



Sustainable Water Services Industry

SUSTAINABLE ISLAMIC FINANCE FRAMEWORK

PENGURUSAN ASET AIR BERHAD ("PAAB")

18 March 2026

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GLOSSARY

ACMF	ASEAN Capital Markets Forum
APLMA	Asia Pacific Loan Market Association
ATB	ASEAN Taxonomy Board
BREEAM	Building Research Establishment Environmental Assessment Method
CAPEX	Capital Expenditure
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ESG	Environment, Social and Governance
GBI	Green Building Index
GBP	Green Bond Principles
GBS	Green Bond Standards
GDP	Gross Domestic Product
GLP	Green Loan Principles
GSS	Green, Social, and Sustainability
HSSE	Health, Safety, Security & Environment
ICMA	International Capital Market Association
IFC	International Finance Corporation
ILI	Infrastructure Leakage Index
IR 4.0	Fourth Industrial Revolution
LEED	Leadership in Energy and Environmental Design
LMA	Loan Market Association
LSTA	Loan Syndications & Trading Association
MOF Inc.	Minister of Finance (Incorporated)
MyCREST	Malaysian Carbon Reduction and Environmental Sustainability Tool
NAWABS	National Water Balance System
NRW	Non-Revenue Water
OPEX	Operating Expenditures
PAAB	Pengurusan Aset Air Berhad
PASB	Pengurusan Air SPV Berhad
PEC	Project Evaluation Committee
PED	Primary energy demand
PERHILITAN	Wildlife Department
RAM	RAM Sustainability Sdn Bhd
RDIC	Research, Development, Innovation and Commercialisation
SBG	Sustainability Bond Guidelines
SBP	Social Bond Principles
SBS	Social Bond Standards
SC	Sustainability Committee
SC Malaysia	Securities Commission Malaysia
SFTs	Sustainability Finance Transactions
SLP	Social Loan Principles
SPAN	Suruhanjaya Perkhidmatan Air Negara
SPO	Second Party Opinion
SRI	Sustainable and Responsible Investment
SSC	Sustainability Steering Committee
STIE	Science, Technology, Innovation and Economy
SUS	Sustainability Bond Standards
Sustainable INFRASTAR The Board	Sustainable Infrastructure Rating Tool Board of Directors
UNSDGs	United Nations Sustainable Development Goals
WOs	Water Operators
WSIA	Water Services Industry Act 2006
WST 2040	Water Sector Transformation 2040

1 INTRODUCTION

1.1 About PAAB¹

Formed in 2006 under the Water Services Industry Act 2006, Pengurusan Aset Air Berhad (“**PAAB**” or the “**Company**” or the “**Group**”) is a government-owned company driving change in Malaysia’s water sector. A wholly owned subsidiary of the Minister of Finance (Incorporated) (“**MoF Inc**”), PAAB spearheads the restructuring of the industry.

Pengurusan Air SPV Berhad (“**PASB**”), 100% owned by PAAB is a special purpose vehicle established to undertake fundraising activities such as issuances of Islamic medium-term notes and Islamic commercial papers in connection with PAAB under the national water services industry restructuring initiatives.

This restructuring aims to achieve a dual purpose: enhancing the efficiency and quality of water services for Malaysians, while ensuring the industry’s long-term sustainability. PAAB acts as the main national water assets custodian company, enabling centralised management and strategic development of these vital resources.

PAAB’s primary mandate lies in funding the development and upgrade of water infrastructure projects across Peninsular Malaysia and Labuan through innovative financing solutions and tapping into competitive sources within the debt capital market. This approach allows for efficient project funding whilst enabling the Water Operators (“**WOs**”) to focus on the operations and maintenance of the water assets.

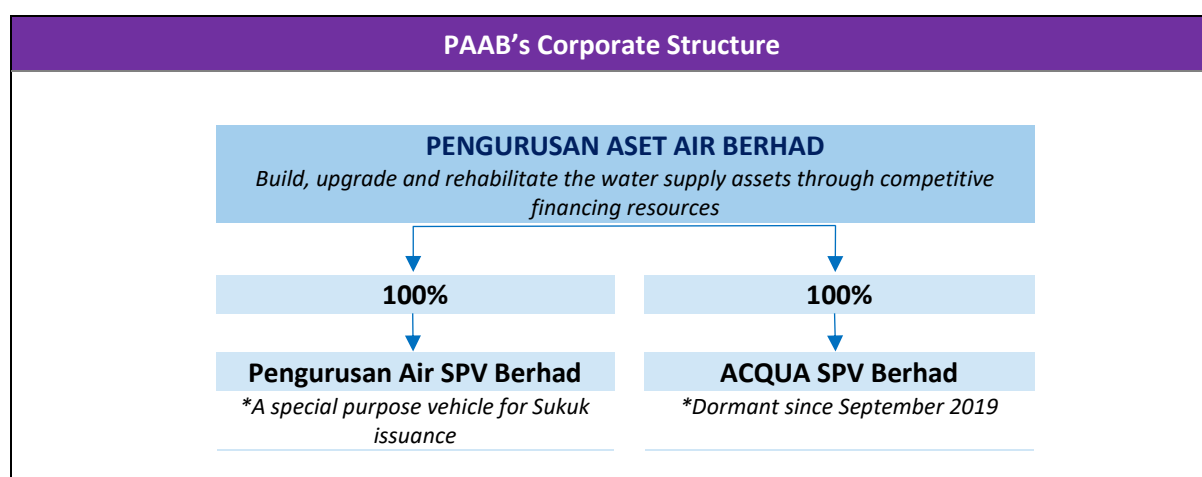
Moving forward, PAAB remains dedicated to ensure sustainable access to clean water for future generations.

VISION	MISSION
<i>Sustainable Water Services Industry</i>	To settle the State Government’s Federal Loan water debts through acquisition of their water assets of equivalent value
	<ul style="list-style-type: none"> ▪ Immediate relief for the State Governments from the burden of federal water supply loans. ▪ Ensures settlement of federal water supply loan directly to the MoF Inc, fostering financial clarity and efficiency.
	To build, upgrade and rehabilitate the water supply assets through competitive financing
	<ul style="list-style-type: none"> ▪ By obtaining competitive financing, PAAB can undertake large-scale projects without placing a heavy financial burden to the Water Operators. ▪ Long-term financing ensures that the water infrastructure projects are sustainable and can be maintained effectively over time. ▪ Upgraded and rehabilitated infrastructure leads to more reliable and higher-quality water supply for consumers.

