Indonesia

Second-Party Opinion — Sustainable Government Securities Framework

Excellent | Good ☑ | Aligned | Not Aligned

Framework Type	Sustainability
Alignment	✓ Green Bond Principles 2021 (ICMA) ✓ Social Bond Principles 2023 (ICMA) ✓ Sustainability Bond Guidelines 2021 (ICMA) ✓ ASEAN Green Bond Standards 2018 (ACMF) ✓ ASEAN Social Bond Standards 2018 (ACMF) ✓ ASEAN Sustainability Bond Standards 2018 (ACMF)
Date assigned	30 April 2025

See Appendix B for definitions.

Pillar	Alignment	Key Drivers
Use of Proceeds	Good	• The use of proceeds (UoP) categories in Indonesia's sustainable government securities framework describe government expenditures such as capital investments, financial support mechanisms and investments in intangible assets, with clear environmental and social benefits. • The uses of proceeds support national policies and Indonesia's commitments to the 2030 UN Sustainable Development Goals (SDGs). Some green projects are eligible for financing under the Indonesian Taxonomy for Sustainable Finance (TKBI).
Use of Proceeds – Other Information	Good	• The framework includes a three-year lookback period for refinancing expenditures, aligning with standard market practice. • It outlines comprehensive exclusion criteria for activities, consistent with the ASEAN Green Bond Standards and Social Bond Standards. • The expected ratio of refinancing to financing is not specified in the framework but will be disclosed in post-issuance reporting, which is common practice.
Evaluation and Selection	Excellent	• The framework clearly defines a multi-layered evaluation and selection process that involves representatives from multiple ministries. This process includes oversight from the Indonesian ministry of national development planning (BAPPENAS) and ministry of environment, ensuring alignment with national policies and commitments.
Management of Proceeds	Good	• Indonesia manages proceeds using a virtual register, monitoring allocation at least twice yearly to ensure that the proceeds are used in line with the framework objectives. • Unallocated proceeds will be temporarily held in cash in the government's general account.
Reporting and Transparency	Excellent	• Allocation reporting will be provided annually for each instrument until full allocation, with additional reporting for material changes. • Impact reporting is provided at the same frequency, subject to information availability. Impact indicators are specific and measurable, reflecting the environmental and social outcomes of the projects. • External verification will be obtained for the annual allocation and impact reports.

Relevant UN Sustainable Development Goals

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Use of Proceeds Summary – ICMA Categories

Green	Renewable energy Energy efficiency Climate change adaptation Clean transportation Pollution prevention and control Environmentally sustainable management of living natural resources and land use Terrestrial and aquatic biodiversity Green buildings Sustainable water and wastewater management
Social	Employment generation Socioeconomic advancement and empowerment Food security and sustainable food systems Access to essential services Affordable basic infrastructure Affordable housing

Source: Indonesia sustainable government securities framework (April 2025)

Framework Highlights

Sustainable Fitch considers transactions under this sustainable government securities framework to be aligned with the ICMA Green Bond Principles, Social Bond Principles and Sustainability Bond Guidelines; and the ASEAN Green Bond Standards, Social Bond Standards and Sustainability Bond Standards from the ASEAN Capital Markets Forum (collectively known as the "sustainable finance principles"). The framework includes the relevant pillars from the principles, covering UoP, process for project evaluation and selection, management of proceeds, and reporting.

Proceeds from transactions under the framework can be allocated to 10 green UoP categories (renewable and clean energy; energy efficiency; climate change adaptation; clean transportation; waste management, waste-to-energy and pollution prevention and control; sustainable management of natural resources on land; sustainable management of natural resources on ocean; green tourism; green buildings; and sustainable water and wastewater management) and four social UoP categories (employment generation, including through the potential effect of SME financing and microfinancing, and socioeconomic advancement and empowerment; food security and sustainable food systems; access to essential services; and affordable basic infrastructure).

The UoP categories describe projects that are aligned with the project categories recommended by the sustainable finance principles.

Six of the green UoP categories describe projects that are included in the Practitioner's Guide for Bonds to Finance the Sustainable Blue Economy by the Asian Development Bank (ADB), ICMA, International Finance Corporation (IFC), UN Environment Programme Finance Initiative and UN Global Compact. Indonesia aims for blue eligible projects to support its national roadmap for blue economy 2045. For several green UoP categories, the eligibility criteria reference thresholds and requirements set out in green taxonomies, such as the TKBI and the Climate Bond Initiative's (CBI) Climate Bonds Taxonomy.

The renewable energy, energy efficiency, clean transportation and green buildings UoP categories describe projects that will support Indonesia's nationally determined contribution (NDC) to reduce GHG emissions by 32% through domestic efforts, potentially reaching 43% with international support by 2030.

The climate change adaptation UoP category describes projects that will support Indonesia's climate resilient development policy 2020–2045 through climate resilient infrastructure and nature-based solutions in marine and coastal environments, water resources and public health.

The sustainable management of natural resources on land and sustainable management of natural resources on ocean UoP categories describe projects that will support Indonesia's forest and land use net sink 2030 initiative, and biodiversity strategy and action plan (IBSAP 2025–2045).

The waste management, waste-to-energy and pollution prevention and control UoP category aims to address environmental pollution issues resulting from inadequate waste management and supports advanced waste management infrastructure. The sustainable water and wastewater management UoP category aims to enhance water-use efficiency, manage water resources to mitigate flood risks and develop wastewater treatment infrastructure. These green projects will support Indonesia's national roadmap for circular economy 2025–2045.

The green tourism UoP category aims to develop sustainable and resilient tourism practices in Indonesia, focusing on local economic development while preserving natural and cultural heritage and mitigating climate change risks.

The framework's four social UoP categories describe activities that support employment generation through SME financing and microfinancing, and socioeconomic advancement and empowerment; food security and sustainable food systems; access to essential services; and affordable basic infrastructure. The social UoP categories target poor and vulnerable households and small- and medium-scale farmers in rural communities and border regions.

The framework sets out a clearly defined list of excluded activities to prevent the financing of environmentally and socially controversial practices, such as those related to fossil fuels, weapons, tobacco, alcohol, and child and forced labour.

The ICMA recommends that eligible projects are clearly described in the legal documentation for transactions. We have only reviewed the sustainable government securities framework for this Second-Party Opinion and have not reviewed any transaction legal documents or marketing materials.

Source: Sustainable Fitch, Indonesia sustainable government securities framework (April 2025)

Entity Highlights

Indonesia is the world's fourth most populous nation and the largest economy in Southeast Asia. The country has experienced rapid economic growth since the 1990s, driven by increased political stability, economic reforms and a growing middle class.

The World Bank classifies Indonesia as an upper-middle-income country, with a GDP per capita of over USD4,900. However, Indonesia still faces significant development challenges, including social inequality, limited access to public health and education, and a significant gap in the distribution of purchasing power between urban and rural populations.

Vulnerability to climate change, rising sea levels, deforestation and natural disasters pose significant risks to its economy and population. The country is home to important global carbon sinks, including the world's largest tropical peatlands and mangroves. Indonesia is notably vulnerable to changing weather patterns and extreme weather events, with 70% of the population residing in coastal areas and much of the rural population dependent on farming for their livelihoods.

Indonesia's sustainable development efforts are reflected in its commitment to the SDGs: its roadmap of SDGs 2023–2030 and its 2025–2029 Medium-Term National Development Plan (RPJMN).

The roadmap outlines strategic interventions aimed at fostering equity, inclusivity and environmental resilience, while ensuring robust economic growth. The RPJMN incorporates SDG priorities, ensuring alignment between national goals and global commitments.

Indonesia's integrated national financing framework outlines its approach to financing sustainable development and bridging the SDG financing gap, including strategies for improving public spending, incentivising private funds' mobilisation and scaling up private sector investment in sustainable development.

Indonesia released the second version of the TKBI in 2025, expanding coverage to four sectors aligned with its NDC targets, with the purpose of driving green financing for key economic sectors.

Indonesia has a climate ambition to achieve net-zero emissions by 2060 or earlier. The ambition is supported by its NDC targets to reduce GHG emissions by 32% through domestic efforts and up to 43% with international support by 2030, against the 2030 business-as-usual scenario, through efforts to shift towards renewable energy and to gradually phase out coal.

Initiatives such as the energy transition mechanism and the Just Energy Transition Partnership aim to ensure that the costs and benefits of the energy transition are equitably shared among stakeholders. The country's forest and land use net sink 2030 initiative aims to reverse deforestation and land degradation, by using Indonesia's vast tropical forests as a vital carbon sink.

The country's climate resilient development policy (2020–2045) guides its efforts to address adaptation challenges such as infrastructure damage, livelihood disruption and broader economic vulnerabilities. The IBSAP 2025–2045 outlines three overarching goals: conservation; sustainable utilisation of resources; and the implementation of measures to ensure long-term biodiversity preservation, including plans to use its marine and costal resources to promote sustainable development.

The advancement of gender equality and social inclusion are integral aspects of Indonesia's social priorities. A key initiative is the gender-responsive budgeting framework, which is embedded in the public planning and budgeting system and requires government ministries and local governments to allocate resources explicitly targeting gender-related goals.

In addition, Indonesia has also financed programmes to improve maternal health, increase gender parity in education, tackle gender-based violence, and expand access to economic opportunities for women and marginalised groups.

It identified eight sectoral groups as areas requiring investment in its roadmap of SDGs 2023–2030. These include basic infrastructure, healthcare and nutrition, education, environmental protection, and food production, which are areas addressed by the social UoP categories in the framework.

