



INDONESIA SUSTAINABLE FINANCING TAXONOMY: ASPIRING TOWARDS EQUITABLE AND GREEN FINANCING



**Analysis and Recommendation
for OJK's Consultative Paper on Indonesia Sustainable Financing Taxonomy
January 2024**



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List of Acronyms

OJK

Otoritas Jasa Keuangan (The Indonesian Financial Services Authority)

THI

Taksonomi Hijau Indonesia (Indonesian Green Taxonomy)

TBI

Taksonomi Berkelanjutan Indonesia (Indonesia Sustainable Financing Taxonomy)

KBLI

Klasifikasi Baku Lapangan Usaha Indonesia (Indonesia Standard Industrial Classification)

ATSF

ASEAN Taxonomy for Sustainable Finance

CFPP

Coal-fired power plants

JETP

Just Energy Transition Partnership

EXECUTIVE SUMMARY



The transition to sustainable energy needs substantial and prolonged financial support. In order to enhance incentives for such funding, a transformation in financial industry regulations is essential to accommodate increased commitments to genuinely sustainable sectors, beyond mere greenwashing or transition-washing. The Green Taxonomy represents a concrete step towards promoting these commitments.

OJK (The Indonesian Financial Services Authority) has published THI (Indonesian Green Taxonomy) as the inaugural version of a guide for the financial industry to classify financing into various categories. The presence of this guide is expected to create transparency and enable the monitoring of commitments to green financing, which can subsequently serve as a basis for policy formulation and incentives to accelerate the funding for energy transition.

In November 2023, the OJK released a media statement to solicit public feedback for the revision of the Green Taxonomy, which is now encapsulated in the Taksonomi Berkelanjutan Indonesia-TBI (Indonesia Sustainable Financing Taxonomy). This report aims to provide feedback on the new taxonomy version by analyzing the comparison between TBI and the ASEAN Taxonomy for Sustainable Finance Version 2 (ATSF v2) as a benchmark and offering inputs on taxonomy elements crucial for accelerating financing for the green economy, particularly in energy transition. Key aspects include:

- There is an ongoing need for a 'red' or 'non-eligible' classification to avoid greenwashing risks in green financing.
- The addition and tightening of criteria for the 'green' classification in the KBLI (Indonesian Standard Industrial Classification).

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- The separation between KBLI groups that require cessation of financing and those that can still add value to sustainable economic activities.
- Encouragement of the recycling sector to boost investments in the circular economy.
- Evaluation of the value chain for all KBLI categories to facilitate a more effective transition.



INTRODUCTION

A. Green Taxonomy and Indonesia Sustainable Financing Taxonomy



The climate crisis has catalyzed responses across various industries to reform operational governance, with the financial sector, particularly banking, playing a crucial role. As a key vehicle of capital mobilization and allocation for the economy, an environmentally oriented financial industry can create incentives for other sectors to align with sustainable practices. Standardizing sustainable investment definitions through green taxonomy is a significant effort to create such an environmentally oriented financial sector. The primary aim of this taxonomy is to foster transparency by monitoring banking support for sustainable industries.

In practice, this taxonomy serves as the basis for reporting the green or sustainable portfolio status of banks, enabling regulators to oversee the financial industry's progress in sustainable financing.¹ For instance, regulators can use portfolio value indicators to evaluate the extent of financial resources allocated to sustainable industry players. Monitoring outcomes then inform the formulation of sustainable financing policies².

Furthermore, the increasing demand for financing instruments like Sustainable Link Bonds (SLB), Green Bonds, Blue Bonds, and other sustainability-based instruments

¹ Otoritas Jasa Keuangan. Taksonomi Hijau Indonesia Edisi 1.0 - 2022. Jakarta, Indonesia: Otoritas Jasa Keuangan, 2022 <https://ojk.go.id/id/berita-dan-kegiatan/info-terkini/Documents/Pages/Taksonomi-Hijau-Indonesia-Edisi-1---2022/Taksonomi%20Hijau%20Edisi%201.0%20-%202022.pdf>.

² Otoritas Jasa Keuangan. INDONESIA SUSTAINABLE FINANCING TAXONOMY versi 1.0. Jakarta, Indonesia: Otoritas Jasa Keuangan, 2023 <https://drive.google.com/drive/folders/1UjYYD3Mi-UXmW9hVxPtXZ3jhgkVVKV0V>.