¹ Referenced from: <https://www.paab.my/annual-report/2024/>

Core Activities	
	<p>Asset Ownership and Management</p> <p>By centralising the ownership of water infrastructure assets, PAAB ensures coordinated management and strategic development to enhance efficiency and service quality.</p>
	<p>Infrastructure Development</p> <p>PAAB is responsible for developing new water infrastructure projects across Peninsular Malaysia and Labuan, aiming to meet the growing demand for reliable water services.</p>
	<p>Financing</p> <p>PASB secures funding for water infrastructure projects through innovative financing solutions, accessing competitive sources within the private debt capital market.</p>

PAAB's Asset Owned ²				
Melaka	Negeri Sembilan	Johor	Pulau Pinang	Perak
Water Intake: 15 Water Treatment Plant: 11 Pump House: 51 Reservoir: 149	Water Intake: 28 Water Treatment Plant: 22 Pump House: 152 Reservoir: 415	Water Intake: 48 Water Treatment Plant: 46 Pump House: 82 Reservoir: 570	Water Intake: 5 Water Treatment Plant: 0 Pump House: 1 Reservoir: 1	Water Intake: 4 Water Treatment Plant: 6 Pump House: 3 Reservoir: 152
Perlis	Kedah	Pahang	Kelantan	Selangor
Water Intake: 1 Water Treatment Plant: 1 Pump House: 0 Reservoir: 0	Water Intake: 10 Water Treatment Plant: 10 Pump House: 10 Reservoir: 36	Water Intake: 14 Water Treatment Plant: 29 Pump House: 12 Reservoir: 59	Water Intake: 12 Water Treatment Plant: 4 Pump House: 2 Reservoir: 10	Water Intake: 6 Water Treatment Plant: 13 Pump House: 94 Reservoir: 121



² As at September 2025, any updates will be made available on PAAB's corporate website <https://www.paab.my/businesses/>, or reflected within its reporting.

National Water Services Industry Restructuring Initiatives³

The restructuring in the water services industry was initiated by the Federal Government to provide a holistic regulation of water services industry which covers both water supply and sewerage services. The objectives of the restructuring are clearly outlined in the National Policy Objectives for the Water Services Industry⁴. In a nutshell, the reform aims to improve the efficiency of the water services sector for the benefit of the people as well as to maintain the sustainability of this important resource.

Background

The water services industry was under the purview of each State Government before the reform of the water services industry was initiated. In most cases, the State Governments owned the water infrastructures and operated the water services. There were also some states, such as Selangor and Johor, where the water services operations were privatised and private concessionaires were responsible for the treating and supplying of water to consumers.

The industry was not centrally regulated, resulting in the varying degree of quality of water supply and services, and differing water charges from state to state. In the states where the water services were privatised, operations were fragmented with several private operators involved in providing water supply to the states which was highly inefficient.

The industry was also plagued by escalating costs of developing new water infrastructure, resulting in most States having to borrow from the Federal Government for capital expenditures (“**CAPEX**”). To compound the problem, some States were experiencing eroding mainstream revenue following rising operating expenditures (“**OPEX**”) and high Non-Revenue Water (“**NRW**”). Many faced difficulty covering their costs and in some states, even OPEX was not met. Caught in this financial conundrum, it was not easy to continue to provide quality service to the consumers.

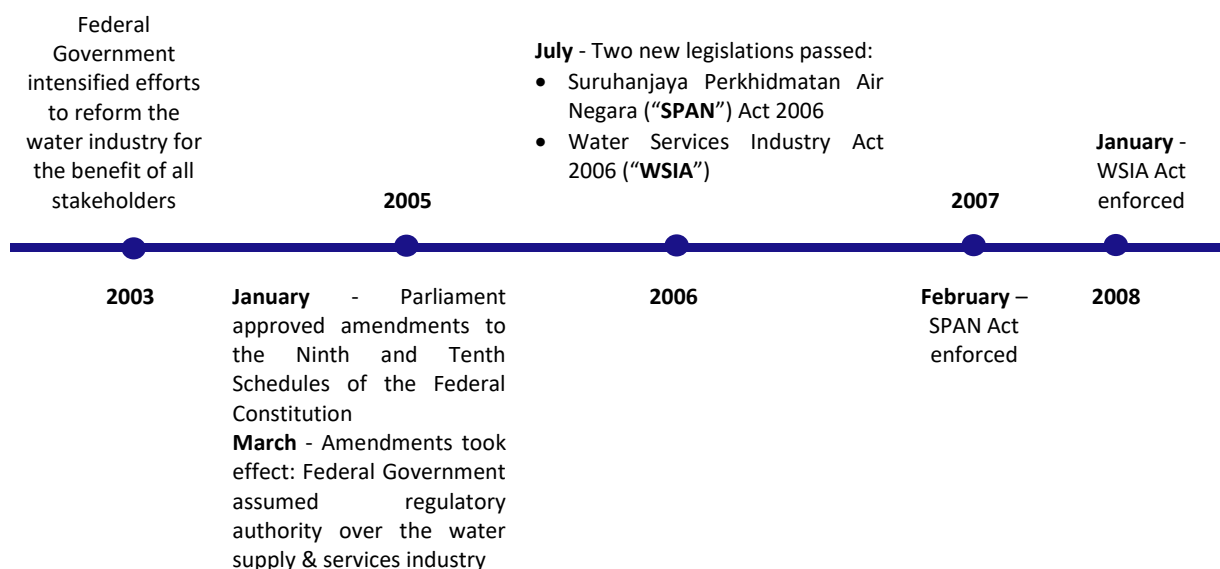
Instead of borrowing from the Federal Government, some states resorted to privatising the water services. The plus side to privatisation is that services often improved however it was not without a cost. These private operations were funded predominantly by debts raised at market rate and the expensive financial cost was passed on to consumers as higher water charges.

The water industry was; undeniably, facing many problems including poor management, but chief of it was financial. However, the Government's resources were limited, and proper financial planning needed to be implemented to ensure the sustainability of the water services industry. Without the financial means to properly maintain and upgrade the water infrastructure, the country was unnecessarily exhausting its precious resources.

³ For more information please refer to: <https://www.paab.my/reform-in-water-services-industry/>

⁴ Kindly refer to [SPAN](#) website for up-to-date policies and acts

Working Towards a New Water Services Industry Effecting Legislative Changes



The Suruhanjaya Perkhidmatan Air Negara Act 2006 provides for the establishment of Suruhanjaya Perkhidmatan Air Negara (“SPAN”) or National Water Services Commission as the technical and economic regulator and sets out the function and powers of SPAN. WSIA, on the other hand, provides the legal framework required for the regulation of the water and sewerage service industry.

The New Model - Separation of Responsibilities: Towards Better Efficiency

The legislative process was only the tip of the iceberg. Given that the previous business model adopted by most WOs does not promote sustainability of the water services industry, the Federal Government had to reinvent the wheel. A new model was developed, targeting to resolve the financial woes of the water services industry, promote financial sustainability in the WOs, and alleviate the Federal Government/taxpayers' financial burden. In the long run, the Federal Government wants the WOs to achieve full cost recovery and attain financial independence. These efforts will ultimately lead to improvement in the quality of water supply and the efficiency of the industry's services.