Source: Sustainable Fitch, Indonesia sustainable government securities framework (April 2025), Indonesia integrated national financing framework 2022, Indonesia roadmap of SDGs 2023–2030, Indonesia TKBI (February 2025), World Bank

Use of Proceeds – Eligible Projects	Alignment: Good
Company Material	**Sustainable Fitch's View**
Green Eligible Projects	
Renewable and clean energy	
• This UoP covers financing for expenditures related to: – generation and transmission of renewable energy, including solar (PV and concentrated solar power), wind power, ocean energy, hydropower, energy from sustainable biomass and geothermal energy; – manufacturing, storage and distribution of low-carbon hydrogen produced from 100% renewable energy; – deployment, refurbishment, upgrade, operation, maintenance and R&D of advanced technologies for nuclear power generation; and – R&D of products or technologies for renewable energy generation and transmission, energy storage and low-carbon hydrogen generated from renewable energy sources. • Eligible activities for generation and transmission of renewable energy must have emissions level of less than 100gCO_2e/kWh on a life-cycle basis, unless otherwise specified. • Concentrated solar power facilities must generate no more than 15% of electricity from non-renewable sources, in accordance with the CBI taxonomy. • Hydropower projects must meet the criteria of the TKBI, and either be: – a run-of-river generation plant and have life-cycle GHG emissions of less than 100gCO_2e/kWh; or – a reservoir-based plant with power density greater than 4W/sqm and life-cycle GHG emissions of less than 100gCO_2e/kWh. • Sustainable biomass refers to biomass projects that use agricultural residues, forestry residues, plantation waste, food waste and organic waste as feedstock. Projects in the exclusion list are excluded, such as: – biomass grown in areas with current or previous high biodiversity; – biomass decreasing carbon pools in soil; and – facilities producing electricity from biofuel or feedstock, where GHG emissions exceed 100gCO_2e/kWh. • Nuclear energy-related expenditures must comply with the International Atomic Energy Agency standards and the TKBI, and should not operate in environmentally and socially critical areas.	• We expect this UoP to be aligned with the renewable energy category of the sustainable finance principles. • Renewable energy investments contribute to SDG 7 (affordable and clean energy). This is particularly significant in Indonesia where fossil fuels (coal, oil and gas) are the main source of energy at 87.8% of the energy mix, according to the International Energy Agency. Renewables account for about 12.2%, with 5.9% from wind, solar and others; 5.9% from biofuels and waste; and 0.5% from hydropower. • Solar, wind and ocean energy generation projects are included in the TKBI and are automatically aligned with international taxonomies, such as the EU taxonomy substantial contribution criteria (SCC) for climate change mitigation. • The framework criteria for concentrated solar power systems align with the CBI taxonomy. However, the 15% provision for non-solar energy sources may reduce their climate change mitigation impact, as backup power could be derived from fossil fuels or non-green sources. • The framework's life-cycle GHG emissions criterion for hydropower aligns with green taxonomies, such as the EU taxonomy SCC for climate change mitigation, the CBI taxonomy and the TKBI. The power density requirement of greater than 4W/sqm is aligned with that of the TKBI. • To address potential environmental downsides associated with hydropower, these taxonomies include additional criteria such as the verification of life-cycle GHG emissions. The CBI and EU taxonomy also specify higher power density thresholds of above 5W/sqm. These requirements provide further assurance of positive impact of the expenditures. • We understand from the issuer that energy production from biomass will use a wide range of feedstocks, including agricultural residues such as palm oil and rice husks, forestry and plantation residues, organic waste and food waste. We consider these feedstocks as more environmentally sustainable than first-generation food and feed crops, as the non-food and non-feed first-generation and second-generation feedstocks do not compete with food security outcomes. • We expect the biomass energy project exclusion list to address key risks such as deforestation and indirect land-use change, while limiting life-cycle GHG emissions from feedstock sourcing to energy transmission, to below 100gCO2e/kWh. • Electricity generation from geothermal energy has the potential to contribute to climate change mitigation by providing renewable and stable baseload power. The 100gCO2e/kWh life-cycle emissions threshold is more ambitious than that of the TKBI, which allows for direct emissions measurements for projects implemented until 2028. • Presently, hydrogen production in Indonesia is primarily grey hydrogen (produced from natural gas) with limited blue hydrogen (produced from natural gas with CO_2 capture), while large-scale green hydrogen (produced from 100% renewable sources) is in active development. • The development of green hydrogen offers significant decarbonisation potential across industries. Investments in the green hydrogen supply chain support this emerging area

	in scaling up for commercial viability to meet future long-term demand for renewable sources of fuel, reducing fossil fuel dependence. • We expect investments in nuclear power, including the construction, modification, operation and R&D of advanced technologies, to reduce GHG emissions by providing large-scale, stable, low-carbon baseload electricity. • These investments adhere to the International Atomic Energy Agency standards and the TKBI, which stipulate life-cycle GHG emissions criteria, safety and environmental standards, radioactivity control, radioactive waste management, proven fuel and reactor design, and decommissioning obligations. • These measures aim to maintain safety, minimise environmental impact and contribute to low-carbon energy generation. However, we view the inherent environmental risks as high compared to other renewable energy technologies, primarily due to the need to manage radioactive materials. This consideration limits the overall positive impact of nuclear projects. • We expect the R&D of renewable energy products or technologies to have the potential to contribute to climate change mitigation. Further information, such as technology readiness levels and life-cycle GHG emissions savings, would confirm their market readiness and potential environmental benefits.	
Energy efficiency		
• This UoP covers financing for the following: – infrastructure energy-efficiency improvements, achieving at least 20% lower energy consumption than the national average for equivalent structures; and – R&D and implementation of products and technologies that reduce the energy consumption of the underlying asset, technology or system, with possible technologies including LED lights, improved chillers, improved lighting technology and reduced power usage in manufacturing operations (post implementation, such projects should lead to energy savings of at least 20% compared to a pre-project implementation baseline). • Sample projects include: – implementation of energy performance standards and labels; and – investment in energy conservation, and provision of energy-efficient appliances.	• We expect this UoP to be aligned with the energy efficiency category of the sustainable finance principles. • The building sector is among the key contributor to energy consumption in Indonesia. It accounted for 23% of Indonesia's total energy consumption in 2021, according to the Climate Policy Initiative. • We expect investments in infrastructure improvements and energy-saving measures that contribute to improvements in building efficiency to contribute significantly to SDGs 7 and 9 (industry, innovation and infrastructure), as they reduce energy consumption and support reduction of resulting GHG emissions. • Improvement of building envelopes; heating, ventilation and air conditioning systems; and lighting of buildings are included in the TKBI under activities such as "energy efficient equipment" and under similar activities in the EU taxonomy. These initiatives can contribute to energy efficiency by reducing heat gain and optimising energy consumption. • The framework specifies quantitative thresholds for energy efficiency improvements, namely for infrastructure improvements to lead to a 20% reduction in its energy consumption as compared to the national average for equivalent structures, and for energy saving measures to lead to a 20% reduction in energy consumption as compared to a pre-project baseline. • These thresholds help ensure that the improvements contribute meaningfully to energy efficiency improvements in the real estate sector.	
Climate change adaptation		
• This UoP covers financing for: – climate-resilient infrastructure, including flood mitigation and drought management; – climate change data and information provision; – public health management; projects that reduce health risks caused by climate change, such as heat stress, vector-borne diseases, air pollution-related illnesses, and	• We expect this UoP to be aligned with the climate change adaptation category of the sustainable finance principles. • We expect flood mitigation projects for climate change adaptation within 50km of the coast or within the marine environment to be aligned with the coastal climate adaptation and resilience category of the Practitioner's Guide for Bonds to Finance the Sustainable Blue Economy by the ADB and ICMA.	

extreme weather impacts on human health or health infrastructure (such as hospitals); and – research leading to technological innovation for climate change adaptation. • Sample projects include: – flood control facilities; – groundwater infrastructure; – nature-based solutions for coastal and inland flood resilience; – lake revitalisation; – national observatory construction; – technology and innovation to enhance climate change mitigation and adaptation; – climate and maritime meteorological data provision; – geospatial information enhancement; and – atmospheric dynamics decision support systems. • Flood mitigation-related projects exclude large-scale infrastructure construction, such as dams, and these projects will be within 50km of the coast or within the marine environment.	• Indonesia ranks among the top 31% of countries most vulnerable to climate change, according to INFORM Risk. This vulnerability stems from various climate-related hazards and geographical factors. • Indonesia has the world's fifth-largest population living in low-lying coastal areas, according to the World Bank and the ADB, making it highly susceptible to flooding and sea-level rise. • The country's drought severity is also intensifying due to El Niño events. The World Bank and the ADB project that water-stressed areas in the country will increase to 31% by 2050, potentially leading to a 10% decrease in agricultural production. • Furthermore, the World Bank and the ADB expect climate change to increase public health risks in Indonesia, particularly the incidence of vector-borne diseases and heat-related illnesses. These climate risks pose significant challenges to Indonesia's environment, economy and public health. • We expect projects under this UoP to support SDGs 3 (good health and well-being), 13 (climate action), 14 (life below water) and 15 (life on land). • We understand from our internal engagement with the issuer that this UoP covers a wide range of measures, practices and infrastructure investments that have a primary objective in enhancing climate resilience. Examples of projects include adopting climate-smart practices in agriculture, infrastructure investments to reinforce the transportation network in flood-prone areas, water management for flood mitigation, and drought contingency planning. • We understand from the issuer that lake revitalisation projects have been proceeding in several areas, including in Java, Sumatra and Sulawesi, to improve water resource management, flood mitigation, biodiversity conservation and ecosystem resilience. • We expect projects focused on developing climate-adaptive solutions, using either engineered or nature-based approaches, to improve resilience to risks arising from climate change. The issuer intends to provide additional information, such as the use of climate risk assessments, safeguards against negative effects on other climate change adaptation or resilience efforts, and monitoring, at the reporting stage to enhance transparency of the projects' adaptation benefits. • We expect research-driven technology innovation to enhance climate-adaptive capacity and climate resilience. Further information, such as the level of market readiness and empirical evidence of improved climate change adaptation outcomes, would be beneficial to confirm its potential environmental benefits. • We understand from the issuer that public health management projects focus on vector-borne disease control, climate-resilient hospitals, protection against environmental hazards such as heatwave and air pollution, and safe water and sanitation systems. We expect these initiatives to support climate change adaptation, while improving public health by through healthcare access, reducing disease transmission and ensuring clean water availability.	

Clean transportation

- This UoP covers the development and upgrading of zero- or low-carbon transportation network and systems following universal emissions thresholds that are also referenced in the CBI taxonomy.
  - Hybrid passenger vehicles must meet the emissions threshold of 50gCO_2e/passenger-km, while hybrid freight vehicles (such as heavy trucks and locomotives) must meet the threshold of 25gCO_2e/tonne-km.
  - The tailpipe emissions intensity of the eligible passenger vehicles must not exceed 50gCO_2e/passenger-km until 2025, and from 2026 onwards, eligible vehicles must have emissions intensity of 0gCO_2e/passenger-km.
  - Hybrid freight vehicles must meet the emissions threshold of 25gCO_2/tonne-km from 2020, 21gCO_2/tonne-km from 2030 and 18gCO_2/tonne-km from 2050.
  - The transportation of fossil fuels, including blended fuels, is not an eligible activity.
- It also covers development, manufacturing, retrofitting and procurement of zero direct-emissions electric and low-carbon vehicles for public transportation (including electric or green hydrogen technologies), and associated infrastructure such as electric vehicle charging stations.
- Sample projects include:
  - development of Greater Jakarta urban train;
  - construction and management of railways infrastructure and supporting facilities in Sumatera; and
  - construction and management of double-track railway infrastructure and supporting facilities for the Java North Line.

