

# The Role of Islamic Finance in Sustainable and Green Transition

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## ABSTRACT

This study examines the role of Islamic finance in advancing the United Nations' Sustainable Development Goals (SDGs), focusing on often-overlooked conflicts among these goals, such as the tension between poverty alleviation (SDG 1), hunger eradication (SDG 2), and environmental sustainability. It emphasizes the need for balanced progress across SDGs, particularly in Muslim societies where welfare aligns with religious principles. The study advocates for a Green Economic Transition (GET) aimed at achieving high human development while respecting Maqasid Shariah and ecological limits. GET, it suggests, should be the core of climate-conscious policies and business strategies. Recognizing shifts in the global financial system to reconcile economic and social development with environmental goals, the study underscores the need for policies aligning these aspects. It also explores the contribution of Islamic economics and finance—including commercial finance (banking, takaful, Sukuk, Shariah-compliant equity markets) and social finance (Zakah, Waqf, charities, Qard)—in fostering sustainable green finance. Noting the gap where these tools are still tied to conventional finance, the study proposes a framework for developing coherent climate policies within Islamic finance and identifies opportunities for Islamic sustainable green finance.

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## 1. Introduction

The Friedman doctrine [1], a dominant paradigm in shareholders' capitalism holds that the social responsibility of a business is to increase its profits, thereby maximizing the company's value and encouraging optimal economic outcomes and overall economic development. However, the Tragedy of Commons warns that the pursuit of short-term interests, given the limited nature of natural resources, will ultimately lead to resource depletion and the potential downfall of shareholder capitalism [2]. This concern is amplified intensely in the Anthropocene era, where human actions

significantly impact the limited biocapacity of the earth [3]. Because our economic activities pose a threat to the environment, future generations, and biodiversity, there is a global shift towards the responsible use of non-renewable resources and the development of sustainable alternative energy [4]. This transition, guided by the United Nations' Sustainable Development Goals (SDGs) 2016-2030, sees the financial system playing a pivotal role [5]. As a result, traditional "shareholders' capitalism" is being challenged by a new "stakeholders' capitalism" paradigm, where Planet, People, and Profits (PPP) constitute the triple bottom line [6]. This shift is exemplified by the "Banking for Values" responsible banking paradigm and the rapidly gaining popularity of value-based intermediation (VBI) for Islamic banking [7].

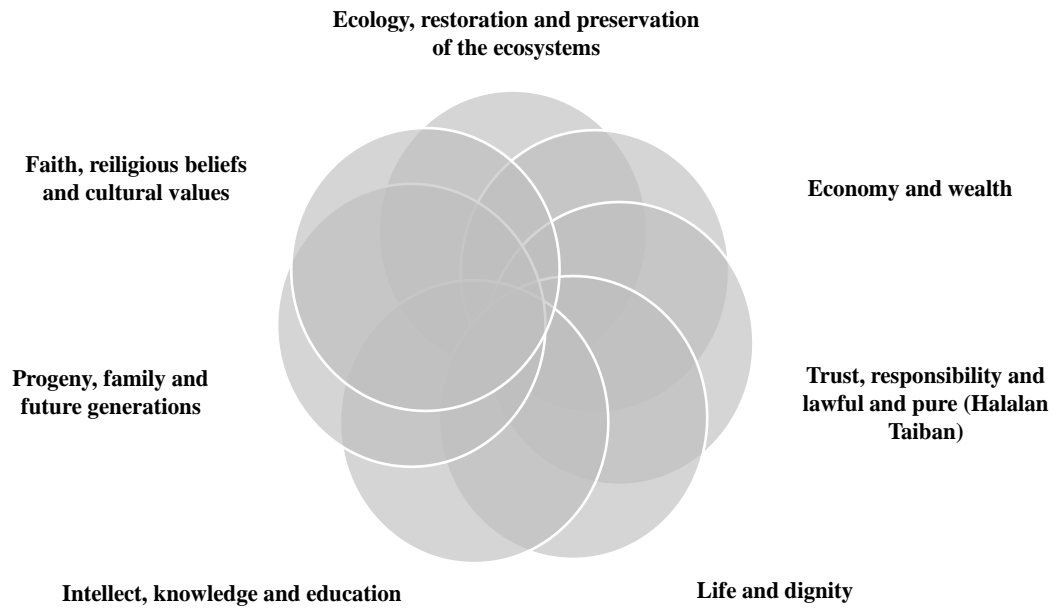
Islamic finance is founded on Islamic teachings and functions according to fundamental principles, including the stewardship of natural resources, the preservation of universal equilibrium, the prohibition of waste, and the encouragement of a balanced lifestyle [8]. These fundamental principles also forbid the financialization of borrowing and gambling, incorporate moral (shariah) screening as a core component of the governance system, and employ the Maqasid al-Shariah framework to enhance the welfare of current and future generations, the environment, and other species [9]. Based on these principles and concepts, the Islamic finance industry can contribute significantly to achieving sustainable goals. However, Islamic finance competes within the conventional markets and is regulated under the influence of the "path-dependent" conventional standards. The rapid development of the Islamic finance industry has made it one of the most important aspects to consider globally. According to the IFSB Stability Report 2021 [10], the total assets of the industry are estimated to be around USD 2.05 trillion.