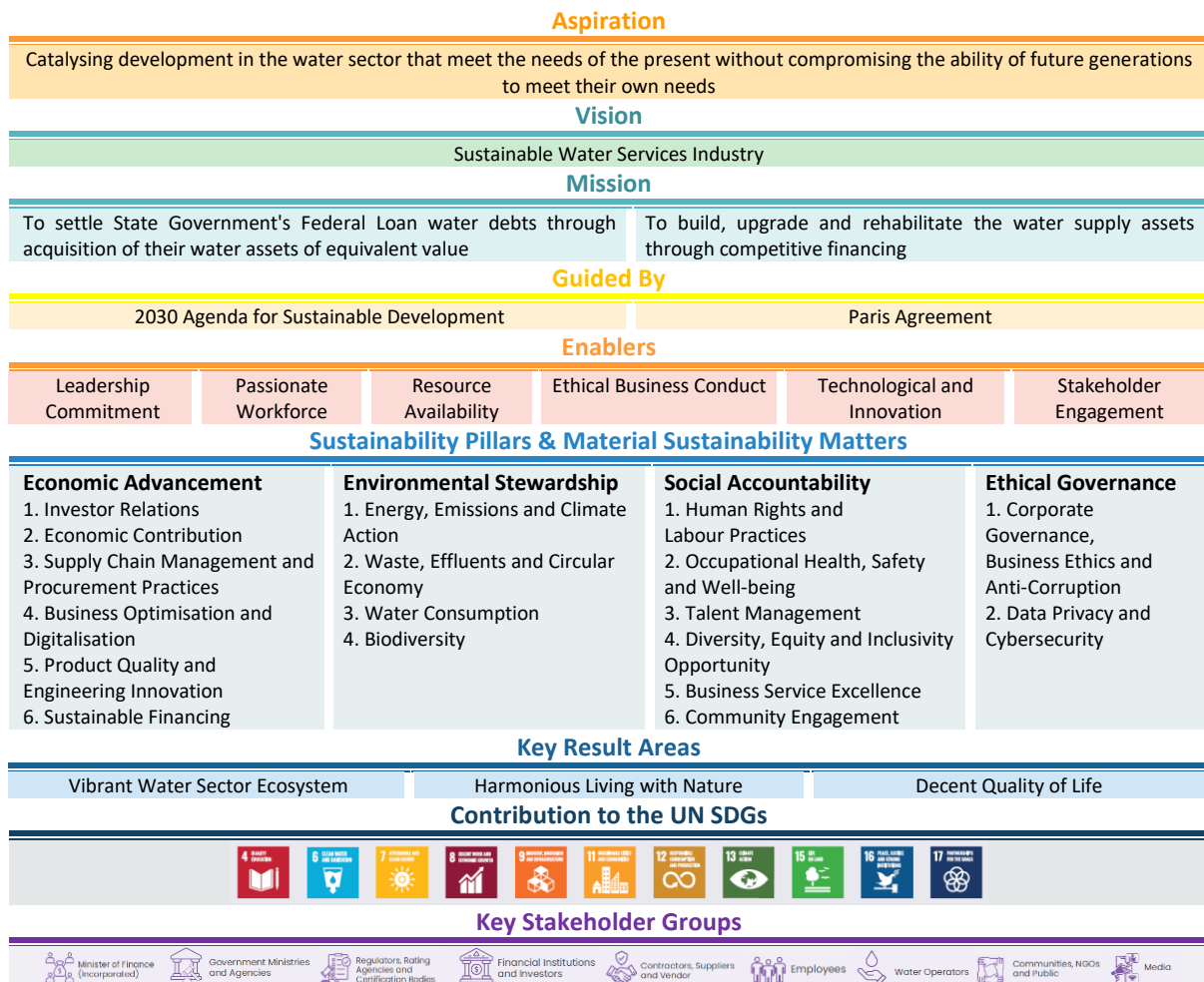
Under the new model, there will be a separation of responsibilities between water asset owners and operators. WOs will no longer be responsible for developing water infrastructure and its funding, so that they can concentrate solely on providing water services to consumer and improving their operational efficiency. The responsibilities of developing water infrastructure and sourcing for its funding have been transferred to PAAB.

1.2 Sustainability at PAAB^{5,6}

As a special purpose entity and as a Government-Linked Company with a mandate to bridge the gap between the public and private sectors, PAAB’s interests and values primarily circle around balancing social obligation to fund, develop, and deliver high quality water infrastructure as well as fiduciary duties to the investors of PAAB and its subsidiaries. The Group’s moral compass to be a responsible organisation guides its conscious efforts in supporting the Federal Government’s aspiration to materialise the international development agenda that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Sustainability Framework

PAAB’s sustainability strategy aligns with the 2030 Agenda for Sustainable Development and the Paris Agreement, reflecting PAAB’s commitment to responsible business practices. The framework integrates responsible practices into the Company’s operations, driving value creation for stakeholders while minimising adverse impacts on people and the planet.



⁵ Referenced from: <https://www.paab.my/wp-content/uploads/2025/06/PAAB-Sustainability-Statement-2024.pdf>

⁶ Any updates to PAAB’s sustainability strategy will be made available on PAAB’s corporate website <https://www.paab.my/sustainability/>, or reflected within its reporting.

Driving Sustainability in Support of Malaysia's WST 2040^{7, 8}

PAAB's commitment to integrate sustainability into its operations, supports the government's efforts and contributes to the Water Sector Transformation 2040 ("WST 2040") Agenda's goal of strengthening Malaysia's water sector. By enhancing accessibility and inclusivity, PAAB fosters equal opportunities while promoting long-term sustainability in alignment with the UN SDGs.



Malaysia has introduced the WST 2040 Agenda in the Twelfth Malaysia Plan (2021–2025) and will continue to be implemented across the Thirteenth Malaysia Plan (2026-2030) to strengthen the sustainability and resilience of the national water sector. The agenda envisions the water sector as an economic enabler and growth engine to ensure water security for all, positioning Malaysia as a Regional Water Hub by 2040.

The WST 2040 is a national agenda to transform the water sector into a dynamic and vibrant economic sector that can contribute significantly to the national gross domestic product ("GDP") and provide good quality affordable water to the *Rakyat* as well as create new job opportunities and facilitating resilient development of science, technology, innovation and economy ("STIE") and Research, Development, Innovation and Commercialisation ("RDIC") in the sector.

The WST 2040 strategies, aligned with the Water Action Decade, include:

- i) empowering people to ensure that the transformation is implemented;
- ii) strengthening governance at all levels;
- iii) enhancing the capacity of data driven decision-making;
- iv) strengthening financial capacity; and
- v) developing sustainable infrastructure with cost effective technology.

The agenda focuses on climate change adaptation, strengthening data integration, establishing water footprint and virtual water inventory, sustainable water resources management through the Water-Food-Energy Nexus, exploring alternative water financing, introducing water as a new economic sector, raising public awareness, and implementing Fourth Industrial Revolution ("IR 4.0").