- We expect this UoP to be aligned with the clean transportation category of the sustainable finance principles.
- The transport sector accounted for 23% of Indonesia's total emissions in 2022, according to the International Energy Agency. The sector also contributes to air pollution and is estimated to contribute to about 12% of the total disease burden related to PM2.5, according to the ADB's Asian Transport Outlook research.
- This is driven by a fossil fuel-based transport sector and a lack of quality and reliable public transportation system. Public transport constitutes only 5% of total transport activity, according to the Indonesia Energy Transition Outlook 2025 published by the Institute for Essential Services Reform.
- Investments in zero- and low-emissions land transportation and their related infrastructure contribute to a low-carbon economy, supporting SDG 11 (sustainable cities and communities).
- Such activities are eligible under the transportation and storage sectors in the TKBI under activities such as "freight interurban rail transport", "infrastructure for rail transport", "passenger land and other passenger transport", "transport by motorbikes, passenger cars and light commercial vehicles", and "freight road transport".
- Rail is the one of the least carbon-intensive modes of freight and passenger transport. The development of railways and their associated infrastructure facilitates the expansion of rail transport to replace other modes of road transport, reducing per capita emissions and air pollution.
- Fully electrified or bi-mode railway transportation with zero tailpipe emissions is fully aligned with the screening criteria of other taxonomies, such as the EU taxonomy SCC for climate change mitigation.
- Private cars accounted for 30% of transport emissions in 2023, according to the Indonesia Energy Transition Outlook 2025. The framework's eligibility criteria of having the tailpipe emissions of passenger vehicles be below 50gCO_2e/passenger-km until 2025 and 0gCO_2e/passenger-km from 2026 onwards are similar to the universal emissions thresholds in the CBI taxonomy, which require a threshold of 0gCO_2e/passenger-km from 2025 onwards.
- The threshold of 0gCO_2e/passenger-km is also aligned with the EU taxonomy SCC for climate change mitigation.
- The emission criteria for freight vehicles are fully aligned with those of the CBI taxonomy, which sets a threshold of 25gCO_2e/tonne-km from 2020, 21gCO_2e/tonne-km from 2030 and 18gCO_2e/t-km from 2050 onwards.
- Supporting infrastructure, such as electric vehicle charging points and hydrogen refuelling stations, is a necessary component of the low-carbon road transport ecosystem, enabling the operation of zero-emissions transport.
- Such projects are eligible under the TKBI's activity of "infrastructure for road and public transportation, including infrastructure to enable low-carbon land transport", and are also fully aligned with the EU taxonomy SCC for climate change mitigation.

Waste management, waste-to-energy, and pollution prevention and control

- This UoP covers waste prevention, treatment and management, and recycling projects, including but not limited to, municipal waste treatment following the waste hierarchy; and transforming waste to renewable energy source.
- It covers the following projects that prevent, control and reduce waste from entering the coastal and marine environments:
  - solid waste management;
  - resource efficiency and circular economy (waste prevention and reduction);
  - non-point source pollution management;
  - rehabilitation of closed landfill areas; and
  - waste-to-energy, including the production of biofuels from waste.
- The facility criteria for waste-to-energy projects follow the CBI taxonomy. Projects that utilise municipal solid waste for energy recovery will segregate recyclable wastes, including plastics, before energy conversion.
- Waste feedstocks include forestry residues and residues, such as palm kernel shells and palm oil mill effluents, from certified sustainable palm oil operations such as the Roundtable on Sustainable Biomaterials and the Roundtable on Sustainable Palm Oil.
- It also covers the recycling of battery metals and air pollution prevention facilities and monitoring systems.
- It also covers the design, development and installation of carbon capture units for the purpose of decarbonising hard-to-abate sectors and associated infrastructure for the transport through pipelines, vehicles and vessels, and the storage of captured CO_2.
- Carbon capture investments follow CBI taxonomy criteria. In addition, proceeds will not be applied to oil and gas upstream (exploration and production) and fossil fuel-based power generation sectors, as well as for greenfield refineries. Enhanced oil recovery is also excluded.
- Sample projects include: improvement of municipal solid waste management systems; monitoring and evaluation of municipal solid waste management systems; improvement of air quality data and information services; improvement of water pollution control in watersheds; development and provision of water pollution control facilities; and waste collection.
- We expect this UoP to be aligned with the pollution prevention and control category of the sustainable finance principles.
- About 40% of waste in Indonesia was unmanaged in 2024, according to data from the National Waste Information System website. Unmanaged waste is disposed of through open dumping, burning or in unsanitary landfills, which leads to land, water and air pollution and causes environmental degradation.
- Projects to improve non-hazardous and hazardous waste management practices and infrastructure encourage the proper collection, disposal and segregation of waste. This sets up the waste management ecosystem for a transition to the circular economy and prevents pollution, supporting SDG 12 (responsible consumption and production).
- The non-point source pollution management and solid waste management projects fulfilling proximity thresholds specified in the framework are aligned with the marine pollution category of the Practitioner's Guide for Bonds to Finance the Sustainable Blue Economy by the ADB and ICMA.
- The remediation of closed landfills is also eligible for financing under this UoP. Municipal solid waste landfills contribute to environmental degradation through pathways such as leachate generation and residual emissions, even years after closure. Remediation activities to remove, control and diminish pollution from these sites thus supports SDGs 11 and 12.
- Waste-to-energy projects are not typically included in science-based taxonomies such as the EU taxonomy due to the high carbon intensity of the waste incineration process. Waste incineration may also compete with other higher-priority waste management strategies in the waste hierarchy, such as reuse and recycling, and potentially impede long-term circular economy objectives.
- In the context of Indonesia, where waste management infrastructure is less developed, waste-to-energy projects aligned with the CBI taxonomy offer a balanced approach to its unique environmental challenges.
- The CBI taxonomy's requirements for energy efficiency and resource recovery, coupled with thresholds to prevent overcapacity, help ensure that the waste-to-energy projects support pollution prevention outcomes and complement other waste management approaches in the waste hierarchy, while not competing with the other aforementioned environmental outcomes.
- In addition, the issuer clarified during internal engagement that waste-to-energy projects from municipal solid waste are limited to pre-sorted waste and exclude organic waste and recyclables prior to incineration; such activities are eligible under the TKBI's activity of "electric power generation".
- The production of biofuels from biomass feedstock, without mixing with other waste streams such as municipal waste, promotes the use of low-carbon fuels in energy generation and supports the production of renewable energy, supporting SDG 7. In particular, secondary feedstock that includes waste from the forestry and palm oil sectors has lower life-cycle emissions compared to conventional fossil fuel sources.
- In Indonesia, the forestry and palm oil sectors are often associated with deforestation and significant land-use emissions. According to the Stockholm Environment Institute, industrial palm oil production contributed to 160

	million tCO_2e of emissions in 2022, mainly driven by peatland degradation and fires on drained peatlands. • Sourcing from certified sources, such as those approved by the Roundtable on Sustainable Biomaterials and the Roundtable on Sustainable Palm Oil, helps ensure that the waste inputs are derived using sustainable practices, adhering to the criteria for GHG emissions reductions and responsible land use, limiting potential harm to other environmental objectives. • About 54% of landfill sites in Indonesia engage in open dumping practices. Open dumping waste sites emit GHG, cause long-term contamination of soil and water resources, and the spread of diseases, when not properly managed or remediated. Remediation activities prevent further pollution and restore land resources for future use, supporting SDGs 3, 6 (clean water and sanitation) and 11. • Indonesia is ranked the 15th globally in terms of air pollution by PM2.5 concentration, with Jakarta being the 10th most polluted regional capital city, according to the 2024 World Air Quality Report. The improvement of air quality data and information services enables more effective monitoring, which can lead to better policy development and regulatory control. This in turn facilitates climate change mitigation and pollution prevention outcomes, supporting SDGs 3 and 13. • The development and deployment of carbon capture and storage are eligible under the TKBI's activities of "carbon capture and storage" and "research, development and innovation for carbon capture and storage related technologies". In addition, carbon capture and storage technologies that are implemented will follow the CBI criteria, which specifies requirements for transport, storage and utilisation across sectors. • Carbon capture and storage technologies provide a viable decarbonisation pathway in sectors such as cement and steel, where technologically viable options are limited, supporting SDGs 9 and 13. • The development of carbon capture and storage will be an important lever for decarbonisation in Indonesia, as the economy is reliant on cement and steel production for growth. According to data from the World Population Review, Indonesia produced 62 million tonnes of cement and 17 million tonnes of steel in 2023, ranking among the top global producers of these commodities. • According to the issuer, all carbon capture and storage projects are presently in development and testing phases, and there are no commercial projects yet.	
Sustainable management of natural resources on land		
• This UoP covers financing for: – sustainable management of nature resources and conservation of habitat and biodiversity; and – agricultural production and technology for environmental impact and improving productivity. • Sustainable management and conservation projects include: – planting of new forest areas and/or replanting of degraded areas; – forest protection; – peatland restoration; – biodiversity conservation; and – improvement of spatial planning in watersheds. • Agricultural technology and practice projects include: – low-emission crops or organic food production;	• We expect this UoP to be aligned with the environmentally sustainable management of living natural resources and land use category of the sustainable finance principles. • Indonesia has the world's third-largest tropical rainforest and the largest area of tropical peatlands. These are global biodiversity hotspots, housing one of the world's highest shares of endemic birds, mammals and amphibians. • However, large-scale deforestation for plantations and peatland pollution due to development pose serious threats to these regions' ecosystems. Consequently, many endemic species are losing their habitats and endangered species face survival threats. • We expect the sustainable management of forestry and ecosystem conservation and restoration to mitigate these issues and support SDGs 13 and 15.	