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necessitates a clearer sectoral Taxonomy. Negotiations for equitable energy transition financing, such as the Just Energy Transition Partnership (JETP), have also faced setbacks in efforts to retire coal-fired power plants (CFPP) due to a lack of clear classification in the existing green taxonomy. This has led to a slow pace in the early retirement of CFPP, with only two plants, CFPP Cirebon-1 and Pelabuhan Ratu, chosen as pilot projects in the JETP based on the Comprehensive Investment and Policy Plan as of November 2023. However, the potential for funding both the closure of coal-fired power plants and the development of transmission and renewable energy generation is significant from the financial institution's perspective. The role of the Glasgow Financial Alliance for Net Zero (GFANZ) and local banks, both private and state-owned banks, with strong commitments can aid in accelerating the agenda for a just energy transition.

The Financial Services Authority (OJK) has issued sectoral classification guidelines since 2022 in the form of the Indonesian Green Taxonomy (THI),³ which is currently being revised into the Indonesia Sustainable Financing Taxonomy (TBI).⁴ Each bank will be required to determine the status of debtors in several categories based on criteria set in the employed taxonomy.

The THI requires fundamental reforms for several reasons, including the need for specific criteria to classify an activity, increased incentives for the early retirement of coal-fired power plants, evaluation of inter-industry linkages (value chain) to regulate financing based on total emissions produced by all activities of each industry and their impact on other sectors, and the necessity for harmonization with international standards (interoperability).

In November 2023, the OJK published the first draft Consultative Paper of TBI Version 1 to gather public feedbacks. In response to this draft, this report will provide a comparative analysis between the OJK's taxonomy version and the taxonomy used at the regional (ASEAN) level as a benchmark. This report will also offer several suggestions for improving the quality of TBI based on identified shortcomings in the current TBI draft.

B. Report Coverage

The core part of this report consists of several sections:



COMPARISON OF SUSTAINABLE TAXONOMIC WITH ASEAN TAXONOMIC

A. Green Taxonomy and Sustainable Taxonomy in Indonesia and ASEAN



Green taxonomy is a mechanism for classifying all business activities across various sectors based on their individual contributions to environmental and social objectives. Fundamentally, green taxonomy serves as a crucial tool for transparency and measurement guidance to support the expansion of green and environmentally friendly financing portfolios.

More specifically, the functions and objectives of green taxonomy include:

- Serving as a tool for enforcing regulations or supervising financing within financial institutions systems;
 - Necessitating regular monitoring in the implementation of credit/financing/investment distribution to the green sector
- and refining reporting by the financial services industry;
 - Providing a means for public transparency to oversee the flow of funds to brown/yellow/green industry sectors;
 - Reducing the risk of greenwashing and transition-washing by establishing uniform standards for green financing guidelines and clarifying sectors that do not meet green-standards;
 - Forming the basis for policy determination and incentives to encourage the mobilization of resources for energy transition and the green sector.

- In Indonesia, the THI is the first version published by the OJK, which is currently being revised into the TBI with several adjustments. ASEAN is also updating its ATSF from version 1 to version 2. One of the objectives of the THI update to TBI is to harmonize with ASEAN standards.⁵



B. Why Green Taxonomy Reform is Necessary

The THI requires fundamental reform for several reasons:

- 1 Firstly, the THI still lacks concrete assessment criteria for classification guidance by financial institutions. For example, the THI does not yet have specific qualitative or quantitative criteria for each sector but relies on general existing government policy guidelines, which tend to be input-oriented and dependent on self-declaration.⁶ This makes objective assessment difficult to implement by the financial services industry, even posing a risk of greenwashing or transition-washing.
- 2 Secondly, there are not yet explicit incentives for transition activities, such as early retirement of CFPP. This is important to increase the commitment to accelerate the closure of CFPP.
- 3 Thirdly, given that each industry is interconnected with other industries (value chain) that can affect the total emissions produced by a sector, there is a need to assess the overall impact of a sector in relation to its contribution of goods or services to other sectors except for the inherently ineligible industry such as coal and some others.
- 4 Lastly, there is a need for Interoperability of standards. Comparability and harmonization with international standards are critical to support the transition at the international level and sustainable economic activities with partner countries.

⁵Otoritas Jasa Keuangan.

⁶Otoritas Jasa Keuangan, "Taksonomi Hijau Indonesia Edisi 1.0 - 2022."

C. Comparative Analysis Between Indonesia Sustainable Financing Taxonomy and ATSF v2

This section presents a summary of the comparison between the TBI and the ATSF v2. It can be concluded that the primary differences lie in the simpler classification of activities in TBI v1 compared to ATSF v2, as well as in the assess-

ment mechanisms. In the following section, a number of recommendations for the further development of TBI will be presented, based on the implications of relevant comparison points.