Technological advancements, particularly water digitalisation, support governance, evidence-based policies, and efficiency gains, mitigating water and energy challenges. The National Water Balance System ("NAWABS") supports water footprint initiatives through systematic river basin management.

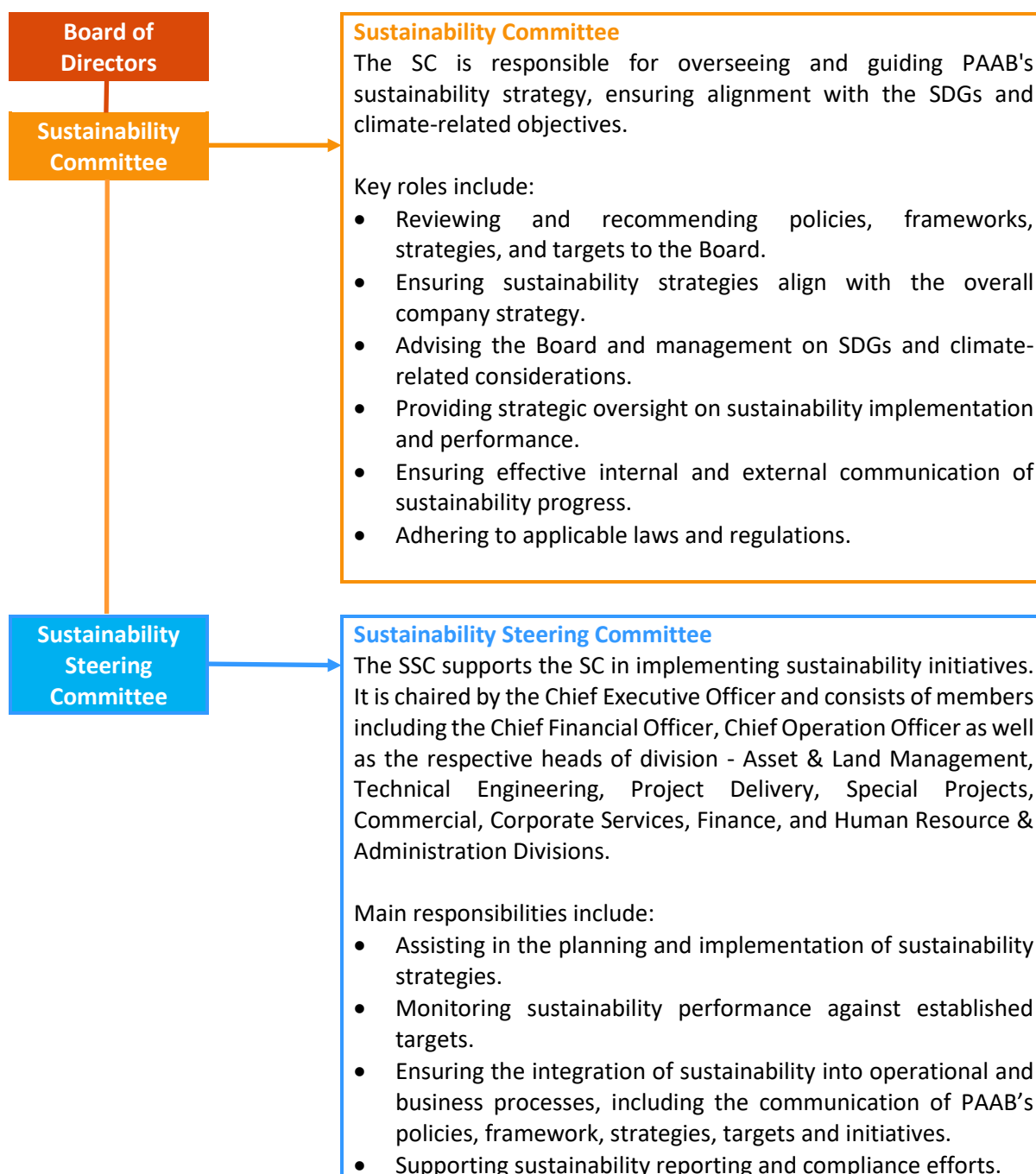
⁷ Referenced from: <https://wst2040.my/>

⁸ Referenced from: <https://sdgs.un.org/partnerships/water-sector-transformation-2040>

1.3 PAAB's Sustainability Governance

At PAAB, the Board of Directors (“**the Board**”) oversees sustainability matters, ensuring alignment with the Company’s strategic priorities. The Sustainability Committee (“**SC**”) as the sub-committee of the Board, works alongside the Sustainability Steering Committee (“**SSC**”) in driving initiatives across the Group.

The SC convenes quarterly to review progress, address key issues and drive continuous improvement while the SSC is responsible for planning, implementing, evaluating and communicating policies, frameworks, strategies, targets and practices that align with the UN SDGs, ensuring a globally relevant approach to cultivate a better tomorrow.



2 SUSTAINABLE FINANCE AT PAAB

2.1 Rationale for Sustainable Finance

To support its sustainability strategy, PAAB has not only incorporated Environment, Social and Governance (“ESG”) considerations into its daily operations but also reflected its commitment to sustainability through sustainable finance. PAAB’s role extends beyond the development and financing of critical infrastructure, it is committed to ensuring that every initiative is grounded in principles of environmental stewardship, social inclusion, and financial sustainability. In the face of mounting climate pressures and evolving national needs, PAAB continues to drive forward sustainable practices, build strategic partnerships, and reinforce robust governance. These efforts are key to shaping a resilient, future-ready water sector that delivers long-term value to the *Rakyat* and contributes meaningfully to Malaysia’s sustainable development goals.

In April 2022, PASB established its Sustainability Sukuk Framework (“**Sustainability Sukuk Framework 2022**”)⁹ to ensure transparency, disclosure, and integrity for its Sustainability Sukuk issuance and obtained a Second Party Opinion (“**SPO**”) from RAM Sustainability Sdn Bhd (“**RAM**”)¹⁰.

PAAB’s Sustainable Islamic Finance Framework 2026 (the “**Framework**”) is issued to update and supersede PASB’s Sustainability Sukuk Framework 2022. This timely update will include:

1. **Alignment with the latest voluntary guidelines** across global, regional, and local markets, which has undergone several updates since 2022, and is reflective of progression towards elevated standards of sustainable finance practices, reduce ambiguity, and mitigate risks of greenwashing and social washing.
2. **Expansion and strengthening of project eligibility criteria** in line with market best practices, including new project categories that are most relevant to PAAB’s business activities.
3. **Broadening of other potential sustainable finance instruments** to cover Sukuk and/or Islamic financings, providing PAAB with full flexibility in adopting sustainable finance as a funding strategy.