The religious value of Islamic finance, which is also in line with SDGs, offers an excellent opportunity for this industry to accelerate its growth and sustainability and contribute to a greener world by combating climate change. The UN's 16 SDGs address three thematic areas and call for stakeholder collaboration [11]. However, there's a conflict between socio-economic and ecological-environmental aspects, with countries achieving high human development causing more significant environmental damage [12]. Without ensuring better quality of water and air, better health cannot be ensured, and without better health, poverty and hunger cannot be eliminated.

Therefore, aligning the SDGs and encouraging a healthy economy that can contribute to the planet's health is imperative. The post-Covid 19 recovery program offers an opportunity for a paradigm shift, where the business world helps build a healthy ecological environment [13]. Islamic economics and finance, as contained in its principles, can play a significant role in resolving this contradiction. Islamic financial services and products, such as Islamic banking [7], takaful [14], Sukuk [15], waqf [16], and charities [17], can contribute to sustainable green finance, making the world safer [18], [19], [20], [21]. This study, therefore, discovers the possible opportunities of Islamic sustainable green finance to gain better insight and supply recommendations for building a standard ecosystem for global Islamic green and sustainable finance. In addition, this study discusses how Islamic finance can help the world achieve greener and sustainable projects and what tools are available to do so.

### **1.1. Mapping of Maqasid Al Shariah and Sustainable Development Goals**

Sustainable development tackles challenges such as poverty, hunger, illiteracy, poor health, exclusion, and environmental issues [20]. Islamic scholars addressed the multidimensional nature of human development in the framework of Maqasid Al Shariah – preservation and uplifting of religion, life, intellect, progeny, and wealth [22]. In the contemporary context, the Maqasid Al Shariah can be discussed with different contextualizations as a framework for sustainable development, as summarized in Fig.1. The Maqasid Al Shariah as Framework for Sustainable Development.

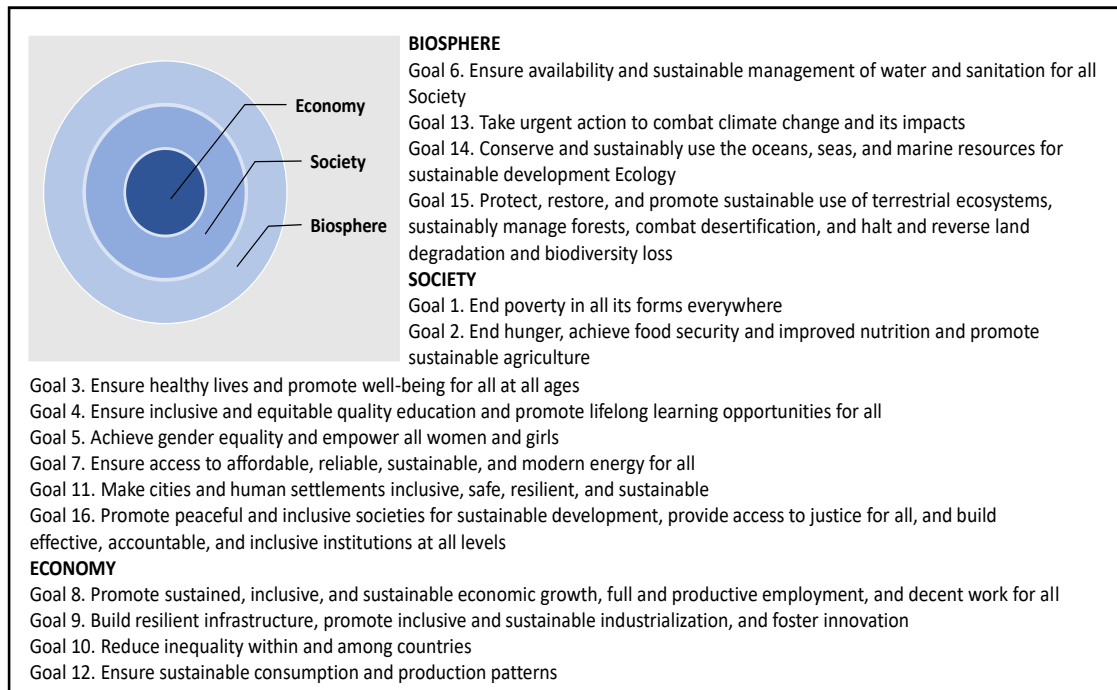


**Fig.1.** The Maqasid Al Shariah as Framework for Sustainable Development

The United Nations' Sustainable Development Goals (SDGs) for 2016-2030 aim to balance the well-being of the current generation with the security and welfare of future generations [23]. In

**Fig.1.** UN Sustainable Development Goals

We reorganized the 16 SDGs by categorizing them into three thematic groups: economics, social, biosphere, and ecological. These dimensions of sustainable development are interconnected. A thriving economy requires a happy and prosperous society, which depends on the quality of air, water, biodiversity, and the earth's biological regenerative capacity [24].