Elements	TBI v1	ATSF v2
Activities classifications	"Green" dan "transition"	Foundation Framework (FF): Green - FF Amber - FF Red - FF Plus Standard (PS): Green - Tier 1 Amber - Tier 2 Amber - Tier 3 Red - PS
Environmental Objectives/EOs	EO1: Climate change mitigation EO2: Climate change adaptation EO3: Protection of healthy ecosystems & biodiversity EO4: Promote resource resilience and transition to circular economy	EO1: Climate change mitigation EO2: Climate change adaptation EO3: Protection of healthy ecosystems & biodiversity EO4: Promote resource resilience and transition to circular economy
Essential Criteria	EC1: Do No Significant Harm EC2: Remedial Measures to Transition EC3: Social Aspects	EC1: Do No Significant Harm EC2: Remedial Measures to Transition EC3: Social Aspects

Elements	TBI v1	ATSF v2
Assessment Approach	For Technical Screening Criteria (TSC): Nature of the activity, quantitative, and qualitative assessments	Foundation Framework (FF) that applies principles-based assessments and decision tree for sustainable activities classifications
	Sector-Agnostic Decision Tree (SDT): principle-based with decision tree for each EO with some guiding questions.	Plus Standard (PS) that uses TSC with quantitative and qualitative assessments and nature of the activity.
Assessment Mechanism	TSC for corporations (non-MSMEs).	No specific distinction of MSMEs vs. non-MSMEs.
	SDT for MSMEs and any other activities specifically determined in the taxonomy.	ATSF does not determine which assessment approach to use. However, there are several notes: <ul style="list-style-type: none"> If any activity does not have TSC defined in PS, that activity can only be evaluated with FF (see p. 43). Choice of assessment approach with FF requires strong justifications (e.g., special circumstances in which assessment with PS is not feasible)
SMEs Standard	In place (SDT)	Not specifically mentioned but there is a sector-agnostic decision tree.
Early Retirement of CFPP category as 'green' label	In place	In place
Value Chain Assessment	Not yet	Not yet

IDENTIFYING GAPS AND MISSING CRITICAL ELEMENTS



This section of the response focuses on the energy sector, which is a central topic in the current TBI. Discussions for other sectors will follow the evolution of the TBI. Presented here are our responses to the TBI version of

November 2023, based on a comparative analysis with ASEAN standards and guided by environmental objectives and the principles of a just transition:

- 1 The explicit mention of early retirement of CFPP as a "green" category activity in TBI represents progress. However, integration with the development of sustainable alternative energy sources is needed.**

the green category, there are no provisions stating that the retired CFPP must be replaced by renewable energy to qualify for the "green" classification, which is essential to support transition activities.

While TBI mentions early retirement schemes for CFPP as crucial during the transition period and categorizes activities to accelerate the operational end of CFPP in

2 The elimination of the red category in the classification increases the risk of greenwashing due to ambiguous categorization.

CELIOS questions why the technical screening criteria (TSC) in TBI do not include a “red” category, whereas the ATSF v2 allows categorizing an activity as “Red” especially if it causes “significant harm” to established environmental objectives. CELIOS sees the “red” or “non-eligible” classification as still necessary to clarify high-carbon activities and environmentally damaging actions. For instance, there are still insufficiently strict criteria in the TSC for critical mineral mining. Considering cases like nickel mining in

3 To avoid greenwashing and transition-washing in the Indonesia Sustainable Financing Taxonomy 1.0 (TBI 1.0), activities directly related to fossil energy should be excluded from the green classification. All activities classified as Green in TBI 1.0 that do not meet Environmental Objectives (EO2, EO3, and EO4)⁷ should be reclassified from “Green” to “Transition”, “Red”, or “non-

4 There is a need to enhance standards and add criteria universally to ensure TBI consistently aligns with the goals of a just transition:

- Criteria for the protection and empowerment of indigenous and local communities should be universally applicable and explicitly mentioned as

Morowali and Obi, which clearly do not meet the above aspects, some activities should be excluded from the “green” or “transition” classifications. **If the goal of reducing classification labels is a simplification, CELIOS suggests that the “red” or “non-eligible” category should be used as the first filter, followed by “green” and “transition” classifications to reduce the administrative burden of assessment and consider the risks of greenwashing and transition-washing that need more mitigation in the context of transition.**

eligible”. The list of activities to be removed from the green classification includes:

- Natural Gas Mining Activities;
- Support Activities for Oil and Natural Gas Mining; and
- Coal-Fired Power Plants (CFPP) (preferably separated from the category of activities on CFPP early retirements).

classification criteria per KBLI to align with the principles of a just transition. The mention of social aspects already exists in TBI but has not been explicitly detailed for each KBLI.