Raising sustainable finance represent a strategic tool for PAAB to:

- **Strengthening its Unique Positioning** by signaling to investors on PAAB’s ongoing and future plans as the sole custodian of national water assets while also being a pure play company within the water sector.
- **Integration with Sustainability Strategy**, aligning to PAAB’s latest corporate sustainability strategies thus strengthens strategic coherence.
- **Mobilize capital to scale up innovation** in renewable energy and terrestrial aquatic conservation, among others, contributing towards natural resources resilience and overall GHG emission reduction.

⁹Reference: <https://www.paab.my/wp-content/uploads/2023/09/PASB-Sustainability-Sukuk-Framework-dated-April-2022.pdf>

¹⁰Reference: <https://www.paab.my/wp-content/uploads/2023/09/PASB-Sustainability-Sukuk-Second-Opinion-Report-dated-April-2022.pdf>

2.2 Scope

This Sustainable Islamic Finance Framework 2026 has been established to demonstrate how PAAB, including its subsidiaries, intend to raise funding via Sukuk and/or Islamic financing which are compliant with one or more of the Sustainability Guidelines (as defined below) (“**Sustainability Finance Transactions**” or “**SFTs**”) to fund investments, assets, and/or projects that create long-term value and contribute to a more sustainable, resilient future in support of national commitments such as the WST 2040 and Net Zero 2050 goals.

Where applicable, PAAB’s subsidiaries undertaking SFTs with reference to this Framework shall adopt and comply, to the extent feasible, the criteria and processes as outlined in this Framework, and make the necessary disclosures within the relevant SFT documentation.

This Framework defines how SFTs following the **Use of Proceeds** format i.e. Sustainable and Responsible Investment (“**SRI**”), Green, Blue, Social, and Sustainability (“**GSS**”) Sukuk and/or Islamic financing or any other financial instrument (“**Instruments**”), can be undertaken by PAAB and its subsidiaries, where the proceeds or an equivalent amount will be exclusively applied to finance or re-finance, in part or in full, new and/or existing Eligible Projects as defined in [Section 3.1](#).

GREEN INSTRUMENTS	SUSTAINABILITY INSTRUMENTS	SOCIAL INSTRUMENTS
Where net proceeds will be exclusively allocated to finance and/or refinance eligible green projects.	Where net proceeds will be allocated to finance and/or refinance a combination of eligible green and/or social projects.	Where net proceeds will be exclusively allocated to finance and/or refinance eligible social projects.
THEMATIC – BLUE INSTRUMENTS Where net proceeds will be allocated to finance and/or refinance eligible blue projects that contribute to the sustainable use of water resources		

2.3 Basis of PAAB’s Sustainable Islamic Finance Framework

This Framework adopts the principles and/or guidelines set by the International Capital Market Association (“**ICMA**”)¹¹, ASEAN Capital Markets Forum (“**ACMF**”)¹², Securities Commission Malaysia (“**SC Malaysia**”)¹³ and Loan Market Association (“**LMA**”)/ Asia Pacific Loan Market Association (“**APLMA**”)/ Loan Syndications & Trading Association (“**LSTA**”)¹⁴ as specified below. These documents provide voluntary guidelines that recommend transparency, disclosure, and promote integrity in the development of the sustainable finance market by clarifying the approach for raising Sustainable Finance.

¹¹ Reference: <https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/>

¹² Reference: <https://www.theacmf.org/initiatives/sustainable-finance>

¹³ Reference: <https://www.sc.com.my/api/documentms/download.ashx?id=49df5207-f32f-4095-a0c6-1aab5f3c2038>

¹⁴ Reference: https://www.lsta.org/content/?_industry_sector=guidelines-memos-primary-market&_asset_type=publication

With respect to Sukuk, the issuance(s) will be aligned with any of the following guidelines, principles, standards or frameworks, including any subsequent amendments made to them from time to time, as appropriate for the type of Sukuk issued:

- Green Bond Principles (“**GBP**”) 2025, Social Bond Principles (“**SBP**”) 2025 and Sustainability Bond Guideline (“**SBG**”) 2021 issued by ICMA;
- ASEAN Green Bond Standards (“**GBS**”) 2018, ASEAN Social Bond Standards (“**SBS**”) 2018 and ASEAN Sustainability Bond Standards (“**SUS**”) 2018 developed by ACMF; and SRI Sukuk Framework 2019 issued by the SC Malaysia (“**SRI Sukuk Framework**”).

With respect to Islamic financing transaction(s), those will be aligned with the following principles developed by LMA, APLMA, and LSTA, including any subsequent amendments made to the principles from time to time:

- Green Loan Principles (“**GLP**”) 2025 and Social Loan Principles (“**SLP**”) 2025.

The GBP, SBP, SBG, GBS, SBS, SUS, SRI Sukuk Framework, GLP and SLP are collectively referred to as the “**Sustainability Guidelines**”.

Building on the Green Bond Principles and the Green Loan Principles, blue Sukuk and/or Islamic financings, as a sub-category of Green, may also be issued under the relevant green categories and will be guided by the Guidelines for Blue Finance Version 2.0¹⁵ developed by the International Finance Corporation (“**IFC**”) in 2025 as well as the Bonds to Finance the Sustainable Blue Economy - A Practitioner's Guide¹⁶ published by ICMA in 2023 (collectively referred to as the “**Blue Finance Guidelines**”).

In addition, the Eligible Projects as defined in [Section 3.1](#) are, where relevant, guided by the Technical Screening Criteria of the ASEAN Taxonomy for Sustainable Finance Version 4¹⁷ developed by the ASEAN Taxonomy Board (“**ATB**”).

¹⁵ Reference: <https://www.ifc.org/content/dam/ifc/doc/2025/guidance-for-blue-finance-v2-0.pdf>

¹⁶ Reference: <https://www.icmagroup.org/assets/documents/Sustainable-finance/Bonds-to-Finance-the-Sustainable-Blue-Economy-a-Practitioners-Guide-September-2023.pdf>

¹⁷ Reference: https://www.theacmf.org/images/downloads/pdf/ASEAN%20Taxonomy%20Sustainable%20Finance%20V4_06Nov25.pdf

3 PAAB'S SUSTAINABLE ISLAMIC FINANCE FRAMEWORK

PAAB's Framework is based upon the four core components of the above-mentioned Sustainability Guidelines:

1. Use of Proceeds;
2. Process for Project Evaluation and Selection;
3. Management of Proceeds; and
4. Reporting.

This Framework may be updated from time to time to include other sustainable debt instruments that may be issued in the future. PAAB retains the option to issue sustainable finance instruments separate from this Framework, where deemed appropriate. For Sukuk transactions, PAAB will ensure that the proceeds are utilised for Shariah-compliant purposes only.