**Fig.1.** UN Sustainable Development Goals

**Table 1.** UN Sustainable Development Goals in relation to Maqasid Al-Shariah

No	SDGs	Maqasid Al-Shariah / SDGs				
		Faith	Life	Intellect	Posterity	Wealth
1	No Poverty	✓	✓		✓	✓
2	Zero Hunger		✓		✓	✓
3	Good Health & Well-being	✓	✓	✓	✓	✓
4	Quality Education	-	✓	✓	✓	✓
5	Gender Equality	-	✓	✓	-	✓
6	Clean Water Sanitation		✓		✓	
7	Affordable Clean Energy		✓	✓		
8	Decent Work Economic Growth		✓		✓	✓
9	Innovation Infrastructure	✓	✓	✓		✓
10	Reduced Inequalities		✓		✓	✓
11	Sustainable Cities Communities		✓		✓	✓
12	Responsible Consumption Production	✓	✓	✓	✓	✓
13	Climate Action	✓	✓			-
14	Life Below Water	✓	✓			✓
15	Life on Land	✓	✓			✓
16	Peace, Justice, Strong Institutions	✓	✓	✓	✓	✓
17	Partnership for Goals					

### 1.2. Do the Various SDGs Conflict With Each Other?

The Sustainable Development Goals (SDGs) are indeed contradictory, mainly grouped based on economic, social and ecological aspects [12]. The Human Development Index (HDI) and the Ecological Footprint (EF) often show a conflict [25]. Countries with high HDI usually have a high EF, while those with low HDI have a low EF [26]. Due to ongoing conflicts, countries are disrupting the balance of the earth's bio-sphere, giving rise to impacts known as “days that transcend national borders”. The earth has an annual bio-spheric regenerative capacity and each country must contribute to the regeneration of this capacity as much as the country uses the capacity annually in 365 days. For example, Qatar reaches its capacity on February 10, and Luxembourg on February 14. The 2022 data in Fig.2. reveals that most countries are significantly exceeding their capacity. The worrisome fact is that the country overshoot days are coming forward in the 365 days year meaning that as development takes place the negative burden of economic development on the earth's regenerative bio-spheric capacity becomes worst. This suggests a conflict between socio-economic development and ecological balance. This raises challenging questions about how to achieve the elimination of poverty and hunger without disturbing the environmental balance.

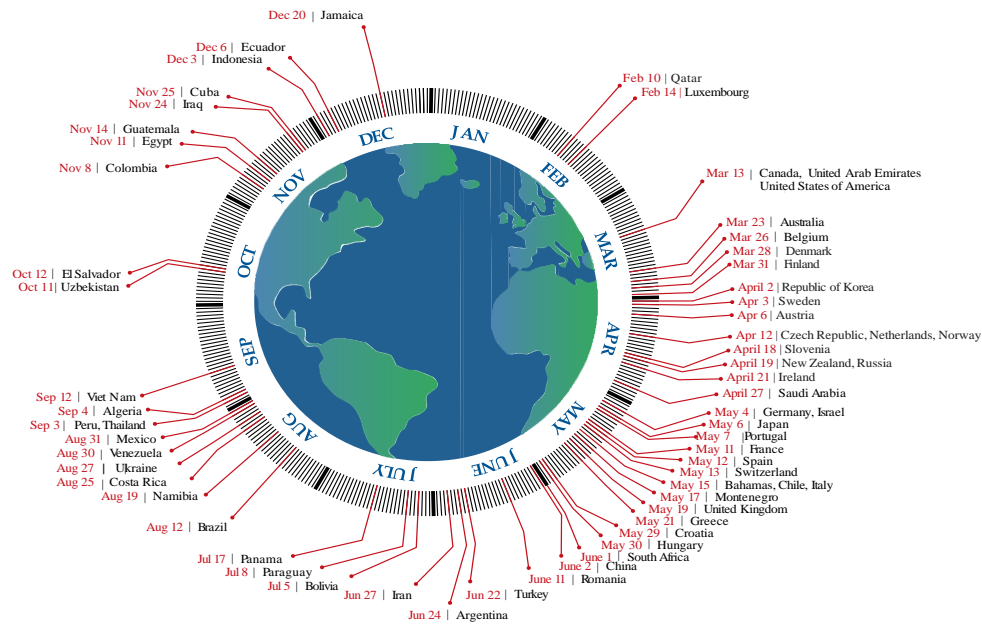


Fig.2. Country Bio-spheric Regenerative Capacities Exhaustion (Overshoot) Days 2022 [27]

### 1.3. Prospects of Green Economic Transformation (GET)

Green Economic Transformation (GET) often defined as the achievement of a high Human Development Index (HDI) (0.8 to 1.0) by a country within the ecological capacity of one earth. Based on data collected by Global Footprint Network [28], the world's average HDI is low at 0.73, and the Ecological Footprint (EF) is 2.75, exceeding the capacity of one earth. The goal for all countries is to reduce the EF to one earth's capacity while simultaneously achieving a high HDI. Indeed, it is challenging for the developed countries to reduce their respective country EF levels while maintaining high HDI and for the less developed countries to remain with the one earth level EF and achieve HDI. The IPCC report summarizes the narrow window of opportunities to achieve the desired GET [29], and we reproduce it in Fig.3. and Fig.4.