– implementation or expansion of biofertiliser production units; – precision farming and smart farm technologies; – drip irrigation and micro-irrigation; – vertical farming; – crop rotation; – no-till farming; and – enhancement of inspection processes for environmental legislation compliance, including remote monitoring technologies. • The forestry-related projects must have certifications from organisations such as the Forest Stewardship Council or the Programme for the Endorsement of Forest Certification, or have a sustainable forest management plan for smallholder farms.	• We understand from the issuer that it will focus on protected areas, national parks, mangroves, peatlands, watershed areas, wildlife corridors and buffer zones. • The issuer also prioritises the conservation of Sumatran tigers, Sumatran rhinos, Javan rhinos, orangutans and Asian elephants through habitat protection, strengthened anti-poaching measures, community-based monitoring programmes and breeding programmes. • Afforestation, forest management, and habitat and biodiversity conservation and restoration projects are included in the TKBI and international taxonomies such as the EU taxonomy and the CBI taxonomy. • We expect forestry and peatland projects to prevent land degradation and enhance carbon sequestration. The use of credible third-party certifications, such as the Forest Stewardship Council or the Programme for the Endorsement of Forest Certification, would provide assurance on the sustainability of forest management practices. • We expect habitat restoration and expansion to protect various plant and animal species and increase survival chances for endangered species. • We expect improved spatial planning in watershed areas to prevent land degradation and preserve biodiversity. • We understand from the issuer that it has established management plans and targets for implementing and maintaining these sustainable land management and conservation projects. Further information, such as a detailed description of the area's initial ecological conditions with concrete conservation objectives, of the climate benefit analysis and of the audit plans, would be beneficial to confirm these management and conservation projects' positive impact. • Indonesia's agriculture sector accounts for 7.8% of the country's GHG emissions, with 34% coming from rice cultivation and 26% from direct land and soil management, according to the UN Environment Programme's Climate and Clean Air Coalition. • We expect the investments in sustainable agricultural practices and precision-farming technologies to support SDGs 2 (zero hunger) and 15 by increasing production efficiency and reducing soil pollution. • We expect the development and production of low-emissions rice varieties to significantly reduce agricultural GHG emissions in Indonesia, as rice cultivation currently accounts for over one-third of the country's agricultural emissions. • Organic food production is included in the CBI taxonomy and supports improved soil health and carbon sequestration. The framework states that these projects must satisfy national standards for organic agricultural systems and relevant regulations. Further information, such as on how the standards correspond to international certification and the level of expected GHG emissions reduction, would be beneficial to confirm its positive impact. • We expect expanding biofertiliser production to reduce chemical fertiliser use, leading to multiple environmental benefits. Biofertilisers can decrease GHG emissions as their manufacturing can be less energy-intensive and they produce less soil nitrous oxide emissions. They also improve soil health by enhancing microbial activity and organic matter content. • These biofertilisers contribute to sustainable agriculture and long-term soil fertility. Further information, such as the level of expected GHG emissions reduction or reference to

	international certifications, would be valuable to confirm its expected environmental benefit. • We understand from the issuer that precision farming or smart farm technologies include GPS for location mapping, soil condition sensors, agricultural drone sprayers and Internet of Things-based smart irrigation systems. These are eligible under the CBI taxonomy. • The implementation of these technologies can improve resource efficiency, such as decreasing water and fertiliser usage while increasing productivity. Further information, such as estimated improvements in efficiency of input use and/or yields, would be beneficial to ensure the positive impact of these projects. • Crop rotation and no-tillage are included in the CBI taxonomy. We expect these agricultural practices to prevent soil erosion and enhance carbon sequestration. Further information, such as a long-term management plan ensuring carbon input or increased carbon sequestration, would be beneficial to confirm the extent of positive impacts. • Vertical farming has the potential to reduce GHG emissions and improve nitrogen management. However, its energy-intensive nature, especially due to artificial lighting, may lead to increased indirect GHG emissions from electricity consumption. • We expect enhancing inspection processes through the implementation of remote monitoring technologies to ensure better compliance with environmental legislation while improving the efficiency and accuracy of these assessments.	
Sustainable management of natural resources on ocean		
• This UoP covers the financing for sustainable management of nature resources and the conservation of habitat and biodiversity in coastal and marine areas. • Sample projects include: – conservation of marine and coastal environment and diversity; – rehabilitation or replanting of mangroves, seagrass and coral reefs; – improvement of marine spatial planning; – sustainable management of fisheries and aquaculture; and – R&D for marine environment improvement.	• We expect this UoP to align with the environmentally sustainable management of living natural resources and land use, and the terrestrial and aquatic biodiversity categories of the sustainable finance principles. • We expect conservation and rehabilitation of marine and coastal environment and diversity projects, as well as sustainable fishery and aquaculture projects, to align respectively with the marine ecosystem restoration and the sustainable marine value chains categories of the Practitioner's Guide for Bonds to Finance the Sustainable Blue Economy by the ADB and ICMA. • Blue carbon ecosystems, including mangroves, seagrasses, and saltmarshes, play a crucial role in carbon sequestration and coastal protection. According to the World Bank, these ecosystems cover only 2% of the total ocean surface but account for 50% of the ocean's carbon absorption. Indonesia is home to 23% of the world's mangroves and holds a significant portion of global blue carbon reserves. • Indonesia faces significant annual mangrove loss, primarily due to conversion to aquaculture ponds, palm oil plantations and coastal urban development, according to the World Bank. • Indonesia's blue economy roadmap aims to increase the proportion of mangroves and seagrass that are considered as good quality to 60% by 2045 from 25.7% in 2023 for mangroves and 30.3% for seagrass. • We expect this UoP to support various environmental objectives, including climate change mitigation, and to contribute to SDGs 13, 14 and 15. • We understand from our internal engagement with the issuer that most Indonesian provinces have implemented marine spatial planning regulations aimed at marine resource management and addressing coastal, fishery and environmental issues.	

	• We understand from the issuer that this UoP aims to conserve critical habitats for coral reefs, mangroves and seagrass, as well as endangered marine biota, including both migratory and endemic species. In addition, certain species such as arowana, eels and Banggai cardinal fish are currently subject to ex-situ conservation measures. • We expect conservation and restoration projects for marine and coastal environments, including mangroves, seagrass and coral reefs, to improve ecosystem resilience and increase carbon sequestration capacity. We also expect marine spatial planning to support the protection of critical habitats and biodiversity. • Further information, such as detailed descriptions of initial ecological conditions, concrete conservation objectives, climate benefit analysis and audit plans, would be beneficial for a more accurate assessment of the positive impact of these projects. • We expect sustainable fishery and aquaculture projects to support marine biodiversity by preventing overfishing and minimising habitat destruction to preserve marine ecosystem balance. • Further information, such as on the implementation of national monitoring and regulation practices, as well as alignment with international standards, would be useful confirm the positive impact of sustainable fishery and aquaculture projects. • Ex-situ conservation activities, such as breeding in aquariums, are not eligible under taxonomies such as the EU taxonomy for contribution to biodiversity outcomes. However, we expect ex-situ conservation to be valuable in terms of its educational value and conservation, particularly as a complementary process in cases where species are extinct or severely threatened in the wild. • We understand from the issuer that it has initiated R&D pilot projects related to ocean accounts and blue carbon management in marine protected areas. • The issuer has provided an overview of these activities, but more detailed explanations of these activities, along with market readiness assessments and empirical evidence of ecosystem improvements, would be useful to confirm the potential positive impact of the projects.	
Green tourism		
• This UoP covers developing tourism resiliency against climate change risks, ecotourism in coastal and marine areas, application of sustainable practices in tourism, and development of tourism and economy creative supply chains. • Sample projects include: – development of ecotourism facilities in coastal areas; – implementation of sustainable practices in existing tourism operations; creation of green tourism supply chains; and – climate resilience projects for tourism infrastructure.	• Projects that improve the environmental sustainability of coastal and marine tourism are aligned with the sustainable coastal and marine tourism category in the Practitioner's Guide for Bonds to Finance the Sustainable Blue Economy by the ADB and ICMA. • Tourism contributes to about 5% of Indonesia's national GDP, according to estimates by the World Travel and Tourism Council. The Indonesian government projects the number of international tourists to exceed 73 million by 2045. • Given the country's rich natural landscapes and cultural heritage, developing nature-based tourism in natural parks, geoparks and marine parks is a key area for economic growth and sustainable development in its tourism sector. • Sustainably managed nature-based tourism has the potential to incentivise the preservation of natural and cultural heritage through job creation and revenue generation, supporting SDG 11. • A wide range of tourism-related activities may be financed under this UoP, according to our engagement with the issuer. The construction of ecotourism infrastructure includes the development of infrastructure necessary to support tourism	

	activities, such as eco-friendly accommodation, visitor centres, nature trails and wildlife observation platforms, and flood control measures. • The development of tourism and economy creative supply chains includes programmes to integrate local community participation in the tourism sector, such as training programmes to offer cultural experiences and products. • Sustainable practices in tourism include promoting regenerative practices, waste management, renewable energy procurement and conservation initiatives. R&D includes the mapping of tourism assets and amenities to develop sustainable tourism strategies. • The development of tourism is not typically eligible under green taxonomies due to the diverse range of activities and the complexity of environmental impacts. • However, the issuer has clarified during internal engagement that regulations and measures are in place to manage potential environmental risks associated with increased tourist traffic and infrastructure developments in nature areas, such as habitat disturbance and wildlife stress, pollution, resource overexploitation and ecosystem degradation. • These measures include mandatory environmental impact assessments prior to the development and allocation of tourism revenue towards conservation efforts, as mandated by the Environmental Protection Act. • Additionally, the tourism ministry's sustainable tourism destination standard provides guidelines aligning tourism development with the environmental conservation and cultural preservation goals.	
Green buildings		
• This UoP covers the development, renovation, maintenance of green buildings, and the construction, refurbishment and maintenance of data centres. • Green buildings must meet regional, national or international performance certifications such as: – Greenship Gold or above; – BREEAM Excellent or above; – LEED Gold or above; or – EDGE certified. • Data centres must meet a power usage effectiveness of below 1.5 and obtain a green data centre certification.	• We expect this UoP to align with the green buildings category of the sustainable finance principles. • The building sector accounted for 23% of Indonesia's total energy consumption in 2021 and is projected to reach 40% by 2030, according to the Climate Policy Initiative. This highlights the critical need to develop and retrofit buildings to improve energy consumption and resource use. This supports SDGs 7, 11 and 13. • National regulations require buildings in Indonesia with significant environmental impacts to conduct an environmental impact assessment, which evaluates potential environmental risks and establishes management and monitoring plans. Certifications such as the Green Building Council Indonesia's Greenship certification and the IFC's EDGE, complement these regulations. • We expect the development, retrofitting and maintenance of green buildings to promote sustainable practices in the real estate sector, improving energy performance, water use, waste reduction and resource efficiency. • These efforts may align with international and national standards, but international taxonomies often emphasise energy performance indicators over certifications or energy-efficiency improvements when evaluating buildings' contribution to climate change mitigation. • These taxonomies set quantitative targets for energy demand in new and existing buildings, which can differ from certification-based approaches. • Data centres are one of the most energy-intensive building types, consuming 10 to 50 times more energy per floor area than a typical commercial office building, according to the US Department of Energy. • Indonesia has one of the fastest-growing data centre industries, driven by its expanding digital economy.	