3.1 Use of Proceeds

PAAB is committed to ensuring that the proceeds of each SFT are used exclusively for financing and/or refinancing¹⁸ projects, assets, or activities ("**Eligible Projects**") that meet the eligibility criteria ("**Eligibility Criteria**") for the eligible green and/or social categories ("**Eligible Categories**") set out below. In order to be earmarked, Eligible Projects must align with all of the following criteria:

i. Eligible Types of Investments

- Eligible Projects may include the value of fixed assets ("**Assets**"), investments and capital expenditures ("**CAPEX**") and/or operating expenditures ("**OPEX**") meeting the eligibility criteria outlined in Section [3.1.1](#) and [3.1.2](#)
- Research and Development ("**R&D**") expenditures related to Eligible Categories

ii. Look-back¹⁹ Period





- Any refinancing of OPEX in relation to Eligible Projects, will be subjected to a maximum look-back period of up to 36 months from time of issuance

For the avoidance of doubt, the proceeds may be used by PAAB for working capital requirements relating to an Eligible Project, refinancing of existing debt relating to an Eligible Project, fees and expenses in relation to each Eligible Project and/or inter-company advances to PAAB and its subsidiaries in relation to each Eligible Project, so long as the proceeds are not used to fund new or existing assets, businesses, projects and/or products falling outside the Eligible Projects identified. In addition to the foregoing, proceeds raised from SFTs via Sukuk issuances and/or Islamic financing transactions shall also be utilised for Shariah-compliant purposes only.

¹⁸ Where relevant, PAAB will specify the amount of proceeds being allocated for refinancing and for which Eligible Projects to be refinanced within the corresponding transaction documentations.

¹⁹ "Look-back period" refers to a maximum period in the past that an Issuer will look back to identify assets/earlier disbursements to such Eligible Projects that will be included in the allocation and impact reporting.





3.1.1 Eligible Green and Blue Use of Proceeds

Eligible Green and Blue Category	Eligibility Criteria	Alignment with UN SDGs
<p>Sustainable Water and Wastewater Management²⁰</p> <p>Sustainability Benefits: <i>Natural Resource Conservation; Pollution Prevention and Control</i></p> 	<p>Construction, development, operation, maintenance, renovation and upgrade of water supply infrastructure to increase efficiency, accessibility and management of water delivery systems including projects such as:</p> <p><u>Water Production & Supply</u></p> <ul style="list-style-type: none"> ▪ Water treatment plants meeting the following criteria: <ul style="list-style-type: none"> ○ Net average energy consumption for abstraction and treatment ≤ 0.5 kWh per m³ produced water supply; or Leakage level: Infrastructure Leakage Index (“ILI”) ≤ 1.5 <p><u>Water Supply Efficiency & NRW Reduction Measures</u></p> <ul style="list-style-type: none"> ▪ Renewal or replacement of old water facilities such as water transmission pipelines to reduce leakage ▪ Sensors, controllers, SCADA system and command centre facilities to enhance network efficiency <p><u>Water Treatment Residue Management</u></p> <ul style="list-style-type: none"> ▪ Advanced wastewater treatment plants catering to high water-consuming industries and commercial entities ▪ Water treatment sludge dewatering systems to prevent pollution of inland waterways ▪ Residual conveyance and disposal system through a Tubular Pipe Conveyor System for safe residue handling from the plant to the residual storage shelter <p><u>Water Reclamation</u></p> <ul style="list-style-type: none"> ▪ Reusing reclaimed water within water treatment processes ▪ Recycling industrial water by reusing treated wastewater in various industrial processes to supply recycled wastewater meeting specific reuse standards ▪ Rainwater harvesting systems <p><u>Desalination Plants</u></p> <ul style="list-style-type: none"> ▪ Desalination projects with energy consumption²¹ not exceeding 3.5kWh/m³ saline water abstracted complete with sustainable/circular brine disposal management such as brine mining 	 <p>Sustainable water and wastewater management projects contribute towards UN SDG targets 6.a and 12.2 by:</p> <ol style="list-style-type: none"> i. Engaging in water- and sanitation-related activities, including harvesting, desalination, efficiency, treatment, recycling, and reuse ii. Increasing sustainable management and efficient use of natural resources
<p>Terrestrial/Aquatic Biodiversity Conservation²²</p> <p>Sustainability Benefits: <i>Biodiversity; Natural Resource Conservation</i></p> 	<p>Protection, conservation and restoration of terrestrial and aquatic ecosystems, such as:</p> <ul style="list-style-type: none"> ▪ Careful management of resources and conservation areas and Reforestation Projects and recovery of water basins ▪ Conservation of the environment and water basin systems ▪ Restoration of rivers and other wetland environments ▪ River water quality improvements ▪ Preservation of watercourses in good ecological and chemical condition, accommodating abstractions, effluent and land run-off 	 <p>Terrestrial/aquatic biodiversity conservation activities contribute towards UN SDG targets 6.6, 14.1 and 15.5 by:</p> <ol style="list-style-type: none"> i. Protecting and restoring water-related ecosystems ii. Preventing and significantly reducing

²⁰ For alignment with the ICMA’s Bonds to Finance the Sustainable Blue Economy - A Practitioner’s Guide, wastewater management projects must be within 100 km of the coast and exclude built-in obsolescence as well as those that lack compliance with policies and regulations

²¹ PAAB strives to achieve lowest energy consumption levels over the long term through advanced and best available technologies



²² For alignment with the ICMA’s Bonds to Finance the Sustainable Blue Economy - A Practitioner’s Guide, projects must be within the marine environment or within 100 km of the coast

		<p>pollution of all kinds, in particular from land-based activities, including debris and nutrient pollution</p> <p>iii. Taking action to reduce the degradation of natural habitats and halt the loss of biodiversity</p>
<p>Climate Change Adaptation²³</p> <p>Sustainability Benefits: <i>Climate Change Adaptation</i></p> 	<p>Investments and expenditures beyond business-as-usual renovations and retrofits, relating to the adaptation to the impacts of climate change identified as a result of vulnerability assessments undertaken including infrastructure and ecosystem resilience, such as:</p> <ul style="list-style-type: none"> ▪ Water Resources Modelling system based on meteorological forecast and historical data for better forecasting capabilities and management of water resources in view of the increase in extreme weather events, inclusive of the use of AI applications where possible; ▪ Sensors and SCADA systems for water resource real-time flow, levels, water quality monitoring and modelling for more accurate forecasting; ▪ Redundancy for Emergencies measures whereby the supply for WTPs across various regions rerouted or redistributed in case of plant failures or climate-related disruptions, which contributes to national water resilience 	 <p>Climate change adaptation measures contribute towards UN SDG targets 6.5, 11.b and 13.3 by:</p> <ol style="list-style-type: none"> i. Implementing integrated water resources management at all levels, including through transboundary cooperation as appropriate ii. Increasing adaptation to climate change and resilience to disasters iii. Integrating climate change measures into strategies and planning
<p>Renewable Energy</p> <p>Sustainability Benefits: <i>Climate Change Mitigation</i></p>	<p>Construction, development, acquisition, maintenance, and/or operation of facilities, systems and equipment of renewable energy including projects such as:</p> <ul style="list-style-type: none"> ▪ Solar power (including all photovoltaic installations whether ground mounted, roof mounted or floating) ▪ Run-of-river hydropower projects without artificial reservoir or low storage capacity or non-run-of-river hydropower satisfying one of the following criteria: <ul style="list-style-type: none"> ○ Facilities that became, or will become operational after 2019 to have life-cycle emissions below 50g CO₂e/kWh, or power density greater than 10 W/m², or ○ Facilities that became operational before 2019 to have life-cycle emissions below 100g CO₂e/kWh, or power density is greater than 5 W/m² 	 <p>Contributes towards UN SDG targets 7.2 and 9.4 by:</p> <ol style="list-style-type: none"> i. Supporting an increase in share of renewable energy in the energy mix ii. Increasing adoption of clean and environmentally sound technologies
<p>Green Buildings</p> <p>Sustainability Benefits: <i>Natural Resource Conservation; Climate Change Mitigation</i></p>	<p>Construction, development, expansion, renovation, and maintenance of buildings that have received or are anticipated to receive green building certification including but not limited to the below international standards or regional equivalent e.g., obtaining:</p> <ul style="list-style-type: none"> ▪ Green Building Index (“GBI”) (Gold and above) ▪ Leadership in Energy and Environmental Design (“LEED”) (Gold and above) ▪ GreenRE (Gold and above) 	 <p>Green buildings contribute towards UN SDG target 11.c by:</p> <ol style="list-style-type: none"> i. Promoting the building of sustainable and resilient buildings