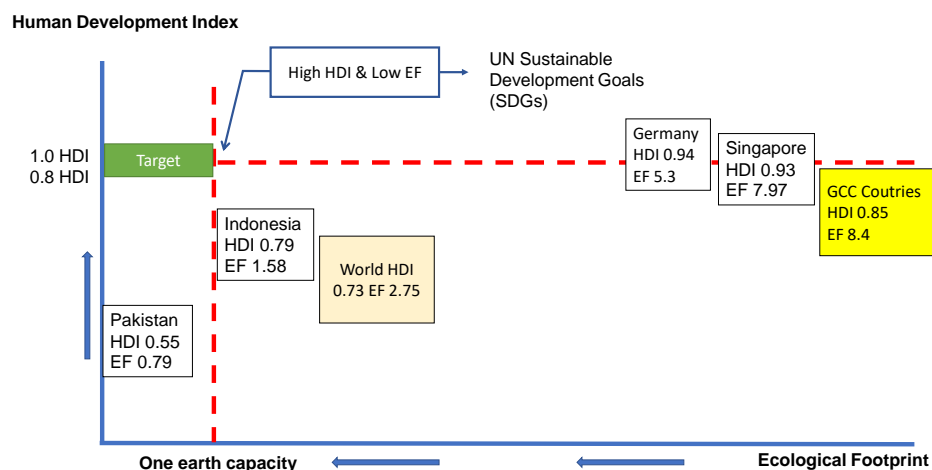


Fig.3. Green Economic Transformation [28]

What we termed above as the GET is now known as climate resilient development (CRD) according to the IPCC [29]. Fig.5. outlines climate resilient development pathways, their prerequisites, and non-climate resilient development pathways along with their potential causes. Preconditions that facilitate climate-resilient development must be encouraged through policy, while factors that cause non-resilient development must be avoided. In Fig.4, further extracted what needs to be encouraged

and what needs to be discouraged and prevented through a robust policy landscape with different stakeholders involved and multidisciplinary approaches adopted. The financial services sector indeed plays a crucial role in what needs to be encouraged and what needs to be discouraged to ensure the desired GET (climate resilient economic development).

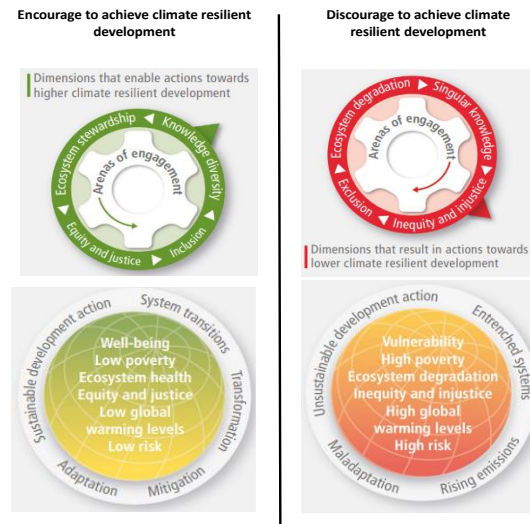


Fig.4. What to encourage and discourage to achieve GET (climate resilient development)? [29]

### There is a rapidly narrowing window of opportunity to enable Climate Resilient Development

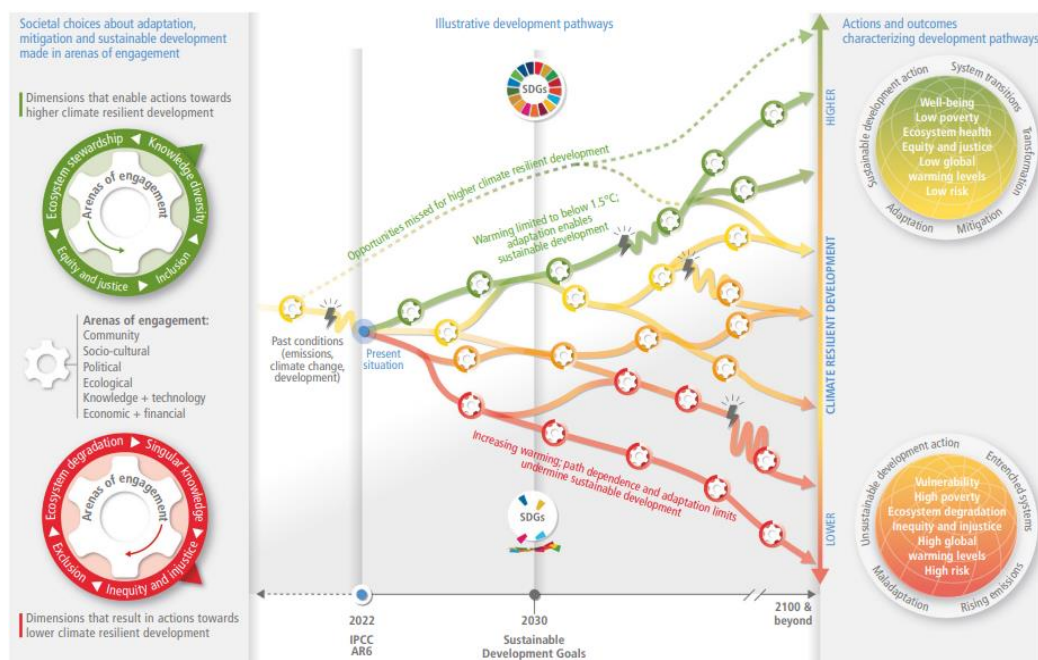


Fig.5. The narrow windows of opportunities for GET and policy options [29]

## 2. Method

This study employs an exploratory approach to examine the role of Islamic finance in green and sustainable development. We utilize two essential methods: policy analysis and journal reviews. Policy analysis is critical for assessing the alignment of existing regulations and initiatives with the principles of Islamic finance, particularly in the context of climate change and sustainable development. By analyzing recent policies, we aim to identify gaps, challenges, and areas for improvement, which will inform recommendations for creating a global Islamic green financial

ecosystem. This method helps to bridge the connection between Islamic financial principles and practical regulatory efforts.

