

GREEN SUKUK: LEGAL FOUNDATIONS FOR DIVERSE APPLICATIONS IN SUSTAINABLE DEVELOPMENT

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Green Sukuk, a Shariah-compliant financial instrument, has emerged as a transformative tool in sustainable finance. Initially associated with renewable energy, particularly solar farms, Green Sukuk now finances a wide array of environmentally beneficial projects, including biodiversity conservation, climate adaptation, sustainable agriculture, and water management.

This legal insight explores the evolving legal frameworks that support these diverse applications, the challenges and opportunities they present, and the implications for Islamic Finance and ESG-Investment efforts.

Conceptual and Legal Foundations of Green Sukuk

Green Sukuk are structured similarly to traditional Sukuk but are distinguished by their exclusive use of proceeds for environmentally sustainable projects. They must comply with both Islamic finance principles and green finance standards, such as:

- (a) Shariah compliance: Avoidance of interest (*riba*), uncertainty (*gharar*), and speculation (*maysir*); and
- (b) Green finance standards: Alignment with frameworks like the ICMA Green Bond Principles, Climate Bonds Standard, and ASEAN Green Bond Standards.

In jurisdictions like Indonesia and Malaysia, Green Sukuk are governed by national regulations¹ that integrate these dual compliance requirements.

Expanding The Scope: Beyond Renewable Energy

1. Biodiversity and Nature Conservation

Green Sukuk is increasingly used to finance ecosystem restoration and biodiversity conservation, reflecting a shift toward nature-based solutions. In 2023, the Government of Malaysia, through the 2024 budget, announced the establishment of a RM1 billion biodiversity Sukuk facility to replant degraded forests and generate carbon credits support conservation efforts². Eligible³ biodiversity projects include, among others:

¹ For example:

(a) Malaysia's 2021 Government of Malaysia (GoM) SDG Sukuk Framework, together with Securities Commission Malaysia's SRI Sukuk and Bond Grant Scheme

(b) Indonesia's Financial Services Authority Regulation No. 60/POJK.04/2017 outlines requirements for environmentally friendly debt securities, including Sukuk

² Government of Malaysia's 2024 Budget Speech, News & Media – Official Portal of the Ministry of Finance

³ National Policy on Biological Diversity 2022-2030

(a) Habitat and Biodiversity Conservation:

- (i) sustainable management of land use and forestry;
- (ii) protection of coastal and marine environments;
- (iii) biodiversity conservation, protection and patrol programs;
- (iv) monitoring, control and surveillance for:
 - a. fisheries;
 - b. mangroves;
 - c. wetlands;
 - d. forest cover; and
 - e. national parks

(b) Forestry and Environmental Research; and

(c) Sustainable Agriculture.

These projects align with Islamic principles of stewardship (*khalifa*) and public good (*maslahah*), reinforcing the ethical foundation of Green Sukuk.

2. Climate Adaptation and Resilience

For climate adaptation, funding can be directed towards sustainable and environmentally friendly initiatives, such as renewable energy installations, water conservation systems, and infrastructural enhancements to withstand climatic changes.

In Malaysia, the 2024 Budget saw a total of RM11.8 billion was allocated to flood mitigation projects, RM563 million to the rehabilitation of over 200 high-risk slopes nationwide and RM300 million to flood preparedness measures managed by the National Disaster Management Agency.

These applications demonstrate the instrument's flexibility in addressing both mitigation and adaptation goals under the Paris Agreement⁴ and national climate strategies. Further, these projects often lack traditional revenue streams but are tradable carbon markets which could become viable through carbon pricing mechanisms, making Green Sukuk a bridge between Islamic finance and emerging climate finance tools.

Legal Structures And Contractual Models

Green Sukuk can be structured using various Islamic finance contracts, each suited to different project types or combined as underlying to a complex project financing potential:

Underlying Islamic Finance Contracts	Project Types
<i>Musharakah</i> (partnership)	a partnership where investors collectively own a stake in a climate adaptation project, sharing the costs and profits
<i>Ijarah</i> (leasing)	used for hire purchase of assets contemplated in the infrastructure and renewable energy projects

⁴ Article 4 (2) and (7) of the 2015 Paris Agreement by the Parties to the United Nations Framework Convention on Climate Change

Underlying Islamic Finance Contracts	Project Types
<i>Istisna'</i> (manufacturing sale)	suitable for construction-based projects
<i>Wakalah</i> (agency)	investors appoint a manager to oversee investment in complex climate adaptation projects
<i>Murabahah</i> (cost-plus sale)	an asset or pool of assets becomes basis of sale and resale at a fixed profit margin to replace interest
<i>Mudarabah</i> (profit-sharing partnership)	a partnership where investors provide capital to a venture with returns dependent on the venture's profit, suitable for potentially profitable projects like green buildings or sustainable agriculture

These contracts enable flexibility in financing diverse green assets while maintaining Shariah compliance.