	Investment in energy-efficient data centres is crucial from an environmental perspective. • We expect energy-efficient data centres to contribute to reducing energy consumption and GHG emissions, as well as improving resource efficiency such as water for cooling systems. • Data centres certified by green data centre certifications could enhance transparency regarding environmental performance but more detail on their requirements would be needed. • Further information, such as regular audits and global warming potential data of refrigerants, would be useful for confirming the environmental benefits of energy-efficient data centres.	
Sustainable water and wastewater management		
• This UoP covers the R&D and implementation of technologies for water saving and treatment; the development of agricultural infrastructure for efficient water management (ie irrigation systems, and rainwater collection and storage facilities); and investments in tail water recovery systems, which collect run-off water from fields that is recycled for agricultural production purposes. • It also covers hydrological monitoring, construction of water diversion canals to lakes located in flood plains and reforestation actions; construction and improvement of public water distribution and treatment facilities; and the development of water-related hazard emergency plans. • Sample projects include: – improvement of water quality data and information services; – construction of irrigation systems and rainwater storage facilities; – construction and improvement of domestic wastewater management system; and – development, improvement and expansion of regional drinking water supply systems.	• We expect this UoP to be aligned with the sustainable water and wastewater management category of the sustainable finance principles. • The agriculture sector consumes 80% of water in Indonesia. This sector plays an important part in Indonesia's economy, employing about 33% of its labour force, many of whom are from the lower-income groups. • However, almost half of irrigation systems are in poor condition, according to a 2021 study by the World Bank done in collaboration with the issuer, indicating that there are significant financing needs in the areas of renewal and water use efficiency improvement of these systems, to support SDGs 2 and 6. • We expect the agriculture infrastructure to align with national and municipal-level plans for sustainable and efficient use of water resources. Irrigation infrastructure includes conventional systems, but the issuer has clarified that its application will be limited to disaster-prone areas where modern alternatives such as drip irrigation are not viable due to climate and technical constraints. • Wastewater will be segregated at source in tailwater recovery and rainwater collection systems, preventing contamination and ensuring that harvested water resources are safe for agriculture use. • Projects to reduce non-point source pollution from agriculture activities may be aligned with the marine pollution category in the Practitioner's Guide for Bonds to Finance the Sustainable Blue Economy by the ADB and ICMA, if they fulfil proximity thresholds to the coast or waterways leading to marine areas. • Overextraction of groundwater for household, commercial and industrial uses has led to land subsidence in major cities such as Jakarta. At the same time, water supply systems often suffer from inefficiency and lack adequate monitoring capacity to ensure safe water quality. • According to the 2021 World Bank study, a significant amount of water resources is lost due to leakages and commercial losses, with non-revenue water averaging 33%. The development of drinking water supply systems that are water efficient is therefore crucial for promoting the sustainable use of water resources, supporting SDG 6. • We expect that renewed and newly installed water supply systems will perform better in terms of leakage prevention compared to the current average. • Municipal water systems are governed by regulatory frameworks that aim to enhance water use efficiency, such as Law No. 17 of 2019 on Water Resources and Government Regulation No. 22 of 2021 on Environmental Protection and Management.	

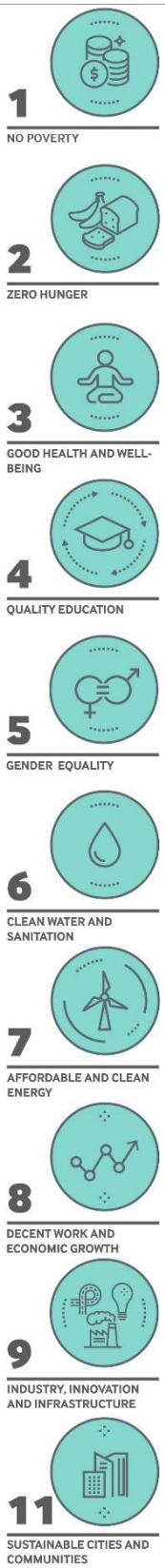
	• Indonesia is a water-stressed country; therefore, regulated and monitored water supply systems play a crucial role in preventing overextraction issues associated with uncontrolled extraction methods, promoting sustainable use of water resources. • About 35% of Indonesia's rice production, a major food crop, occurs in water-stressed areas, according to the 2021 World Bank report. The country's exposure and vulnerability to weather-related disasters such as floods and droughts exacerbate seasonal water shortages and can affect water security and agricultural productivity. • Hydrological monitoring, nature-based solutions and ecosystem restoration for the purposes of flood and drought risk prevention are important to help protect water resources from environmental shocks in the face of increasing climate variability, supporting SDGs 6 and 13. • Large-scale nature-based management measures offer a sustainable alternative to traditional engineered solutions for flood and drought risks management, if properly designed and managed. • We understand through engagement with the issuer that the projects will include management efforts aligned with national environmental standards to ensure water quality and prevent ecological degradation. Key measures include sediment and erosion control, regulation of wastewater discharge and pollution runoff, watershed management, and ongoing monitoring. • Nature-based solutions may be aligned with the coastal climate adaptation and resilience category in the Practitioner's Guide for Bonds to Finance the Sustainable Blue Economy by the ADB, if they fulfil proximity thresholds to the coast or marine areas. • About 70% of groundwater pollution in Indonesia is attributed to contamination by wastewater discharge. Nationwide, only 7% of municipal wastewater is safely collected and treated via off-site sanitation facilities, while the remaining 93% is untreated and unsafely discharged into waterways, according to the 2021 World Bank report. • Thus, the development of wastewater treatment facilities is crucial in preventing contamination of water resources and sustainable wastewater management, supporting SDG 6. • We understand, through engagement with the issuer, that the wastewater treatment facilities are managed collaboratively by the national and municipal authorities. • Funds raised by issuances under this framework at the national level will be exclusively allocated to the construction of treatment plants and primary treatment facilities, while municipal authorities will be responsible for the implementation of collecting systems and secondary treatment capabilities. • Projects in wastewater management may be aligned with the marine pollution category in the Practitioner's Guide for Bonds to Finance the Sustainable Blue Economy by the ADB and ICMA, if they fulfil proximity thresholds to the coast or waterways leading to marine areas.

Social Eligible Projects

Employment generation, including through the potential effect of SME financing and microfinancing, and socioeconomic advancement and empowerment

- This UoP covers projects to improve welfare and eradicate poverty through social protection and assistance programmes aiming to extend basic and universal social welfare in Indonesia.
- It also covers rural development through empowerment of rural communities in 3T regions and governance, especially in borders and disadvantaged villages, to provide local employment opportunities by managing existing local resources.
- Additionally, it includes employment generation through provision of technical training to unemployed people, support for client-centric public employment services, strengthening of select active labour market programmes, facilitation of labour market monitoring and analysis and project management, and technical and financial support to micro and small businesses.
- It also covers the projects to improve gender equality through the provision of access and quality services for family planning and reproductive health, the provision of gender-responsive legal framework, enhancing support and access to financing for female entrepreneurs and female-owned businesses, and enhancing financial support to women in a vulnerable position, with special focus on low-income women.
- Female-owned businesses follow the IFC's criteria of at least 51% owned by women; or at least 20% owned by women and have women representation in top management roles.
- Sample projects include:
  - provision of social assistance in the form of cash and basic food necessities to poor and vulnerable households;
  - programmes to provide social assistance, such as health and education, to poor and vulnerable families including school age children, elderly people, people with disabilities and pregnant mothers;
  - provision of health insurance subsidies to poor and vulnerable people to be eligible for national health insurance;
  - development of systems to improve unified data management with coverage of at least 40% of expenditures and quality of beneficiaries' register;
  - rehabilitation of facilities and basic infrastructure in villages;
  - improving financing facility and business process coaching for micro and small businesses;
  - capacity building for local governments; and
  - improving governance in management of rural communities.

- We expect this UoP to be aligned with the employment generation and socioeconomic advancement and empowerment categories of the sustainable finance principles.
- Poverty rates in Indonesia have declined consistently since 2000. However, its Gini coefficient increased to 36.1 in 2023 from 30.3 in 2000, according to World Bank data, indicating a widening income gap between the nation's poorest and richest.
- Poorer households often lack access to basic necessities and services such as education and healthcare, and are more vulnerable to economic shocks. Therefore, social assistance programmes are critical in providing access to these resources and reducing vulnerabilities, creating more opportunities for social mobility to alleviate poverty.
- These programmes have a long-standing history in Indonesia and are a vital part of its social protection system to support low-income and vulnerable groups.
- Monitoring efforts by the World Bank suggest that they have generally been effective in allocating resources to the right target beneficiaries. There is also potential for greater impact by expanding coverage to unreached households, addressing uncovered social risks and areas, and enhancing integration across implementing ministries and agencies within the social assistance system.
- Expenditures in these programmes support SDG 1 (no poverty), as well as other non-income social dimensions such as SDGs 2, 3 and 4 (quality education).
- The issuer will identify rural areas based on the 3T regions classification. The 3T regions refer to underdeveloped, remote and outermost regions that have poor accessibility and connectivity, owing to a combination of factors such as lack of access to economic opportunities, lack of infrastructure development and being geographically isolated.
- Provision of essential infrastructure and services for these communities improves connectivity and access to essential services and creates employment opportunities, supporting SDG 11.
- Unemployment rates in Indonesia are relatively low, at 3.3%, according to 2023 estimates by the International Labour Organization (ILO), which is lower than the 5.7% average for upper-middle-income countries. However, the unemployment rate is higher among young people, with over 20% of Indonesia's youth population not in education, employment or training in 2023, according to the ILO.
- Research by the ADB suggests that infrastructure gaps and an oversupply of semi-skilled workers are key factors contributing to low labour productivity in the country. Individuals engaged in low-productivity agricultural activities, particularly those with lower educational levels, face additional challenges in transitioning to higher productivity jobs.
- This situation underscores the need for targeted interventions such as labour market programmes and the provision of technical training and public employment services to address youth unemployment and improve overall labour productivity, supporting SDG 8 (decent work and economic growth).
- Eligible projects in employment generation sub-category support sovereign programmes to provide business capital