Literature assessment is crucial for understanding academic discussions about Islamic finance and sustainability. Analyzing previous research and scholarly articles can provide theoretical insights that help us understand the practical challenges identified through policy analysis. This approach allows for a comprehensive understanding of Islamic green finance's practical and theoretical aspects. Through content analysis of these sources, we can identify key themes and trends that shape the current landscape and the potential for growth in sustainable Islamic finance.

### 3. Results and Discussion

#### 3.1. Green Economic Transformation and the Paradigm Shift

The conflict between the Sustainable Development Goals (SDGs) from the dominant capitalist economic paradigm, known as the shareholders' paradigm, has the following features:

- The economy is separated from the society and the ecology. As a result, waste, emissions, loss of biodiversity, and the earth's biocapacity are treated as mere concerns of externality. This approach fails to recognize that all economic activities depend on the Earth's limited and exhaustible natural assets and resources. A thriving economy requires a healthy ecological environment and population.
- Interest-based financial systems and financialization prioritize short-term consequences over long-term ones in cash flow analysis and investment decision-making. Hence, the markets incentivize resource allocation in the economy to ignore long-term and intergenerational considerations, including healthy biospheres.
- Traditional financial architecture (financial reporting and prudential supervision) and its services cater to financial development and stability with a short-term oriented paradigm. The financial architecture is rapidly transforming to correct historical misjudgements and misleading policy prescriptions.

A new paradigm, known as the stakeholders' paradigm, is based on People (society), Planet (ecology), and Profit (shareholders) - the triple bottom line [30]. This paradigm is taking shape in various forms like SDGs, Environmental, Social, and Governance (ESGs) [31], circular economy [32], regenerative economy [33], etc. The circular economy paradigm is being adopted as the core paradigm in several strategies of green economic transformation, like the European Green Deal [34].

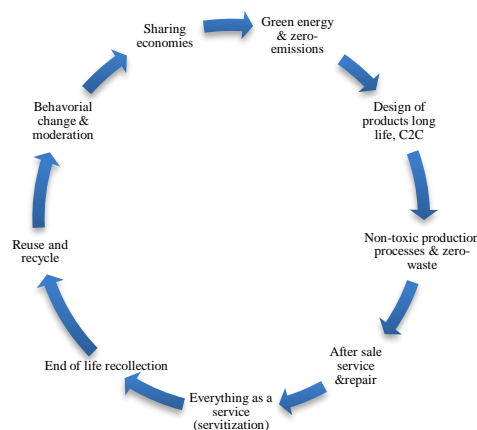


Fig.6. Green business models of circular economy [21]

The essential departure of the new paradigm from the dominant capitalistic paradigm is to emphasize producers' and consumers' responsibilities and internalize negative externalities through an altruistic change at the level of individuals, households, firms, and public sector organizations. The utilization of technology is expected to facilitate the implementation of the new paradigm where

waste, emissions, and biodiversity loss could be minimized. The main expectations from the various participants in the markets are practices such as refusing harmful practices, reducing waste, refurbishing, reusing, recycling, relying on green energy, promoting sharing economy solutions, adopting new technologies, implementing green production processes, providing after-sale service and repair, offering a product as a service, establishing circular supply chains, encouraging industrial symbiosis, setting producers' responsibilities, and setting financial and social taxonomies.

In terms of financing, if there are net positive externalities, then the financing is regenerative, which is the ideal in Islamic financing. For example, in 2021, Chilean cherry growers airlifted 320k tons of cherries to China and earned USD 2.5 billion. This shipment, however, caused enormous emissions, depleting the common global public good - the climate. Similarly, all commodities have carbon intensities [35]. Manufactured products using cheap coal-powered energy and shipped worldwide have even more negative implications for climate justice [36]. These are examples of degenerative businesses. All stakeholders – banks, insurance companies, owners, lenders, airlines, consumers, and, more importantly, law, policy, and regulatory framework makers are responsible. Islamic financial institutions and services are not exempt from these responsibilities.

### 3.2. Transforming International Financial Architecture

There's an important two-way relationship between financial services and climate change – financial services contribute to global warming, negatively impacting financial services. This relationship is depicted in Fig.7 shows the channels of transmission of climate related risks to the financial system. In Table 2 We further elaborate on this point and address how the key stakeholders of financial services impact climate change and how climate change impacts the key stakeholders of financial services.

Table 2. UN Sustainable Development Goals

SN	Key Players	Impact on Climate Change	Impact of Climate Change
1	Banks	<ul style="list-style-type: none"> <li>Finance carbon intensive operations</li> <li>Promote consumerism and waste</li> <li>Carbon intensive operational environment</li> </ul>	<ul style="list-style-type: none"> <li>Increased operational, credit, and liquidity risks</li> <li>Physical damage from climate events</li> </ul>
2	Insurance Companies	<ul style="list-style-type: none"> <li>Cover carbon intensive businesses</li> <li>Invest in carbon intensive markets</li> <li>Carbon-intensive working environment</li> </ul>	<ul style="list-style-type: none"> <li>Increased operational, credit, and liquidity risks</li> <li>Damage to assets from climate events</li> </ul>
3	Bonds Issuers	<ul style="list-style-type: none"> <li>Majority bonds market is carbon-intensive</li> </ul>	<ul style="list-style-type: none"> <li>Increased liquidity, operational, credit, and transition risks</li> </ul>
4	Equity Markets	<ul style="list-style-type: none"> <li>Ownership of carbon-intensive businesses</li> </ul>	<ul style="list-style-type: none"> <li>Short-term cash flow maximization can lead to negative externalities</li> <li>Recognition of ESG principles for sustainability</li> </ul>
5	Asset Managers	<ul style="list-style-type: none"> <li>Invest in carbon-intensive assets</li> </ul>	<ul style="list-style-type: none"> <li>Expectation to consider ESG concerns</li> </ul>
6	Central Bank Reserve Managers	<ul style="list-style-type: none"> <li>Invest in carbon-intensive assets</li> </ul>	<ul style="list-style-type: none"> <li>Growing recognition of climate change's impact on financial services</li> </ul>