²³ For alignment with the ICMA’s *Bonds to Finance the Sustainable Blue Economy - A Practitioner’s Guide*, projects must be within 50 km of the coast or within the marine environment and exclude grey infrastructure in ecologically sensitive areas

	<ul style="list-style-type: none"> ▪ Building Research Establishment Environmental Assessment Method (“BREEAM”) (Excellent and above) ▪ Malaysian Carbon Reduction and Environmental Sustainability Tool (“MyCREST”) (4 Stars and above) ▪ Sustainable Infrastructure Rating Tool (“Sustainable INFRASTAR”) (4-Star) ▪ Any other green building certifications equivalent to the above standards <p>Refurbishment/retrofit of buildings to achieve a minimum of 30% improvement in energy efficiency or primary energy demand (“PED”) over initial performance.</p> <p>This shall apply to all new and existing buildings/complexes, offices, and water treatment plant administrative buildings.</p>	
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3.1.2 Eligible Social Use of Proceeds

Eligible Social Category	Target Population	Eligibility Criteria	Alignment with UN SDGs
Affordable Basic Infrastructure	<i>General public, in particular, the underserved and unserved due to lack of quality access to essential basic needs e.g. water supply</i>	<p>Investments in the development, construction, installation, and maintenance of systems and/or programmes that ensure distribution of affordable clean water, such as:</p> <ul style="list-style-type: none"> ▪ Installation of affordable water treatment facilities and sanitation systems ▪ Installation of water efficient fittings at high water consumption public facilities such as mosques and places of worship and schools and institutions of higher learning ▪ Development of water pumping systems and distribution networks 	<div style="display: flex; align-items: center; gap: 10px;"> <div style="border: 1px solid black; padding: 2px; text-align: center;">  <small>3 GOOD HEALTH AND WELL-BEING</small> </div> <div style="border: 1px solid black; padding: 2px; text-align: center;">  <small>6 CLEAN WATER AND SANITATION</small> </div> </div> <p>Contributes towards UN SDG targets 3.9 and 6.1 by:</p> <ol style="list-style-type: none"> i. Ensuring universal and equitable access to safe and affordable drinking water for all ii. Reducing the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination

3.1.3 Exclusion List for Green and Social Projects

PAAB’s Utilisation of Proceeds for Green and Social Projects shall be excluded from financing projects or activities related to the following industries below (“**Green and Social Project Exclusion List**”), and as aligned with the ACMF’s ASEAN GBS (e.g. fossil fuel generations projects), and ACMF’s ASEAN SBS (e.g., activities that pose a negative social impact related to alcohol, gambling tobacco and weaponry):

- (a) Luxury sectors (precious metals / precious minerals / artworks and antiques wholesale or brokerage);
- (b) Child labour or forced labour;
- (c) Gambling;
- (d) Adult entertainment;
- (e) Weapons and military contracting;
- (f) Alcohol;
- (g) Tobacco;
- (h) Fossil-fuel generation related activities (including extraction, exploration, production, power generation or transport of fossil fuels); and
- (i) Production or trade in any product or activity deemed illegal under international conventions and agreements, or subject to international bans

3.2 Process for Project Evaluation and Selection

PAAB has established processes and procedures to ensure that projects are properly identified and assessed in compliance with this Framework. PAAB's Sustainability Committee ("SC") is responsible for overseeing and guiding PAAB's sustainability strategy, ensuring alignment with the UNSDGs and climate-related objectives. PAAB's SC will be supported by the Sustainability Steering Committee ("SSC") with overall guidance from the Board of Directors. PAAB has also established a Project Evaluation Committee ("PEC") to conduct project evaluation processes. In respect to this Framework, the SC, SSC, PEC and the relevant teams are responsible for:

- Overseeing the implementation of the Framework to ensure effective governance, compliance and alignment with PAAB's sustainability objectives, which includes oversight of project selection, utilisation of proceeds, as well as allocation and impact reporting;
- Proposing projects for SFT consideration, in accordance with the Eligibility Criteria;
- Reviewing, selecting, validating and monitoring the pool of Eligible Projects, based on the categories and criteria as specified in this Framework, which is in alignment with PAAB's sustainability strategy;
- Reviewing and approving any proposed updates to this Framework, to reflect any changes on PAAB's sustainability strategies and initiatives and in the event that projects no longer meet the Eligibility Criteria²⁴;
- Reviewing and validating the relevant reports, including the Allocation and Impact Reports (as described in [Section 3.4](#) below) for the annual reporting;
- Monitoring the ongoing evolution related to the sustainable finance markets in terms of disclosure and reporting to be in line with market best practices e.g., appointment of an independent auditor to provide an annual assurance report, to the extent where feasible; and
- Monitoring ESG controversies²⁵ based on the Environmental Impact Assessments ("EIA") and Environmental Management Plans ("EMP") conducted and developed for PAAB's projects, or as they may arise.

The Eligibility Criteria as defined in [Section 3.1](#), includes a set of both exclusion criteria and selection of environmental and social criteria which the Eligible Project must meet to be financed or refinanced by SFTs.

Environmental and Social Risk Management

To manage environmental impacts, PAAB conducts EIA and develop EMP for its projects, in adherence to legal requirements. As part of these efforts, appropriate measures will be executed as required under the EMP. Contractors are also required to take necessary measures to prevent harm to protected wildlife species by strictly prohibiting poaching activities. Any sightings of large wildlife within construction areas must be reported, with arrangements made for relocation in collaboration with the Wildlife Department ("PERHILITAN").

