulation Number 33 of 2023 concerning Energy Conservation Regulation of the Minister of Public Works and Public Housing Number 9 of 2021 concerning Guideline on Sustainable Construction Implementation Regulation of the Minister of Public Works and Public Housing Number 14 of 2020 concerning Standard and Guideline on the Procurement of Construction Services through Providers Regulation of the Minister of Public Works and Public Housing Number 21 of 2021 concerning Performance Assessment on Green Building Construction Regulation of the Minister of Industry Number 25 of 2021 concerning Guideline and Procedure for the Supervision and Control of Industry Regulation of the Minister of Environment and Forestry Number 56 of 2017 concerning Standards and Competency Testing for Functional Position of Environmental Impact Controller Regulation of the Minister of Environment and Forestry Number 18 of 2021 concerning Competency Certification of Environmental Impact Analysis Service Provider (AMDAL) Regulation of the Minister of Energy and Mineral Resources Number 2 of 2023 concerning Carbon Capture and Storage, as well as Carbon Capture, Utilization, and Storage in Upstream Oil and Natural Gas Business Activities Regulation of the Minister of Energy and Mineral Resources Number 9 of 2023 concerning Amendment to Regulation of the Minister of Energy and Mineral Resources Number 16 of 2020 concerning Strategic Plan of the Ministry of Energy and Mineral Resources of 2020-2024 Decree of the Minister of Industry Number 24 of 2019 concerning the Establishment of the Indonesian National Work Competency Standards (SKKNI) for the Field of Industrial Consultant Expertise Decision of Deputy I LKPP Number 2 of 2025 concerning the Model Procurement Document for Sustainable Construction Design Consulting Services

No.	KBLI 2017	Activities	Relevant Provisions (non-exhaustive list)
4	72101	Natural Science Research and Development	Law Number 11 of 2019 concerning National System of Science and Technology
			Presidential Regulation Number 14 of 2024 concerning Implementation of Carbon Capture and Storage Activities
			Government Regulation Number 41 of 2006 concerning Licensing for Research and Development Activities by Foreign Universities, Foreign R&D Institutions, Foreign Business Entities, and Foreign Nationals
			Regulation of the Minister of Finance Number 81 of 2024 concerning Taxation Provisions in the Context of the Implementation of the Core Tax Administration System, Article 42 and 43
			Regulation of the Minister of Energy and Mineral Resources Number 2 of 2023 concerning Carbon Capture and Storage, as well as Carbon Capture, Utilization, and Storage in Upstream Oil and Natural Gas Business Activities
			Regulation of the Minister of Research, Technology, and Higher Education Number 38 of 2019 concerning National Research Priorities for 2020–2024
			Regulation of the Minister of Home Affairs Number 17 of 2016 concerning Guidelines for Research and Development in the Ministry of Home Affairs and Regional Governments
			Regulation of the National Research and Innovation Agency Number 5 of 2023 concerning Governance of Research and Innovation in Regional Areas
5	72102	Technology and Engineering Research and Development	Law Number 11 of 2019 concerning National System of Science and Technology
			Presidential Regulation Number 14 of 2024 concerning Implementation of Carbon Capture and Storage Activities
			Regulation of the Minister of Finance Number 81 of 2024 concerning Taxation Provisions in the Context of the Implementation of the Core Tax Administration System, Article 42 and 43
			Regulation of the Minister of Energy and Mineral Resources Number 2 of 2023 concerning Carbon Capture and Storage, as well as Carbon Capture, Utilization, and Storage in Upstream Oil and Natural Gas Business Activities
			Regulation of the Minister of Villages, Development of Underdeveloped Regions, and Transmigration Number 23 of 2017 concerning Development and Implementation of Effective and Efficient Technology in the Management of Village Natural Resources
6	72104	Biotechnology Research and Development	Law Number 11 of 2019 concerning National System of Science and Technology
			Presidential Regulation Number 14 of 2024 concerning Implementation of Carbon Capture and Storage Activities
			Regulation of the Minister of Finance Number 81 of 2024 concerning Taxation Provisions in the Context of the Implementation of the Core Tax Administration System, Article 42 and 43
			Regulation of the Minister of Energy and Mineral Resources Number 2 of 2023 concerning Carbon Capture and Storage, as well as Carbon Capture, Utilization, and Storage in Upstream Oil and Natural Gas Business Activities
			Regulation of the National Research and Innovation Agency Number 9 of 2025 concerning the Duties, Functions, and Organizational Structure of the Research Center for Life and Environmental Sciences