- |   |                                       |   |  |
|---|---------------------------------------|---|--|
| 7 | Multilateral Development Banks (MDBs) | <ul style="list-style-type: none"> <li>• Operations could have a negative environmental impact</li> </ul>                             | <ul style="list-style-type: none"> <li>• Engaging in climate-resilient development, historically mixed attitude</li> </ul> |
| 8 | International Monetary Fund (IMF)     | <ul style="list-style-type: none"> <li>• Historically focused on financial stability, now recognizing climate implications</li> </ul> | <ul style="list-style-type: none"> <li>• Expected future assessments to address climate impact</li> </ul>                  |

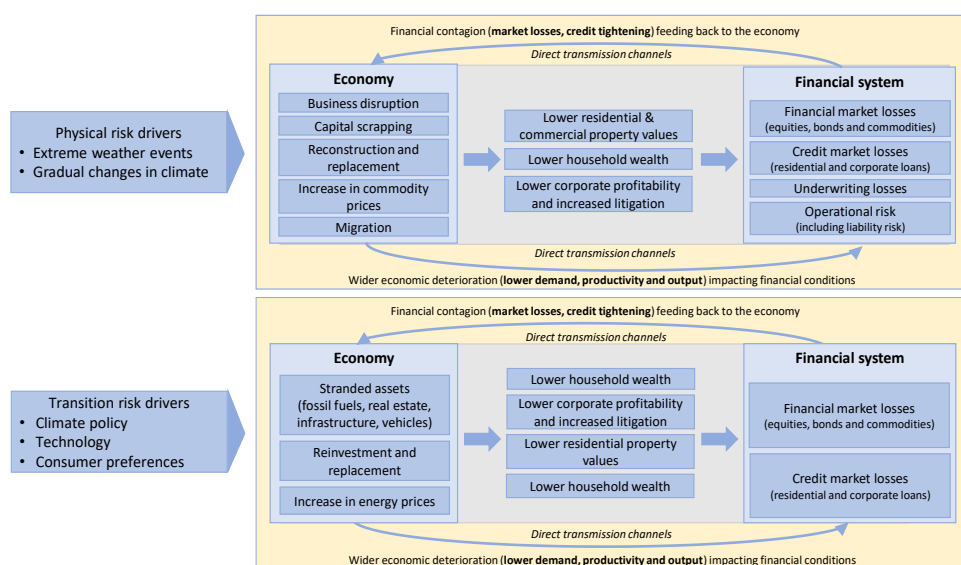


Fig.7. Transition of Climate Related Risks to Financial Systems [37]

### 3.3. Transforming Financial Architecture and Infrastructures

The financial services industry operates within national jurisdictions in the global financial system, adhering to internationally recognized practices and norms. At the international level, the financial architecture comprises several critical elements, including:

- Universal Moral, ethical, and legal norms and practices of conducting business,
- Best practice standards (capital adequacy, transparency, governance, and supervision,
- Objectives of Financial Architecture and
- International institutions (functions and coordination) – BIS, IMF, FSB, and WB.

At the national level of each country and authority, a set of support infrastructures is needed to implement the international architecture. These support requirements are:

- Legal and regulatory infrastructure
- Transparency and governance infrastructure
- Systemic liquidity infrastructure
- Human resources and R&D infrastructure

These architectures and infrastructures are transforming rapidly as summarized in

Table 3,

Table 4, and

Table 5. In Islamic finance, Malaysia has introduced the Value-Based Intermediation (VBI) initiative for Islamic banks and a climate risk framework for all banks. Initial efforts have been made in Indonesia and Malaysia to issue green Sukuk [38], [39]. However, the overall response of Islamic finance to the rapidly transforming financial architecture and infrastructures has been slow.

Table 3. The transforming global financial architecture for green transition

Pillars	Traditional	Emerging	Response to Conventional Finance	Response to Islamic Finance
Business Norms	Universal moral, ethical, and legal norms	PRI, GCP, PRB, PSI, ESG, SDGs	4253 PRI signatories; 240 banks adopted PRBs	Malaysia's VBI; Limited response outside Malaysia
Standards	Best practice standards	GIR, Sustainability Reporting, SDGs, VBI Reporting	1600 companies using GRI; Sustainability reporting required in 70 countries	OIC Fiqh Academy resolution; Limited engagement from IFSB, AAOIFI, IIFM, IILM
Objectives	Financial Development, Stability, Inclusion	Environmental Sustainability, ESG compliance, Achieving SDGs	Inclusive, sustainable, eco-friendly processes; Aim for net-zero emissions by 2050	Shariah compliance; Emphasis on Maqasid and financial inclusion
Institutions	UN Institutions, BIS, IMF, WB, FSB	BIS programs, Climate change focus groups, IMF and WB disclosures in FSAP, NGFS	Addressing climate-related risks; NGFS established	Sustainability Sukuk program; Passive engagement from IFSB and AAOIFI