	subsidies for smallholder farmers, female-owned businesses and collateral-free revolving funds managed by microfinance cooperatives. • Micro-, small- and medium-sized enterprises are an important segment in Indonesia's economy, accounting for 62% of the nation's GDP and 97% of employment in 2023, according to data from the Indonesian coordinating ministry for economic affairs. • These enterprises typically encounter difficulties in accessing formal forms of financing due to factors such as limited credit histories and insufficient collateral. Specialised financing products that target these challenges promote economic growth and job creation, supporting SDGs 8 and 9. • Additionally, microfinance providers are governed by the Indonesian Financial Services Authority, which has stipulated regulatory provisions on responsible lending practices that include a requirement for these providers to disclose interest rates on a quarterly basis and prohibition to charge beyond what is reported to the authorities. • Gender equality has been on the rise in Indonesia. The country's gender inequality index, measured by Statistics Indonesia, declined consistently over the past five years, reaching 0.447 in 2023. • However, significant gaps still exist in various areas. For example, the female labour force participation rate remains about 30pp lower than that of men, highlighting a significant gender disparity in formal economic engagement. • In terms of health, about 12.6% of women gave birth outside the health facilities, highlighting a gap in the reproductive healthcare system and in the availability of essential health services for women. • Implementing targeted programmes that boost economic opportunities and improve access to essential services is key to advancing gender equality outcomes, supporting SDG 5 (gender equality).	
Food security and sustainable food systems		
• This UoP covers production subsidies to small and medium farmers for basic food production, including training, facilities and infrastructure. • It also covers integrated nutrition intervention programmes for priority targets, such as pregnant mothers, children under five and adolescent girls. • Sample projects include: – programmes to support small and medium farms and young people; – the provision of seeds and facilitating improvement in food production, training for agricultural entrepreneurs and certifications; – nutrition supplementation, surveillance, education and campaign, food aids, and provision of water and sanitation for stunting reduction; – R&D of agriculture systems; and – the development of processing facilities and marketing of agriculture products.	• We expect this UoP to be aligned with the food security and sustainable food systems category of the sustainable finance principles. • The agriculture sector is Indonesia's second-largest source of employment, accounting for about 33% of the country's labour force, according to the UN Food and Agriculture Organization's 2018 country factsheet on small family farms. • The issuer defines small- and medium-scale farmers as farmers who have agriculture land area of below 0.5 hectares and up to 2 hectares, respectively. • These farmers typically lack or have limited access to mechanisation and market connectivity. Agriculture tends to be their primary source of livelihoods, making these households particularly vulnerable to market price fluctuations and weather-related factors that affect agriculture productivity. • Depending on the local climate, the farmers may grow staples such as rice, corn and cassava, as well as cash crops such as coffee, tea, spices, palm oil, fruits and vegetables. The use of genetically modified crops is limited, with only 10 varieties across sugarcane, potato and corn crops that were approved for commercial cultivation as of November 2023. • Providing subsidies, training and necessary facilities and infrastructure to these farmers can significantly improve agricultural productivity and potentially increase their incomes through enhanced inputs and production methods. This approach directly supports SDG 2 by addressing food security and promoting sustainable agriculture.	

	• As part of its 2025–2029 RPJMN, Indonesia has identified strategies to create a more health-conscious and sustainable agriculture sector aligned with long-term food security goals. Such practices include increased monitoring, training and regulation of pesticide use, the promotion of organic fertilisers and the integration of natural pest control planting techniques in agricultural practices. • Nutrition intervention programmes encompass a range of initiatives, including food provision programmes targeting students, mothers and toddlers, as well as crop biofortification and the promotion of dietary diversification. These programmes aim to meet address issues of malnutrition and meet nutritional needs, contributing to long-term outcomes of good nutrition and health, supporting SDG 2. • Childhood malnutrition has significant impacts on early development and can have long-term implications on health and morbidity. About 20% of children in Indonesia are stunted, and one in 12 children are considered to suffer from wasting. • Furthermore, about 280,000 babies are born each year with low birth weights, indicating a prevalent gap in addressing maternal malnutrition. • These instances of nutritional deprivation are often associated with other forms of deprivation, such as poverty, low education levels and limited access to infrastructure.	
Access to essential services		
• This UoP covers the financing of projects that contribute to healthcare and education. • In healthcare, it includes projects that involve constructing, equipping and operating hospitals, clinics and healthcare centres to provide public, free or subsidised health services. • It also covers: – training for healthcare professionals to enhance the quality of health services; – communicable disease control through screening, case detection, prevention services, surveillance and treatment; – non-communicable disease control through early detection, education, promotion of healthy lifestyles, regulation and treatment; – improving access to reproductive health and family planning; – strengthening the national vaccine programme; – enhancing preparedness for public health emergencies, including surveillance, early detection and outbreak control; and – improving the integration and utilisation of health information and e-health solutions. • In education, it includes projects aimed at improving the quality of primary and secondary education, including teacher training and financial assistance such as grants and scholarships. • It also involves the construction and maintenance of public schools, universities, campuses and accommodations, as well as providing public vocational education through courses, training, facilities and infrastructure for vocational schools and colleges, along with scholarships. • Sample projects for education include: – the Indonesia Pintar (Smart Indonesia) programme, which supports children aged between six years old and 21 years old from poor families, as well as orphans,	• We expect this UoP to be aligned with the access to essential services category of the sustainable finance principles. • Indonesia faces healthcare-related concerns, including high out-of-pocket costs that have made medical services inaccessible for many. • The World Health Organization reported that since 2014, the country has implemented a national health insurance programme that has significantly increased coverage to over 95% of the population and cut out-of-pocket expenses to 27.5% of total health spending from 45%. • Indonesia is making progress in reducing financial hurdles to healthcare access; however, it still faces other concerns, such as unequal access to healthcare in regions with limited resources, high rates of maternal mortality and a substantial burden of tuberculosis. • We expect the investments to enhance the quality of health services, such as training for healthcare professionals, improving access to reproductive health and family planning, strengthening the national vaccine programme, and extending the public healthcare system. • This supports SDG 3 by better addressing health problems, continuing to reduce the financial burden on residents, and addressing disparities in healthcare access. • We expect the investments related to education and vocational training to contribute to SDG 4. Indonesia's economy is increasingly oriented towards secondary and service sectors, with over 71.5% of its employed population representing the secondary and tertiary sectors in 2021, according to the ILO. • Consequently, education and vocational training are essential in equipping individuals with the necessary skills to participate in the labour market that demands a workforce with specialised technical and vocational expertise. • Furthermore, some programmes, such as the Smart Indonesia programme, provide cash transfers targeting students from lower-income groups such as those in possession of the Indonesia Smart Card, and disadvantaged	

individuals with disabilities, and victims of natural disasters; – the Bantuan Operasional Sekolah (School Operational Assistance) programme, which exempts students from tuition fees; – the Sekolah Penggerak initiative for improving the quality of education in elementary, junior and senior high schools; and – enhancing vocational school quality through the "SMK for Industry 4.0" development initiative.	groups that include those in welfare institutions and orphanages, students with disabilities, and those affected by natural disasters. • Providing financial assistance reduces out-of-pocket expenses for education, increasing the likelihood of such students completing basic education.
Affordable basic infrastructure	
• This UoP covers the financing of projects that contribute to sustainable cities and communities; clean water and sanitation; and industry, innovation and infrastructure. • Under sustainable cities and communities, it includes: – the provision of public housing targeting low-income households; – housing financing at reduced interest rates customised according to the location and income of target families; – roads, railways or ports that increase access for people in remote areas; and – access to affordable electricity, including subsidy programmes and transmission and distribution projects within remote or under-served areas that have either no or inadequate access to electricity. • Affordable electricity projects will have at least 80% of electricity in the relevant grid generated from renewable sources. • The framework defines low-income households as those with a monthly income of less than IDR8 million (about USD495). Current housing conditions of targeted populations fulfil at least one of the following criteria: living in inadequate housing; small or overcrowded housing under 12sqm per person; or living in slums or disaster-prone areas. • Under clean water and sanitation, it includes the construction and maintenance of basic sanitation facilities and infrastructure, such as toilets, handwashing facilities and sewage treatment, as well as projects and interventions that ensure the supply of water with sufficient and appropriate quality and quantity for human consumption and multiple uses. • Under industry, innovation and infrastructure, it includes the improvement of the reliability and sustainability of internet connectivity services and telecommunication projects to promote digital inclusion in unconnected or under-served communities. • The framework defines under-served communities as: – those that either have access to mobile service through only one operator with limited broadband capacity, where the backhaul or access capacity does not allow for a quality internet experience; or – those that only have access to 2G, 3G or limited 4G mobile networks, or copper for fixed networks.	• We expect this UoP to be aligned with the affordable housing and the affordable basic infrastructure categories of the sustainable finance principles. • We generally consider the improvement of access to affordable housing and basic infrastructure to be socially positive, especially if targeted at vulnerable populations. • Investments in affordable public housing support housing and financial security for socioeconomically disadvantaged households and individuals, thereby contributing to SDGs 1 and 11. • Indonesia faces a significant challenge in addressing the demand for affordable housing in urban areas, with 67% of the population expected to reside in urban areas by 2035. Rapid urbanisation has worsened the housing shortage, with around 20% of urban residents currently living in precarious and overcrowded informal settlements. • This UoP is aimed at improving the supply of affordable housing for low-income groups. The framework defines low-income groups based on the Indonesian ministry of public works and public housing's eligibility criteria for affordable housing programmes. According to the criteria, eligible households must have a monthly income below IDR8 million. • Indonesia's provincial minimum wage rates range from IDR2.1 million to IDR5.4 million per person, depending on economic conditions and living costs of the provinces. The eligibility threshold for affordable housing implies that low-income households are only earning slightly above the minimum wage range. • This indicates that the targeted population is likely to face greater financial strain compared to the broader urban population of Indonesia, so the provision of affordable housing would alleviate a significant source of financial strain. In addition, the framework identifies households with acute housing needs. These households face current living conditions that are inadequate, overcrowded or unsafe, thereby addressing an important area of need. • We consider investments in roads, railways or ports as essential to support SDG 11, particularly given Indonesia's unique geography of being an archipelago of thousands of islands. • These investments aim to improve the mobility of residents in remote areas, helping them reach economic and educational opportunities elsewhere in the country. As the government focuses on public transport infrastructure, these projects can provide significant social benefits by enhancing accessibility and connectivity for citizens in more remote areas. • We expect investments in electricity transmission and distribution projects, as well as electricity subsidy programmes, to support SDG 7 by providing affordable energy to residents living in under-served or remote areas with limited or no access to electricity.	