- Emphasis on criteria for rehabilitation and revitalization on each KBLI, such as through reclamation, reforestation, or

⁷ EO2: Adaptasi Perubahan Iklim

EO3: Perlindungan Ekosistem dan Keanekaragaman Hayati

EO4: Peningkatan Sumber Daya dan Transisi Menuju Ekonomi Sirkular

revegetation activities, should be mandated to manage environmental impacts. Consistent care for re-vegetation plants should be included to ensure the sustainability of these activities.⁸ Besides being mentioned in EO3 principles, this criterion needs to be explicitly stated for the TSC of each KBLI.

- Addition of objective criteria including comprehensive environmental impact measurement, aspirations of indigenous peoples and protected forest managers, and the obligation of a transparent grievance mechanism from communities impacted by projects with a clear action plan for each complaint.
- More emphasis on objective, output-based assessments. For example, for the criterion “having an emission reduction roadmap and reducing direct GRK emissions > 12.5% (or 15.5%) from Business as Usual...”, it should be explicitly stated that the baseline figures used must come from third-party verification, not internal company assessments. There is concern that companies will over-estimate their baselines if based on self-assessment. Additionally, an economic feasibility criterion per ton of soil/sand/water mined should be

added as a first criterion to simplify the assessment of industries that can still be eligible for sustainable financing. For example, for iron ore mining, a criterion of the ratio of valuable metal/mineral per ton of soil/sand/water mined with a certain threshold compared to the estimated impact of environmental damage and social conflict should be set, with an assessment conducted by auditors or third-party verification. If the assessment does not meet standards, it should be directly categorized as “red” or “non-eligible” due to the disproportionate benefit to harm.

- There is a debate about whether coal-fired power plants (CFPP/PLTU) that support green activities like electric vehicle production can be classified as green.⁹ CELIOS views that the support for electric vehicle production does not necessarily have to come from CFPP. In principle, if there is a greener alternative than what currently exists, then it is this greener alternative that should be promoted. Moreover, the leniency towards CFPP on the grounds of supporting green activities is actually not valid because when considered and evaluated from the perspective of the total value chain, the end result of such electric vehicle

⁸ Pratiwi, Narendra BH, Siregar CA, et al. Managing and reforesting degraded post-mining landscape in Indonesia: A Review. *Land* 2021; 10: 658.

⁹ Agung Satyadini, “Indonesia’s New Definition of Climate-Friendly Investment Risks Greenwashing Coal Power,” East Asia Forum, November 11, 2023, <https://eastasiaforum.org/2023/11/11/indonesias-new-definition-of-climate-friendly-investment-risks-greenwashing-coal-power/>.

production will likely generate more emissions since it is supported by CFPP in its supply chain. Nevertheless, apart from sectors that are clearly 'red' such as coal-fired power plants (CFPP) and some other industrial classifications with greener alternatives (see the table in points 5 and 6), regulators also need to comprehensively consider which sectors, if integrated into the supply chain, can still contribute to an overall reduction in emissions. Therefore, value chain evaluation is proposed.

- The Initiative for Responsible Mining Assurance (IRMA) should be one of the standards for good mining practices in the green and yellow categories.
- For the “green” classification, the PROPER criteria need to be elevated to not just green but gold, as the minimum “green” PROPER is already used for the “transition” classification. One goal is to add incentives for accelerated transition.
- Criteria for the results of Environmental Impact Assessment (EIA) or Environmental and Social Impact Assessment (ESIA) are necessary. Following ATSF version 2, both are needed to manage aspects that could cause “significant harm” to the achievement of sustainability and environmental objectives. The criteria and guiding questions for “Do No Significant Harm” assessment in TBI is still too subjective and vague.



5 CELIOS suggests a strategic framework for restructuring the existing taxonomy. Additionally, specific explanations for each KBLI are provided in the subsequent pages.

**Cessation
with Modification**

- This approach is for industries which social and environmental risks can still be managed and the economic benefits justified, but only if their activities are significantly restricted.
- Selective financing should be provided (e.g., only for small and medium-sized enterprises, SMEs) to minimize exploitation by large industries.
- In the taxonomy implementation, this would mean a "red" or "non-eligible" classification for large industry players and a "green" or "transition" classification for small and medium-sized industry players without ownership and intervention by large industries.
- Examples include the extraction of ornamental stones, building stones, etc.