Source: Authors' compilation

Table 4. Transforming national financial infrastructures for green transition

Traditional Pillars	Extended elements of Pillars	Emerging responses to climate change	Status of Islamic Finance
Legal and Regulatory Infrastructure	Regulatory and supervisory regimes cover banking and corporate laws, contracts, property rights, bankruptcy, creditor rights, and financial safety nets.	Major regulators and central banks, such as the EU, ECB, UK, USA, Canada, and others, have made regulatory changes to address climate change concerns. The European Green Deal and EU Taxonomy require financial institutions and businesses to adhere to strict sustainability guidelines. Similar guidelines are being increasingly applied in other jurisdictions for	In Islamic finance, Malaysia has introduced a pioneering initiative called value-based intermediation, guided by Maqasid Al Shariah. Fourteen Islamic banks have voluntarily adopted this framework and are adhering to it. Additionally,
Transparency and Governance Infrastructure	Transparency and neutrality in monetary and financial policy, corporate governance framework, accounting and auditing standards, disclosure requirements, market monitoring systems, and credit ratings and reporting.		
Systemic Liquidity Infrastructure	This refers to the microstructure of the financial markets, including the money, exchange, and securities markets, as well as activities related to monetary and exchange transactions, payment		

	and securities settlement systems, and the intricate details of the functioning of the money, exchange, and securities markets.	sustainability disclosures. Organizations like BIS, NGFS, BCBS are addressing the physical and transition risks of climate change. Rating agencies are also recognizing climate risk exposure more frequently.	Malaysia has made a climate risk framework mandatory for all financial institutions. There is a small segment of green Sukuk, and capital markets authorities are slowly discussing ESG (Environmental, Social, and Governance) concerns, even though existing Shariah screening methodologies do not address these concerns.
Human Resources and R&D Infrastructure	Services available include literacy, education, training, certification programs, research, advisory services, product creation, Shariah governance competencies, and information services.	Additionally, there is an increasing application of the Integrated Reporting framework by financial institutions. Discussions and dialogues among regulators and policymakers regarding fiscal and monetary policy response to climate change are ongoing.	
Shariah Governance Infrastructure	Shariah supervision includes legal protection, an arbitration and reconciliation framework, Shariah governance, a central Shariah advisory board, and licensing of Islamic financial services.		

**Table 5.** Islamic Financial Architecture and Infrastructures for Green Transformation

International Mode of Contribution to Islamic Finance and New Directions to Financial Institutions Address Climate Change			
Institution		Role	New Directions
Islamic Development Bank (IsDB)		TA, equity stake, policy support, infrastructure, and architecture development	Introduced climate policy framework, sustainable Sukuk program, research, training, and policy support
Islamic Research and Training Institute (IRTI)		Research, training, advisory, and information services for Sharia economics and finance	Opportunities to lead policy dialogue in transitioning to green economies
Islamic Corporation for the Insurance of Investment and Export Credit (ICIEC)		Facilitates trade and investment between member countries through Sharia-compliant risk mitigation tools	Opportunities to align operations with IsDB climate policy
Islamic Corporation for the Development of the Private Sector (ICD)		Fosters sustainable economic growth in member countries by financing private sector investment, mobilizing capital, and providing advisory services	Opportunities to align operations with IsDB climate policy
International Islamic Trade Finance Corporation (ITFC)		Advances trade among OIC Member Countries, contributing to improving socioeconomic conditions	Faces risks from energy transition from fossil fuels to clean energy; needs a

		strategy to overcome challenges
OIC Fiqh Academy (CHIC-FA)	Shariah's guidance on contemporary issues	Mobilize opinions of scholars for climate remediation
Statistical, Economic and Social Research and Training Centre for Islamic Countries (SESRIC)	Information processing, data management, cooperation, and training	Integrate climate remediation in all activities
Standing Committee for Economic and Commercial Cooperation of the Organization of the Islamic Cooperation (COMCEC)	Enhancing policy dialogue, coordination, and cooperation	Bring climate remediation to the center of policy dialogue
Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI)	Standard setting, product development, training	Integrate Maqasid-based integrated standards in accounting, auditing, and Shariah standards.
International Islamic Financial Market (IIFM)	Financial markets product development and training	Prepare standards for sustainable Sukuk and integrate ESC concerns
General Council of Islamic Banks and Financial Institutions (CIBAFI)	Product development, training, advocacy, research	Engage in climate remediation and develop futuristic initiatives
International Islamic Rating Agency (IIRA)	Rating services	Integrate sustainability in its rating methodology
Islamic Financial Services Board (IFSB)	Standard setting, policy convening, training	Extend its work to cover climate-related concerns
International Islamic Centre for Reconciliation and Commercial Arbitration (IICRACA)	Dispute resolution	Address environment-related disputes
International Islamic Liquidity Management Corporation (IILM)	Liquidity support	Utilize sustainable Sukuk in its work

Source: [21]

### 3.4. Responsible Finance and Islamic Finance

#### a) Principles of Responsible Finance

The United Nations Environmental Program Finance Initiative [40] promotes responsible financial services through the Principles of Responsible Investments (PRIs) Table 6 Principles of Responsible Banking (PRBs) Source: [41]

Table 7, and Principles of Sustainable Insurance (PSI) Source: [42]

Table 8. These principles are transforming global financial services. However, only a few Islamic financial institutions have adopted them. Bank Negara Malaysia has initiated a value-based intermediation initiative, and CIBAFI has Sustainability Guidelines for Islamic Banks.