	• Almost 100% of Indonesia's population have access to electricity, but the research from the Institute for Essential Services has indicated that there are still gaps remaining in terms of reliability and quality that ensures quality of life. For example, electricity is not available 24 hours a day in some areas that have been electrified. • We consider investments in water infrastructure and basic sanitation facilities, such as toilets, handwashing facilities and sewage treatment, to contribute to SDG 6. These projects support the provision of clean drinking water, an internationally recognised human right, and promote improved hygiene and health conditions for residents in Indonesia. • We expect investments in telecommunication infrastructure to support SDG 9 by facilitating better communication for residents in Indonesia, particularly where limited connectivity and outdated network infrastructure exist, thereby broadening their access to a range of opportunities and services.
Source: Indonesia sustainable government securities framework (April 2025)	Source: Sustainable Fitch

Use of Proceeds – Other Information	Alignment: Good
Company Material	**Sustainable Fitch's View**
• An equivalent amount of the net proceeds of sustainable securities will be used to finance and/or refinance, in whole or in part, new or existing eligible sustainable expenditures with green or blue and/or social focus. Green, blue, social, sustainability and SDGs securities may be issued under the framework. • Eligible expenditures may take the form of investment expenditures, subsidies, fiscal transfer, grants, loans, tax expenditures, operating and maintenance expenditures, intervention expenditures, and investment in intangible assets. • Eligible sustainable expenditures may include the expenditures made three years prior to the issuance or signing date of the respective sustainable securities. • The following activities are excluded from consideration for eligible expenditures: – projects that cause or contribute to deforestation; – child labour and forced labour; – adult entertainment; – weapons; – alcohol; – tobacco; – fossil fuels; – gambling; – infrastructure projects that are highly polluting or carbon intensive in nature; and – biomass or feedstock that is derived from sources that compete with food production or that lead to deforestation; that are grown in areas with currently or previously high biodiversity; or that will decrease carbon pools in soil. • In addition, for facilities producing electricity from biofuel or feedstock, GHG emissions must be less than 100gCO_2e/kWh on a life-cycle basis. • Precious metals wholesale or brokerage, precious minerals wholesale or brokerage, and artworks and antiques wholesale or brokerage are also excluded. • If part of the proceeds is to be used for refinancing, the issuer shall disclose the ratio of the proceeds that is used for financing and refinancing to the total proceeds. Whenever possible, the issuer will prioritise the allocation of the proceeds to current and future expenditures (ie financing instead of refinancing).	• The framework does not specify the expected ratio of refinancing to financing; disclosure is intended to be made after allocation. • Disclosure of the expected ratio is recommended by the sustainable finance principles. Having a higher share of new financing is more positive from an additionality perspective, although we recognise that refinancing can still reach new beneficiaries in the context of sovereign issuances, as a significant proportion of the bond proceeds is typically allocated to long-term infrastructure or ongoing programmes with a regular change in beneficiaries. • The issuer has disclosed its intended lookback period for expenditures related to refinancing. Disclosure of this ratio is in line with the sustainable finance principles. • The lookback period of three years is in line with standard market practice, particularly in the context of a sovereign issuer where the issuances are often allocated to projects and programmes with long-term horizons. • The framework establishes a comprehensive and clearly defined set of exclusion criteria that prevent issuances under the framework from financing controversial sectors with negative environmental and social impacts. The exclusions are aligned with the ASEAN Green Bond Standards and Social Bond Standards requirements for exclusions.
Source: Indonesia sustainable government securities framework (April 2025)	Source: Sustainable Fitch

Evaluation and Selection	Alignment: Excellent
Company Material	**Sustainable Fitch's View**
• The evaluation and selection process ensures that proceeds from sustainable securities are allocated exclusively to eligible expenditures. • For expenditures with a green or blue focus, the issuer will leverage the climate budget tagging mechanism available within the KRISNA system, the national government's integrated planning budgeting and monitoring system. • To enhance this process, additional identification methods may be explored, if they refer to national documents related to projects and activities recognised as part of climate change mitigation and adaptation efforts or blue activities. • For expenditures with a social or SDGs focus, the issuer will utilise the KRISNA system to identify SDGs-related expenditures tagged by line ministries. BAPPENAS oversees the process of identifying and maintaining a list of eligible expenditures to ensure alignment with SDGs priorities.	• The project evaluation and selection process is clearly defined in the framework, in line with the requirements of the sustainable finance principles. • The selection and evaluation process is multi-layered, with involvement and oversight from multiple ministries, which supports oversight and accountability. • Eligible expenditures with environmental or social benefits are initially selected by individual line ministries, following which they are validated by BAPPENAS and the ministry of environment for consistency against national development goals. Finally, the ministry of finance, together with BAPPENAS and the individual line ministries, approve the allocation of projects based on alignment with the framework criteria and timelines. • We deem the involvement of BAPPENAS and the ministry of environment to confirm alignment with national NDCs for green and blue expenditures, and that of the SDGs secretariat of BAPPENAS to

Evaluation and Selection	Alignment: Excellent
Company Material	**Sustainable Fitch's View**
• The environmental or social benefits and alignment to the issuer's 2030 SDG goals for each project are accessed by the individual ministries together with BAPPENAS and validated by the ministry of environment to be consistent with Indonesia's NDC for eligible green or blue expenditures; and the SDGs secretariat of BAPPENAS to be consistent with the roadmap of SDGs 2023–2030 for expenditures with a social or SDGs focus. • It will then be endorsed by the ministry of finance as "tagged" for budget allocation. • To be eligible expenditures and funded by the proceeds of the sustainable securities issued under this framework, the ministry of finance in coordination with BAPPENAS and line ministries will select "tagged" projects that: – fall under one or more of the eligibility criteria defined within this framework; and – have a project development timeline consistent with the tenor of the applicable sustainable securities. • The ministry of finance, in coordination with BAPPENAS, will maintain notes and records of all eligible expenditures reviewed and to be funded by the proceeds of each sustainable security issued.	confirm alignment with the SDGs roadmap for social and SDGs expenditures, to provide a layer of checks and balances to ensure that the selected projects are aligned with sustainability outcomes.
Source: Indonesia sustainable government securities framework (April 2025)	Source: Sustainable Fitch

Management of Proceeds	Alignment: Good
Company Material	**Sustainable Fitch's View**
• The proceeds of each sustainable security issued will be managed within the government's general account in accordance with its treasury management policy. Upon request from the line ministries, the sustainable securities proceeds will be credited to a designated account of the relevant ministries for funding exclusively projects as defined in the framework. • Proceeds pending allocation to eligible sustainable expenditures will be held in cash in the government's general account at Bank Indonesia, the country's central bank. • The ministry of finance shall manage the processes for allocation of the proceeds of each sustainable securities issuance and make sure that the proceeds are used in accordance with this framework. • The respective ministries utilising the proceeds shall track and monitor, and report to the ministry of finance, the environmental and social benefits of the eligible expenditures in their portfolio that are funded by the sustainable securities proceeds. • A sustainable securities allocation register will be established to record the allocation of the proceeds from each sustainable security. The register will contain, for each sustainable security issued, information including: – details of each sustainable security, including ISIN, pricing date and maturity date; and – list of eligible expenditures, with information including summary of projects details; amount of proceeds allocated to each eligible project; expected environmental and/or social impacts of eligible expenditures; aggregate amount of proceeds of sustainable securities allocated to eligible expenditures; and remaining balance of unallocated proceeds. • In case of asset divestment, the issuer will mark the proceeds as "unallocated" until the proceeds are used to finance and/or refinance other eligible expenditures.	• We view the management of proceeds, as described in the framework, to be in line with the requirements of the sustainable finance principles. • The use of a virtual register within the government's and line ministries' general accounts to monitor the allocation of proceeds aligns with the requirements of the sustainable finance principles to track proceeds in an appropriate manner. • We consider further segregation of proceeds between the bond proceeds and other general-purpose funds, such as by using a dedicated bank account, as best practice to prevent co-mingling. • Monitoring and review of the allocated expenditures is done by individual line ministries with checks performed at least twice a year, which helps ensure that proceeds are used in accordance with the framework's objectives. • Unallocated proceeds will be held in cash; disclosure of this information is in line with the sustainable finance principles. Investing unallocated funds in expenditures that are consistent with the environmental and social goals of the framework would enhance the positive impact of issuances under this framework.
Source: Indonesia sustainable government securities framework (April 2025)	Source: Sustainable Fitch

Reporting and Transparency	Alignment: Excellent
Company Material	**Sustainable Fitch's View**
• The issuer, represented by the ministry of finance, will publish reporting annually for each sustainable security issued, no later than in December of the following year after issuance. These reports will be provided until full allocation, or thereafter if there are any material changes in terms of allocation and/or impact. • Any sustainable securities report will contain at least: – a list with brief description of the projects and the type of expenditures, to which sustainable securities proceeds have been allocated; – the share of financing versus refinancing; – the share of allocated and unallocated proceeds; – the co-financing share for projects involving multiple stakeholders; and – SDG alignment and impact. • Where possible, the issuer, represented by the ministry of finance, will report on the environmental and/or social impacts associated with the eligible expenditures funded with the net proceeds of the sustainable securities. • Subject to the nature of eligible expenditures and availability of information, the issuer aims to include, but not limited to, the list of impact indicators in its framework. The progress of the SDGs objectives can also be presented, where relevant. • The issuer will engage an independent third party to provide assurance on its annual reporting on sustainable securities and the compliance of each sustainable security issued with this framework.	• We consider the reporting and verification commitments described in the framework to be in line with the requirements of the sustainable finance principles. • The issuer will provide allocation reporting on an annual basis at least until full allocation for each sustainable financing instrument issued under the framework. • The issuer has also committed to additional reporting in the event of material changes, which will provide transparency throughout each instrument's life. The issuer has clarified that the time lag in publishing reporting data is due to constraints with fiscal reporting and review timelines. This may potentially limit the timeliness of reporting provided to investors for issuances made at the start of the year; however, we view the mentioned constraint to be reasonable and that the reporting commitment aligns with good market practice. • The issuer intends to provide impact reporting with the same frequency and granularity, subject to information availability. Having a hard commitment to report on impact is best practice for impact reporting, as it assures transparency on impact for investors. • The impact indicators listed in the framework are specific and measurable, reflecting the environmental and social impact of eligible projects, which we consider as good practice for impact reporting. • Obtaining external verification on the allocation of proceeds on an annual basis is a common market practice that meets the recommendations of the sustainable finance principles. In addition to verifying the allocation of funds, we consider having technical verification of impact data to be best practice, as it provides assurance on the measurement and reporting of environmental and social impact.
Source: Indonesia sustainable government securities framework (April 2025)	Source: Sustainable Fitch

Relevant UN Sustainable Development Goals

- **1.3:** Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable.