**Total Cessation
(No Tolerance)**

- This approach applies to industries where the social and environmental risks outweigh the economic impacts and are very costly to manage (significant harm).
- These industries already have viable alternatives, necessitating an accelerated transition through the cessation of financing.
- In the taxonomy implementation, these industries should be classified as "red" or "non-eligible."
- Exceptions are made for a small number of activities, such as transitional efforts like the early retirement of coal-fired power plants (CFPP).
- Examples include coal mining, lignite mining, petroleum extraction, asbestos excavation, etc.

**Tightening and Establishing
More Objective-Specific Standards**

- This approach is for industries where social and environmental risks can still be managed and the economic benefits justified despite being managed by large industries.
- Enhanced standards are required to reduce the environmental and social risks associated with KBLI (Indonesian Standard Industrial Classification).
- In the taxonomy implementation, this would involve a "red" or "non-eligible" classification for industry players who do not meet certain criteria and a "green" or "transition" classification for those who meet specific criteria.
- The current TBI criteria need enhancement (refer to previous notes and those following point 5).
- Examples include iron sand mining and geothermal energy exploitation.

**Maintain the "Transition" Category
or Open Opportunities for "Green"
Classification in the Taxonomy**

- This approach applies to industries where social and environmental risks can still be managed, and the economic benefits justified if managed by large industries, especially those linked to crucial sectors for national food security or renewable energy products. Productive activities in these industries have the potential to reduce emissions in other related sectors.
- Enhanced standards are required to minimize environmental and social impacts.
- In the taxonomy implementation, this involves a "red" or "non-eligible" classification for industry players who do not meet certain criteria and a "green" or "transition" classification for those who meet specific criteria.
- The current TBI criteria need enhancement (refer to previous notes and those following point 5).
- Examples include nitrate mining, iodine mining, etc.
- Specifically, for mining activities that do not yet have an environmental performance rating (PROPER), it is suggested that they remain classified as "transition" only.

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In addition to Point 4 outlined above, the following are specific recommendations based on the quadrant in Point 5.

Quadrant	KBLI	Current TBI Classification	Recommendations
Total Cessation (No Tolerance)	05101: Coal Mining	Transition	<p>There needs to be a categorization of coal mining into the "red" or "non-eligible" category, including the use of CCS/CCUS (Carbon Capture and Utility Storage) in mining, which poses risks of prolonging the life of coal mines (Coal to DME, etc.)</p> <p>The target of reducing greenhouse gas emissions by more than 12.5% from business as usual is too vague to be used as a criterion due to the risk of moral hazard by industry players who might overstate their business-as-usual estimates to achieve a 12.5% reduction on paper.</p> <p>Even for high-quality coal mining such as anthracite, the thermal content of coal per ton of soil mined compared to potential environmental impacts (e.g., carbon footprint per the same unit) should be considered in classification criteria. If it's too small, the mining project should actually fall under the "red" or "non-eligible" category.</p> <p>Currently, there are many indicators that can be selected to underpin such evidence-based policies.¹⁰ The OJK needs to coordinate with KLHK (Ministry of Environment and Forestry) to measure objective standards that can be used as the basis for the THI revision assessment.</p>
Total Cessation (No Tolerance)	05102: Coal Gasification at Mining Site	Transition	<p>No tolerance should be given for this KBLI. Ideally, this category should also be excluded from the "transition" category because coal gasification is economically expensive, requires government subsidies to make the product prices competitive, and has a negative impact on the environment. Additionally, there are concerns that coal gasification projects will hinder energy transition and prolong the use of coal with technologies that are actually ineffective in reducing carbon emissions.</p>

¹⁰ Marcelo Fuentes et al., "Classification of Indicators Measuring Environmental Sustainability of Mining and Processing of Copper," *Minerals Engineering* 170 (2021): 107033.