No.	KBLI 2017	Activities	Relevant Provisions (non-exhaustive list)
7	72105	Agricultural and Livestock Sciences Research and Development	Law Number 11 of 2019 concerning National System of Science and Technology
			Law Number 22 of 2019 concerning Sustainable Agricultural Cultivation System
			Government Regulation Number 6 of 2013 concerning the Empowerment of Livestock Farmers
			Government Regulation Number 26 of 2021 concerning Organization of Agricultural Sector
			Government Regulation Number 12 of 2010 concerning Forestry Research and Development, Education and Training
			Presidential Regulation Number 14 of 2024 concerning Implementation of Carbon Capture and Storage Activities
			Regulation of the Minister of Finance Number 81 of 2024 concerning Taxation Provisions in the Context of the Implementation of the Core Tax Administration System, Article 42 and 43
			Regulation of the Minister of Energy and Mineral Resources Number 2 of 2023 concerning Carbon Capture and Storage, as well as Carbon Capture, Utilization, and Storage in Upstream Oil and Natural Gas Business Activities
			Regulation of the Minister of Agriculture Number 07/PERMENTAN/LB.200/2/2018 of 2018 concerning Guidelines on the Transfer of Agricultural Technology
8	72106	Fishery and Marine Sciences Research and Development	Law Number 11 of 2019 concerning National System of Science and Technology
			Law Number 31 of 2004 concerning Fishery
			Presidential Regulation Number 14 of 2024 concerning Implementation of Carbon Capture and Storage Activities
			Government Regulation Number 27 of 2021 concerning Organization of Marine Affairs and Fishery Sector
			Government Regulation Number 30 of 2008 concerning Organization of Fishery Research and Development
			Regulation of the Minister of Finance Number 81 of 2024 concerning Taxation Provisions in the Context of the Implementation of the Core Tax Administration System, Article 42 and 43
			Regulation of the Minister of Energy and Mineral Resources Number 2 of 2023 concerning Carbon Capture and Storage, as well as Carbon Capture, Utilization, and Storage in Upstream Oil and Natural Gas Business Activities
			Regulation of the Minister of Marine Affairs and Fisheries Number PER.10/MEN/2010 concerning Procedure and Requirements of Licensing of Fishery Research and Development
			Regulation of the Minister of Marine Affairs and Fisheries Number 31/PERMEN-KP/2020 of 2020 concerning Management of Conservation Areas
			Regulation of the Minister of Marine Affairs and Fisheries Number 22 of 2021 concerning Preparation of Fisheries Management Plan and Fisheries Management Agency in the Fisheries Management Areas of the Republic of Indonesia (WPPNRI)
9	72109	Research and Development of Other Natural Sciences and Engineering Technology	Law Number 11 of 2019 concerning National System of Science and Technology
			Presidential Regulation Number 14 of 2024 concerning Implementation of Carbon Capture and Storage Activities

No.	KBLI 2017	Activities	Relevant Provisions (non-exhaustive list)
			Regulation of the Minister of Finance Number 81 of 2024 concerning Taxation Provisions in the Context of the Implementation of the Core Tax Administration System, Article 42 and 43
			Regulation of the Minister of Energy and Mineral Resources Number 2 of 2023 concerning Carbon Capture and Storage, as well as Carbon Capture, Utilization, and Storage in Upstream Oil and Natural Gas Business Activities
			Regulation of the National Research and Innovation Agency Number 5 of 2023 concerning Governance of Research and Innovation in Regional Areas

E.2. List of Abbreviations and Terminologies

Table 15. List of Abbreviations and Terminologies

Abbreviations and Terminologies	Description
Climate Risk and Vulnerability Assessment (CRVA)	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.
Convention on Biological Diversity (CBD) Guidelines	Internationally recognized standards and recommendations for biodiversity conservation and ecosystem management, as outlined by the Convention on Biological Diversity. The standards and recommendations provide a framework to ensure that activities are aligned with best practices to protect and maintain healthy ecosystems and biodiversity.
Energy Service Company (ESCO)	A company that provides energy efficiency solutions that offer comprehensive services to reduce energy consumption and operational costs without sacrificing performance. ESCO acts as a strategic partner in designing, financing, and implementing energy conservation projects, including energy audits, system upgrades, and utilization of energy-saving technologies in the industrial, commercial, and public sectors.
Extended Producer Responsibility (EPR)	A progressive environmental policy that requires manufacturers to be responsible for the management of their product waste after use, including collection, recycling, and recovery. EPR encourages more sustainable product design and strengthens circular economy systems through post-consumption responsibility.
Green Industry Service Company (GISCO)	Technical services and consulting company that supports the industry's transformation towards greener, more efficient and more sustainable practices across the board. GISCO plays a role in accelerating the adoption of green technology and green industry certification in various manufacturing sectors.
Indonesian Biodiversity Strategy and Action Plan (IBSAP) 2025-2045	National strategic document that sets the direction of policies and actions for the conservation of Indonesia's biodiversity, as part of the global commitment to the Convention on Biological Diversity (CBD). IBSAP is a reference for the government and stakeholders in designing sustainable biodiversity conservation and utilization programs.
International Union for Conservation of Nature (IUCN) Red List	Globally recognized framework and criteria for assessing the conservation status of species to guide biodiversity protection efforts. It provides a standardized approach to identifying at-risk species, supporting the objectives of the EO through informed ecosystem management and conservation practices
Life Cycle Assessment (LCA)	The compilation and evaluation of inputs, outputs and potential environmental impacts of a product system throughout its life cycle. LCA is a cradle to grave approach to quantitatively assessing a product system. <i>(Indonesia National Standard (SNI) ISO 14040:2016 and SNI ISO 14044:2017)</i>
Company Performance Rating Assessment Program in Environmental Management (Program Penilaian Peringkat Kinerja Perusahaan dalam Pengelolaan Lingkungan Hidup / PROPER)	Evaluation of the performance of the person in charge of the business and/or activity in the field of environmental management. The assessment is carried out by the Ministry of Environment and Forestry of the Republic of Indonesia (currently the Ministry of Environment / Environmental Control Agency). <i>(Regulation of the Minister of Environment and Forestry of the Republic Indonesia Number 1 of 2021 concerning the Ranking Assessment Program Company Performance in Environmental Management)</i>