- **2.1:** By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.
- **2.2:** By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons.
- **2.4:** By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.

- **3.3:** By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.
- **3.8:** Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.
- **3.9:** By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

- **4.2:** By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education.
- **4.3:** By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university.
- **4.4:** By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.
- **4.5:** By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations.

- **5.4:** Recognise and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate.
- **5.6:** Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences.
- **5.a:** Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws.
- **5.c:** Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels.

- **6.1:** By 2030, achieve universal and equitable access to safe and affordable drinking water for all.
- **6.2:** By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.
- **6.3:** By 2030, improve water quality by reducing pollution, eliminating dumping and minimising release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.
- **6.4:** By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.

- **7.1:** By 2030, ensure universal access to affordable, reliable and modern energy services.
- **7.2:** By 2030, increase substantially the share of renewable energy in the global energy mix.

Relevant UN Sustainable Development Goals

- **8.3:** Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalisation and growth of micro-, small- and medium-sized enterprises, including through access to financial services.
- **8.5:** By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.
- **8.10:** Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all.

- **9.4:** By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.
- **9.c:** Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020.

- **11.1:** By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums.
- **11.2:** By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.
- **11.4:** Strengthen efforts to protect and safeguard the world's cultural and natural heritage.
- **11.6:** By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.
- **11.a:** Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning.

- **12.4:** By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimise their adverse impacts on human health and the environment.
- **12.5:** By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.

- **13.1:** Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.
- **13.2:** Integrate climate change measures into national policies, strategies and planning.
- **13.3:** Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

- **14.1:** By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.
- **14.2:** By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans.
- **14.4:** By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics.

- **15.1:** By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.
- **15.2:** By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.
- **15.3**: By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world.
- **15.4:** By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development.
- **15.9:** By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts.

Source: Sustainable Fitch, UN

Appendix A: Principles and Guidelines

Type of Instrument: Sustainability

Four Pillars	
1) Use of Proceeds (UoP)	Yes
2) Project Evaluation & Selection	Yes
3) Management of Proceeds	Yes
4) Reporting	Yes

Independent External Review Provider	
Second-party opinion	Yes
Verification	Yes
Certification	No
Scoring/Rating	No
Other	n.a.

1) Use of Proceeds (UoP) – based on expected or actual instrument allocation

UoP as per Green Bond Principles (GBP)	
Renewable energy	Yes
Energy efficiency	Yes
Pollution prevention and control	Yes
Environmentally sustainable management of living natural resources and land use	Yes
Terrestrial and aquatic biodiversity conservation	Yes
Clean transportation	Yes
Sustainable water and wastewater management	Yes
Climate change adaptation	Yes
Certified eco-efficient and/or circular economy adapted products, production technologies and processes	No
Green buildings	Yes
Unknown at issuance but currently expected to conform with GBP categories, or other eligible areas not yet stated in GBP	Green tourism
Other	n.a.

Use of Proceeds as per Social Bond Principles (SBP)	
Affordable basic infrastructure	Yes
Access to essential services	Yes
Affordable housing	Yes
Employment generation (through SME financing and microfinancing)	Yes
Food security	Yes
Socioeconomic advancement and empowerment	Yes
Unknown at issuance but currently expected to conform with SBP categories, or other eligible areas not yet stated in SBP	n.a.
Other	n.a.

Target Populations	
Living below the poverty line	Yes
Excluded and/or marginalised populations and/or communities	Yes
People with disabilities	Yes
Migrants and/or displaced persons	Yes

Type of Instrument: Sustainability	
Undereducated	Yes
Underserved, owing to a lack of quality access to essential goods and services	Yes
Unemployed and/or workers affected by climate transition	Yes
Women and/or sexual and gender minorities	Yes
Aging populations and vulnerable youth	Yes
Other vulnerable groups, including as a result of natural disasters, climate change, and/or climate transition projects that cause or exacerbate socioeconomic inequity	Yes
Other	Micro-, small- and medium-sized enterprises

2) Project Evaluation & Selection	
Evaluation & Selection	
Credentials on the issuer's social and green objectives	Yes
Documented process to determine that projects fit within defined categories	Yes
Defined and transparent criteria for projects eligible for sustainability bond proceeds	Yes
Documented process to identify and manage potential ESG risks associated with the project	Yes
Summary criteria for project evaluation and selection publicly available	Yes
Other	n.a.

Evaluation & Selection/Responsibility & Accountability	
Evaluation/selection criteria subject to external advice or verification	No
In-house assessment	Yes
Other	n.a.

3) Management of Proceeds	
Tracking of Proceeds	
Sustainability bond proceeds segregated or tracked by the issuer in an appropriate manner	Yes
Disclosure of intended types of temporary investment instruments for unallocated proceeds	Yes
Other	n.a.

Additional Disclosure	
Allocations to future investments only	No
Allocations to both existing and future investments	Yes
Allocation to individual disbursements	Yes
Allocation to a portfolio of disbursements	No
Disclosure of portfolio balance of unallocated proceeds	Yes
Other	n.a.

4) Reporting	
UoP Reporting	
Project-by-project	Yes
On a project portfolio basis	No
Linkage to individual bond(s)	Yes
Other	n.a.

Type of Instrument: Sustainability

UoP Reporting/Information Reported	
Allocated amounts	Yes
Sustainability bond-financed share of total investment	Yes
Other	n.a.
UoP Reporting/Frequency	
Annual	Yes
Semi-annual	No
Other	n.a.
Impact Reporting	
Project-by-project	Yes
On a project portfolio basis	No
Linkage to individual bond(s)	Yes
Other	n.a.
Impact Reporting/Information Reported (exp. ex-post)	
GHG emissions/savings	Yes
Energy savings	Yes
Decrease in water use	Yes
Number of beneficiaries	Yes
Target populations	Yes
Other ESG indicators	Number of negative climate events predicted; amount of waste separated, collected or treated; area conserved; and green building certification achieved. The framework includes a full list.
Impact Reporting/Frequency	
Annual	Yes
Semi-annual	No
Other	n.a.
Means of Disclosure	
Information published in financial report	No
Information published in ad hoc documents	Yes
Information published in sustainability report	No
Reporting reviewed	Yes
Other	n.a.

Source: Sustainable Fitch, ICMA

Appendix B: Definitions

Term	Definition
Debt types	
Green	Proceeds will be used for green projects and/or environmental-related activities as identified in the instrument documents. The instrument may be aligned with ICMA Green Bond Principles or other principles, guidelines or taxonomies.
Social	Proceeds will be used for social projects and/or social-related activities as identified in the instrument documents. The instrument may be aligned with ICMA Social Bond Principles or other principles, guidelines or taxonomies.
Sustainability	Proceeds will be used for a mix of green and social projects and/or environmental and social-related activities as identified in the instrument documents. The instrument may be aligned with ICMA Sustainability Bond Guidelines or other principles, guidelines, taxonomies.
Sustainability-linked	Financial and/or structural features are linked to the achievement of pre-defined sustainability objectives. Such features may be aligned with ICMA Sustainability-linked Bond Principles or other principles, guidelines or taxonomies. The instrument is often referred to as an SLB (sustainability-linked bond) or SLL (sustainability-linked loan).
Conventional	Proceeds are not destined for any green, social or sustainability project or activity, and the financial or structural features are not linked to any sustainability objective.
Other	Any other type of financing instrument or a combination of the above instruments.
Standards	
ICMA	International Capital Market Association. In the Second-Party Opinion we refer to alignment with ICMA's Bond Principles: a series of principles and guidelines for green, social, sustainability and sustainability-linked bonds.
LMA, LSTA and APLMA	Loan Market Association (LMA), Loan Syndications and Trading Association (LSTA) and Asia Pacific Loan Market Association (APLMA). In the Second-Party Opinion we refer to alignment with Sustainable Finance Loan Principles: a series of principles and guidelines for green, social and sustainability-linked loans.
EU Green Bond Standard	A set of voluntary standards created by the EU to "enhance the effectiveness, transparency, accountability, comparability and credibility of the green bond market".

Source: Sustainable Fitch, ICMA, UN, EU Technical Expert Group

Appendix C: Second-Party Opinion Methodology

Second-Party Opinion

Second-Party Opinions (SPO) are a way for issuers to obtain an independent external review on their green, social, sustainability and sustainability-linked instruments.

As per the ICMA Guidelines for External Reviewers, an SPO entails an assessment of the alignment of the issuer's green, social, sustainability or sustainability-linked bond or loan issuance, framework or programme with the relevant principles. For these purposes, "alignment" should refer to all core components of the relevant principles.

Sustainable Fitch analysts vary the analysis based on the type of instruments, to consider whether there are defined uses of proceeds or KPIs and sustainability performance targets. The analysis is done on a standalone basis, separate to the entity.

Analytical Process

The analysis considers all available relevant information (ESG and financial). The reports transparently display the sources of information analysed for each section and provide a line-by-line commentary on the sub-factors analysed. The ESG analysts working on an SPO will also engage directly with the issuer to acquire any additional relevant information not already in the public domain or in instrument-related documentation.

An important part of the analysis is the assessment of the E and S aspects of the use of proceeds. In addition to the alignment with ICMA Principle and Guidelines, the analysis may also refer to major taxonomies (eg the EU taxonomy for E aspects, and the UN Sustainable Development Goals for S aspects).

Once the analyst has completed the analysis, with commentary for the related SPO, it is submitted to the approval committee, which reviews it for accuracy and consistency. Based on issuer preference and mandate, an SPO can be monitored (annually or more frequently, if new information becomes available) or on a point-in-time basis.

Scale and Definitions

	ESG Framework
Excellent	Sustainable finance framework and/or debt instrument structure is fully aligned to all relevant core international principles and guidelines. Practices inherent to the structure meet excellent levels of rigour and transparency in all respects and are well in excess of the standards commonly followed by the market.
Good	Sustainable finance framework and/or debt instrument structure is fully aligned to all relevant core international principles and guidelines. Practices inherent to the structure meet good levels of rigour and transparency; in some instances, they go beyond the standards commonly followed by the market.
Aligned	Sustainable finance framework and/or debt instrument structure is aligned to all relevant core international principles and guidelines. Practices inherent to the structure meet the minimum standards in terms of rigour and transparency commonly followed by the market.
Not Aligned	Sustainable finance framework and/or debt instrument structure is not aligned to relevant core international principles and guidelines. Practices inherent to the structure fall short of common market practice.

Source: Sustainable Fitch

SOLICITATION STATUS

The Second-Party Opinion was solicited and assigned or maintained by Sustainable Fitch at the request of the entity.