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Quadrant	KBLI	Current TBI Classification	Recommendations
Total Cessation (No Tolerance)	05200: Lignite Mining	Transition	No tolerance should be given for this KBLI. Lignite, as a low-calorie coal, has a much higher environmental impact and cost compared to its economic impact. The economic impact is too low to compensate for its environmental impact. It should be categorized as "red" or "non-eligible."
Total Cessation (No Tolerance)	06100: Petroleum (Crude Oil) Mining	Transition	No tolerance should be given for this KBLI. Exploration and mining of petroleum are contradictory to efforts to decarbonize sectors such as industrial transportation and ending fossil-fueled power plants, and will hinder the transition to cleaner energy sources. It should be categorized as "red" or "non-eligible."
Total Cessation (No Tolerance)	06201: Natural Gas Mining	Green/Transition	Just as with Petroleum, no tolerance should be given for this KBLI. Exploration and mining of Natural Gas will hinder the efforts to decarbonize sectors such as industrial transportation and ending fossil-fueled power plants and will detract the transition to cleaner energy sources. Expansion of Natural Gas operational areas risks reducing investment and financing interest in renewable energy sectors. Although Natural Gas is seen as lower in carbon emissions compared to Petroleum, it still poses significant risks to the environment and health. It should be categorized as "red" or "non-eligible."
Total Cessation (No Tolerance)	19211 : Fuel Industry from Oil Refining and Processing	Transition	Since Petroleum is recommended to be categorized as "red" or "non-eligible," this sector should also be categorized similarly, thus not fitting into the TBI transition category.
Total Cessation (No Tolerance)	09100 : Support Activities for Petroleum and Natural Gas Mining	Green/Transition	Likewise, for the sectors above, since Petroleum and Natural Gas are recommended to be categorized as "red" or "non-eligible," this sector should also receive the same categorization. Exceptions could be made if industry players intend to shift to providing support services for the transition to renewable energy.

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Quadrant	KBLI	Current TBI Classification	Recommendations
Total Cessation (No Tolerance)	08991 : Precious Stone Mining	Transition	There is no need for including this KBLI in the "transition" category nor for financing, especially when the added value to the community and industry is minimal, particularly for precious stones used solely for jewelry making. These should fall under the "non-eligible" category unless the precious stones are used for industrial purposes, such as drill manufacturing.
	08994 : Asbestos Quarrying		Asbestos should also be categorized as "non-eligible" unless it is used in special applications that do not directly interact with humans, given its health impacts as a carcinogenic building material. When fully calculated, the environmental and health costs of this KBLI likely exceed its economic benefits.
Cessation with Modification	08101 : Quarrying of Ornamental and Building Stone 08102 : Limestone (Lime) Quarrying 08103 : Gravel Quarrying 08104 : Sand Quarrying 08105 : Clay and Soil Quarrying 08106 : Gypsum Quarrying 08107 : Trass Quarrying 08108 : Pumice Quarrying 08109 : Quarrying of Other Stone, Sand and Clay	Transition	<p>For the capital-intensive excavation industry covering these KBLIs, banking financing should be discouraged. For example, sand extraction should be performed only by small-scale manual mines to promote labor-intensive activities and minimize environmental impacts.</p> <p>In the taxonomy, CELIOS recommends that only SMEs be given the opportunity to obtain the "green" category for these KBLIs, aiming to reduce financing and the role of large industries. This is expected to increase the financing share for SMEs and employment absorption.</p> <p>For this purpose, there should be criteria that SME ownership must not be associated with large industries, complementing the existing SDT for SMEs.</p> <p>For this industry, CELIOS does not recommend continuing financing for large industries, as they tend to have incentives for overexploitation. SMEs should be encouraged to absorb the supply needs for these KBLIs.</p>

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Quadrant	KBLI	Current TBI Classification	Recommendations
Tightening and Establishing More Objective Specific Standards	06202: Geothermal Energy Production	Green/Transition	<p>More objective criteria are needed (refer to note 4 above). Several Geothermal Power projects have faced criticism and rejection by communities due to the seismic effects (vibrations) and significant water usage caused by drilling, threatening the local environment. The location of Geothermal Power projects in protected forest areas and indigenous community-managed areas is often contradictory to the principles of a just energy transition.</p> <p>Objective criteria should include comprehensive environmental impact assessments, accommodating the aspirations of indigenous communities and protected forest managers, and the obligation of a grievance mechanism from communities affected by the project.</p>
Tightening and Establishing More Objective Specific Standards	07101: Sand Mining	Transition	<p>More objective criteria are required (refer to note 4 above) due to the high potential for social conflict in this KBLI, sometimes leading to violence and loss of life, as seen in the case of Lumajang Regency. Large industries and local governments often do not involve local communities in activities and decision-making.</p> <p>For example, criteria such as the ratio of iron ore and other minerals per ton of soil/sand/water extracted, audited or verified by a third party, are needed to regulate these industry players more objectively. The target of reducing greenhouse gas emissions by >12.5% from business as usual is too vague to be used as a determination criterion due to the risk of unscrupulous industry players overstating their business-as-usual estimates to achieve a 12.5% reduction on paper.</p> <p>Emphasis should be placed on land rehabilitation, mitigating negative impacts on land morphology like erosion, and establishing a grievance mechanism for affected communities. This sector generally has a high risk of land conflicts, sometimes leading to violence by local governments deploying forces to suppress public protests, contradicting the principles of a just transition.</p>

⁵ Widiyanto HW. Konflik Tambang Pasir Besi Lumajang: Analisis Akar Dan Resolusi. Mozaik Kaji Ilmu Sej 2020; 11.