PAAB has also implemented a zero-discharge policy in the design of its water assets, particularly in water treatment plants. The policy seeks to minimise environmental impact, conserve water resources and promote sustainability in PAAB's business operations. PAAB adopted Green Procurement principles by selecting products and services based on key criteria that prioritised environmentally sustainable products and aimed at reducing environmental impact.

²⁴ Following divestment, liquidation, technology switch, concerns regarding alignment of underlying activity with eligibility criteria etc.

²⁵ Examples include data privacy and security, product governance and business ethics

Its comprehensive policies including the Health, Safety, Security & Environment (“**HSSE**”) Policy and ISO 9001 Quality Policy are in place to outline PAAB’s commitment in conducting all business activities in a healthy, safe, and secure manner, without risk to the environment and its workers, contractors, consultants, visitors, and any other parties involved. PAAB will ensure that it has complied and will continue to comply with the relevant ESG standards or recognised best practices relating to the Eligible Projects and may include IFC’s Environmental and Social risk management standards.

The **step-by-step process** for evaluation and selection of Eligible Project uses internal expertise as follows:

1. The SSC, together with the PEC, will assess and identify projects that satisfy the Eligibility Criteria set forth in the “**Use of Proceeds**” section and in accordance with PAAB’s sustainability objectives and strategies including assessment of the project’s environmental and social risks.
2. The SSC, which is chaired by the Chief Executive Officer, consists of members including the Chief Financial Officer, Chief Operation Officer as well as the respective heads of division:
 - Asset & Land Management Division
 - Technical Engineering Division
 - Project Delivery Division
 - Special Projects Division
 - Commercial Division
 - Corporate Services Division
 - Finance Division
 - Human Resource & Administration Division
3. On a quarterly basis, or as required, the SC will be updated on the implementation activities, including the oversight of project selection, utilisation of proceeds, as well as allocation and impact reporting.
4. In case of divestment or an Eligible Project no longer meets the Eligibility Criteria, the proceeds will be allocated to other Eligible Projects as soon as practicable.

PAAB’s SC will be responsible for managing any future updates to the Framework, including any expansion of the Eligibility Criteria under the “**Use of Proceeds**” section. Any changes to the Framework will be published on PAAB’s website: <https://www.paab.my/>.

3.3 Management of Proceeds

The proceeds from each SFTs will be allocated for the financing and/or refinancing of Eligible Projects as outlined in [Section 3.1](#) above. PAAB’s Treasury and Corporate Finance Department will track internally the proceeds raised from the SFTs to be allocated to Eligible Projects.

Pending the full allocation of proceeds, the balance of unallocated proceeds shall be earmarked and held in the form of temporary sustainable cash or cash equivalent investment instruments in line with PAAB’s Treasury and Corporate Finance Department standard operating procedure/manual.

In case of asset divestment or cancellation of a project, PAAB will reallocate proceeds to finance other Eligible Projects, compliant with this Framework, as soon as practicable. PAAB will aim to fully allocate the proceeds from any SFT issuance within 36 months.

3.4 Reporting

On an annual basis, at least until full allocation or in case of material changes, PAAB will provide the following allocation and impact reporting on its SFT(s) to the extent feasible, within its website: <https://www.paab.my/>.

In the **Allocation Reporting**, PAAB will include:

- i. The amount issued and outstanding for the SFTs;
- ii. The total value of Eligible Projects;
- iii. A description of the portfolio of Eligible Projects including a breakdown of the allocated amounts by Eligible Categories where appropriate;
- iv. The amount and/or percentage of new and existing projects (share of financing and refinancing); and
- v. Any further information on how unallocated proceeds have been held.

The **Impact Reporting** will provide qualitative and quantitative performance measures and examples associated with each category of Eligible Projects. Impact reporting may include, but are not limited to:

Eligible Green Project Categories	Example of Impact Metrics
Sustainable Water & Wastewater Management	<ul style="list-style-type: none"> ▪ Reduction in NRW percentage (%) ▪ Avoided water leakage (m³) ▪ Volume of wastewater treated for reuse (m³) / <u>reclaimed water</u> ▪ Area covered by sustainable land and water resources management practices ▪ Annual water savings in m³/a and/or in %
Terrestrial/Aquatic Biodiversity Conservation	<ul style="list-style-type: none"> ▪ Number of water bodies with improvement linked to effluent changes ▪ Land assessed and managed for biodiversity (ha) ▪ Number of biodiversity projects undertaken ▪ Reforested and recovered area (ha)
Climate Change Adaptation	<ul style="list-style-type: none"> ▪ Number of projects undertaken for water resilience improvement ▪ Number of sensors, monitoring tools installed for improved forecasting
Renewable Energy	<ul style="list-style-type: none"> ▪ Number of renewable energy projects constructed ▪ GHG emissions reduced/ avoided in metric tons of CO₂e ▪ Annual renewable energy generation in MWh per year ▪ Installed capacity of renewable energy in MW
Green Building	<ul style="list-style-type: none"> ▪ Number of Green Buildings constructed ▪ Type of Green Buildings constructed by certification type ▪ Estimated annual energy consumption in KWh/m² or savings in MWh ▪ Estimated annual GHG emissions reduced and/or avoided in tonnes CO₂e

Eligible Social Project Categories	Example of Impact Metrics
Affordable Basic Infrastructure	<ul style="list-style-type: none"> ▪ Number of water infrastructure projects built/upgraded (e.g. rooftop tanks and pumping systems) ▪ Number of water treatment plants built or upgraded ▪ Percentage/size of populations provided access to clean water and/or sanitation ▪ Number of new household water connections

Alongside the allocation reporting, the impact reporting will be disclosed annually, with the methodology of the indicators above where relevant and feasible.

Any material developments, such as modification of the Framework, will also be reported in a timely manner on PAAB's website. Such information will be provided on an annual basis until all the net proceeds have been fully allocated.

3.5 External Review

3.5.1 Pre-Issuance Review

PAAB has obtained an independent Second Party Opinion (“SPO”) from RAM to review the Framework, its transparency and governance as well as its alignment to the components of the Sustainability Guidelines.

The SPO report is available on RAM’s website: <https://www.ram.com.my/> and also available on PAAB’s website: <https://www.paab.my/>.

3.5.2 Post-Issuance Review

External verification on the tracking of the SFT proceeds may be provided by an independent third party appointed by PAAB. The verification may include an opinion on all allocation and impact reports produced in line with [Section 3.4](#), and management of proceeds to verify the PAAB’s internal tracking method. This review, if undertaken, will be made available on PAAB’s website: <https://www.paab.my/>.

4 Update and Amendment of the Framework

PAAB may review this Framework from time to time, including its alignment to updated versions of the relevant Principles as and when available in the market and where applicable, PAAB may procure an updated SPO from RAM or any such other qualified SPO provider pursuant to the revision.