Case Studies: Diverse Applications Beyond Malaysia

1. Indonesia's Green Sukuk Portfolio

In 2021, Indonesia issued sovereign Green Sukuk to fund:

- (a) Renewable energy.⁵
- (b) Sustainable transport (e.g., 690 km of railway tracks).⁶
- (c) Waste management and pollution control.⁷

These projects are audited and verified by third parties, ensuring transparency and accountability.

2. United Arab Emirates (UAE) and Saudi Arabia

In the UAE, corporations such as DP World⁸ and Majid Al Futtaim⁹ have issued Green Sukuk for:

- (a) green buildings;¹⁰
- (b) lean transport;
- (c) renewable energy;
- (d) energy efficiency; and
- (e) sustainable water management.¹¹

Meanwhile, Saudi Arabia's Islamic Development Bank issued a €1 billion Green Sukuk to finance:

- (a) renewable energy;
- (b) pollution prevention and control;
- (c) clean transportation;
- (d) environmentally sustainable management of natural living resources and land use; and
- (e) sustainable water and wastewater management.¹²

These examples highlight the regional diversification of Green Sukuk applications.

⁵ *The Sovereign Green Sukuk: An Analysis of Its Process and Barriers to Funding Renewable Energy Projects in Indonesia*

⁶ *Accelerating Southeast Asia's Innovative Finance for SDGs: Indonesia's Pioneering Role*

⁷ *Green Sukuk Allocation and Impact Report 2023*

⁸ *DP World raises \$1.5 billion for decarbonization - Offshore Energy*

⁹ *was listed as the world's first benchmark corporate Green Sukuk and the first issued by a corporate in the Middle East.*

¹⁰ *DP World Green Sukuk Allocation and Impact Report*

¹¹ *Majid Al Futtaim Green Sukuk Case Study*

¹² *Islamic Development Bank Achieves New Milestone with Debut Green Sukuk Worth EUR 1 Billion for Green Financing in its Member Countries*

Governance And Legal Accountability

Green Sukuk offers stronger governance mechanisms than traditional green bonds due to their Shariah structure, that are:

- (a) asset-backed structure, where the funds are tied to specific, identifiable assets and adhere to the principles of risk-sharing, which can be strategically aligned with sustainable development goals (SDGs);
- (b) oversight by the Shariah advisory boards in respective jurisdictions, ensuring ethical and theological compliance; and
- (c) its ring-fencing mechanism by the creation of special purpose vehicles (SPVs), to isolate financial risks, raise capital and manage assets efficiently.

These features mitigate greenwashing risks and enhance investor trust.

Legal Recommendations For Expanding Green Sukuk

1. Develop Biodiversity Guidelines

Though we have not seen the planned Biodiversity Sukuk issued by the Government of Malaysia in the year 2024, in the near term, the agencies under the Government of Malaysia are recommended to publish clear criteria and indicators for biodiversity projects to facilitate their inclusion in the Green Sukuk frameworks. Certainty of eligibility will give confidence to the corporate sectors to participate under the guise of Public-Private Partnerships.

2. Enable Carbon Credit Integration

Governments should develop legal infrastructure to support carbon markets and allow Green Sukuk to finance carbon credit-generating projects such as sustainable forestry, carbon capture, utilisation and storage (CCUS) alongside energy-transition activity in the oil & gas sector. Carbon-credit projects often lack direct revenue streams, making them challenging to finance through Sukuk. However, the emergence of carbon markets and tradable carbon credits offers a potential solution. Green Sukuk could be structured to finance projects that generate carbon credits, creating new revenue models.

3. Promote Capacity Building

Creation of awareness by way of insights, campaigns, roadshows targeting issuers, investors, and Islamic Financial Institutions is essential to expand the market for capital-raising in ESG-related activities.

Conclusion

Green Sukuk is evolving from a niche instrument for solar energy into a multifaceted tool for sustainable development. Its legal frameworks are adapting to support diverse applications, including biodiversity conservation, climate adaptation, and sustainable agriculture.

By aligning Islamic finance principles with global sustainability goals, Green Sukuk offers a unique pathway to ethical and impactful investment. However, realising its full potential requires legal innovation, regulatory harmonisation, and market development. With the right legal infrastructure, Green Sukuk can mobilise billions toward a greener, more resilient future, while staying true to its ethical and faith-based foundations.

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