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Quadrant	KBLI	Current TBI Classification	Recommendations
Tightening and Establishing More Objective Specific Standards	08992 : Feldspar and Calcite Quarrying	Transition	Again, business as usual figures are not objective criteria. Alternative criteria such as the ratio of valuable metals/minerals per ton of soil/sand/water excavated compared to potential environmental damage or social conflict, audited or verified by a third party, should be considered. A comprehensive assessment of the economic benefits versus environmental damage and potential conflict is necessary.
Tightening and Establishing More Objective Specific Standards	08993 : Natural Asphalt Mining	Transition	Similarly, alternative criteria such as the ratio of natural asphalt per ton of soil/sand/water mined compared to potential environmental damage or social conflict, audited or verified by a third party with comprehensive criteria, should be considered. Additionally, this KBLI generally causes significant air pollution that disturbs the environment and community. There should be classification provisions for natural asphalt transportation management that minimize this pollution. Actors not meeting these criteria should be categorized as "red" or "non-eligible."
Tightening and Establishing More Objective Specific Standards	08995 : Quartz / Silica Sand Quarrying	Green/Transition	This KBLI is important for the solar cell and integrated circuit industries. However, its classification criteria also need to be more objective. For example, the quartz content per ton of soil/sand/water excavated should be assessed through audit or third-party verification. Classification should consider the impact on the environment and community. The case in Rempang serves as a lesson on how the process of developing production facilities and excavating Quartz/Silica Sand can face opposition from communities.

⁶ Suroto S. Dampak Adanya Penambangan Pasir Besi di Desa Bandungharjo, Banyumanis dan Ujungwatu Kabupaten Jepara Menurut Undang-undang No. 32 Tahun 2009 Tentang Perlindungan Dan Pengelolaan Lingkungan Hidup. 2018.

⁷ Suroto S, Gunarto G. Dampak Penambangan Pasir Besi Di Desa Bandungharjo, Banyumanis Dan Ujungwatu Kabupaten Jepara Menurut UU No. 32 Tahun 2009 Tentang Perlindungan Dan Pengelolaan Lingkungan Hidup. J Daulat Huk 2018; 1.

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Quadrant	KBLI	Current TBI Classification	Recommendations
Tightening and Establishing More Objective Specific Standards	08999 : Other Mining and Quarrying N.E.C. (Not Elsewhere Classified)	Transition	The classification criteria also need to be more objective. For example, the content per ton of soil/sand/water excavated should be assessed through audit or third-party verification.
Tightening and Establishing More Objective Specific Standards	35101 : Electricity Generation	Green/Transition	<p>Exclude all new and captive CFPPs (industrial area power plants) from the green classification. CELIOS supports the view that CFPPs should only be classified as green if they are existing plants planning early retirement and replacement with renewable energy power plants.</p> <p>Moreover, specifically for the early retirement of CFPPs, although there has been progress in categorizing them as "green" activities, the OJK also needs to encourage the acceleration of installing renewable energy sources as replacements for CFPPs. Therefore, CELIOS proposes an additional requirement for the early retirement of CFPPs to be categorized as "green" activities if they have transitioned to renewable energy sources and are no longer operating to support high-emission activities like captive smelters. Meanwhile, CFPPs that do not meet both these conditions should be categorized as "transition."</p> <p>The argument for leniency towards coal-fired power plants (CFPP) on the grounds of supporting green activities is invalid and unnecessary since, when considered and evaluated from the perspective of the total value chain, it is likely that the end result of such electric vehicle production might generate more emissions since it is supported by PLTU in its supply chain.</p>
Tightening and Establishing More Objective Specific Standards	09900 : Other Support Activities for Mining and Quarrying	Green/Transition	For the green classification, add criteria to show that the product or service sold can reduce carbon emissions in the mining and quarrying industry.

⁸ Ismail NK, Azzahra NF, Pireno FH, Amanda FP, Dyana JS, Wati DS. Kepastian Hukum dan Upaya Pertanggungjawaban Pemerintah Terhadap Perlindungan Hak Tanah Ulayat di Pulau Rempang. *Jaksa J Kaji Ilmu Huk Dan Polit* 2024; 2: 93–112.

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Quadrant	KBLI	Current TBI Classification	Recommendations
Maintain the "Transition" Category or Open Opportunities for "Green" Classification in the Taxonomy	07301 : Gold and Silver Mining	Transition	<p>This KBLI has the potential to be greener with an emphasis on circular activities. Additionally, these KBLIs' products also support renewable energy products such as solar cells (solar panels).</p> <p>Industry players in these sectors should be encouraged to engage in activities or collaborate with KBLIs within the scope of circular economic activities to perform recycling activities as an additional requirement for the "green" classification.</p> <p>Similarly, to the KBLI above more objective criteria are needed (refer to note 4 above).</p>
	07309 : Pertambangan Biji Logam Mulia Lainnya		
Maintain the "Transition" Category or Open Opportunities for "Green" Classification in the Taxonomy	07102: Iron Ore Mining	Transition	<p>This KBLI has the potential to be greener with an emphasis on circular activities. Additionally, these KBLIs' products also support renewable energy products such as solar powers or batteries for solar cells.</p> <p>There should be encouragement for industry players to engage in activities or collaborate with recycling KBLIs to perform recycling activities as an additional requirement for the "green" classification.</p> <p>Similarly, to the KBLI above more objective criteria are needed (refer to note 4 above).</p>
	07210: Uranium and Thorium Ore Mining		
	07291 : Tin Ore Mining		
	07292 : Black Tin Ore Mining		
	07293 : Bauxite/Aluminum Ore Mining		
	07294 : Copper Ore Mining		
	07295 : Nickel Ore Mining		
	07296 : Manganese Ore Mining		
	07299 : Mining of Other Non-Ferrous Metal Ores		

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Quadrant	KBLI	Current TBI Classification	Recommendations
Maintain the "Transition" Category or Open Opportunities for "Green" Classification in the Taxonomy	08911 : Sulfur Mining 08912 : Phosphate Mining 08913 : Nitrate Mining 08914 : Iodine Mining 08915 : Potash (Potassium Carbonate) Mining 08919 : Mining of Other Minerals, Chemicals and Fertilizers 08930 : Salt Extraction	Transition	<p>If well-managed, this sector can support the reduction of emissions and environmental damage through agricultural intensification or extending the shelf life of fishery products. For example, high-quality, evenly distributed fertilizer can increase land productivity and reduce the rate of deforestation for agricultural purposes.</p> <p>For these reasons, TBI's position as a Transition classification is appropriate, with the addition of certain stricter requirements, such as reducing emissions by >12.5% and guaranteeing at least a green PROPER rating. Ideally, there should be more objective standards than just reducing emissions based on business as usual (refer to note 4).</p>

- 7** There is a need to add a Recycling KBLI (recycling) along with "green" criteria for that sector to promote circular economic activities.
- 8** A value chain assessment for each KBLI is necessary to ensure comprehensive support for green financing.

CONCLUSION



The green taxonomy plays a crucial role in creating transparency and incentives to boost financing for energy transition and the green sector. Currently, OJK is developing TBI to update THI. This new taxonomy aims to provide financial industry guidelines for financing in the green and sustainable energy sectors. While TBI's development has aligned several elements with the ATSF v2, there are important considerations for its further development:

- Re-evaluation of the Elimination of “Red” or “Non-Eligible” Category: The removal of the “red” or “non-eligible” category should be reconsidered, as it may create ambiguity in determining whether certain activities should be discontinued for financing, contradicting the principles of a just energy transition.
- Addition and Tightening of Criteria for “Green” and “Transition” Classifications: There is a need to add and tighten criteria for classifying an activity as “green” and “transition.” This includes explicit criteria for the protection of indigenous communities, local populations, and the environment in each KBLI assessment. Stricter criteria are necessary to close the financing gap for sectors implicated in green-washing or transition-washing (pretense of transitioning).
- Clear Separation Between KBLI Groups: A clear distinction should be made between KBLI groups that no longer require financing and those that can still be financed to support the energy transition.
- Support for the Recycling Industry and Comprehensive Evaluation of the Value Chain: Support is needed for the recycling industry, along with a thorough evaluation of the supply chain (value chain) for each KBLI. This ensures that the assessments for classification consider the entire activity or life cycle of the KBLI and encourage circular economic activities in every KBLI capable of recycling.

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