Table 6. Principles of Responsible Investments

Principle 1	We will incorporate ESG issues into investment analysis and decision-making processes.
Principle 2	We will be active owners and incorporate ESG issues into our policies and practices.
Principle 3	We will seek appropriate disclosure on ESG issues by the entities in which we invest
Principle 4	We will promote acceptance and implementation of the principles within the investment industry.

Principle 5	We will work together to enhance our effectiveness in implementing the principles.
Principle 6	We will each report on our activities and progress towards implementing the principles

Source: [41]

**Table 7.** Principles of Responsible Banking

Principle 1	Alignment: We will align our business strategy to be consistent with and contribute to individuals' needs and society's goals, as expressed in the Sustainable Development Goals, the Paris Climate Agreement, and relevant national and regional frameworks.
Principle 2	Impact and Target Setting: We will continuously increase our positive impacts while reducing the negative impacts on and managing the risks to people and the environment resulting from our activities, products, and services. To this end, we will set and publish targets where we can have the most significant impacts.
Principle 3	Clients and Customers: We will work responsibly with our clients and our customers to encourage sustainable practices and enable economic activities that create shared prosperity for current and future generations.
Principle 4	Stakeholders: We will proactively and responsibly consult, engage and partner with relevant stakeholders to achieve society's goals.
Principle 5	Governance and Culture: We will implement our commitment to these Principles through effective governance and a culture of responsible banking.
Principle 6	Transparency and Accountability: We will periodically review our individual and collective implementation of these Principles and be transparent about and accountable for our positive and negative impacts and our contribution to society's goals.

Source: [42]

**Table 8.** Principles of Responsible Insurance

Principle 1	We will embed in our decision-making environmental, social, and governance issues relevant to our insurance business.
Principle 2	We will work together with our clients and business partners to raise awareness of environmental, social, and governance issues, manage risk, and develop solutions.
Principle 3	We will work together with governments, regulators, and other key stakeholders to promote widespread action across society on environmental, social, and governance issues.
Principle 4	We will demonstrate accountability and transparency in regularly disclosing publicly our progress in implementing the principles.

Source: [43]

### 3.5. Islamic Finance and Sustainability

**Table 9.** Size of Islamic financial services by regions and segments

Region	Islamic Banking Assets	Sukuk Outstanding	Islamic Funds Assets	Takaful Contributions	Total	Share %
GCC	979.7	280.4	46.3	12.3	1318.7	48.9
South-East Asia (SEA)	258.2	366.4	41.9	4.1	670.6	24.9
Middle East & South Asia	499.0	18.9	22.8	5.5	546.2	20.3
Africa	43.1	1.7	1.5	0.6	46.9	1.7
Others	61.8	22.1	31.3	0.6	115.8	4.3
Total	1841.8	689.5	143.8	23.1	2698.2	100.0
Share %	68.3	25.6	5.3	0.9	100.00	

Source: [10]

a) Is Islamic *Finance Sustainable*?

Because of reoccurring financial instabilities like the 2008-2009 global financial crises, whenever the question of sustainability is raised in Islamic finance, it refers to the connotation of banking and financial system stability. However, our discussion is related to environmental, social, and governance sustainability and the role of Islamic finance in achieving climate-resilient economic development or green economic transformation, as we call the process.

Some of the basic principles of Islamic finance are as follows [44]:

- i. Human beings are Allah's trustee on earth; Allah is the Ultimate owner of the earth and its resources, and man only uses the resources as His trustee and, therefore, must take good care of the resources with great responsibility.
- ii. As Allah's trustee, man must establish and keep the al-Meezan (the universal balance) and remove all activities and transactions, including emissions and pollution, from the path of the natural laws so as not to transgress the universal balance.
- iii. Israaf (waste) and tabzeer (extravagance) are strictly forbidden and are preferred to be zero.
- iv. A balanced way of life (Wassatiyah) is strongly recommended in all aspects of life, including business, consumption, and use of resources.
- v. Riba (commercialization and financialization of lending) and gambling are forbidden.
- vi. Moral (Shariah) screening is fully adopted by financial institutions and other entities as an integral part of the governance system.
- vii. Al Adel wal Ihsan are the norms of the social and legal system that maintain harmony, solidarity, justice, and brotherhood.
- viii. The Maqasid al-Shariah provides a framework that integrates religion, life, intellect, family, wealth, and the ecological environment to improve the conditions of the present generation of people, their future generations, the ecological environment, and other species.

These principles of Islamic economics and finance inspire the discipline and make it balanced, sustainable, and inclusive. If these principles are implemented, sustainable, inclusive, and climate-resilient economic development will be ensured. However, the practices of Islamic financial institutions are influenced by the market, technological, and regulatory environment, the paradigm and measure of success used in businesses, and the actual implementation of the above principles in the business models and practices.

The pandemic has underscored the importance of Islamic social finance, with efforts by Indonesia and Malaysia leading the way in integrating climate and environmental sustainability issues into waqf [45]. Waqf-driven green transformation initiatives are the focus of some academic conferences, webinars, and academic publications. Saudi Arabia's sovereign wealth fund is at the forefront of a potential global shift towards sustainable finance, developing an ESG framework [46]. The education sector is now trying to catch up by incorporating sustainable finance into academic curricula and encouraging discussions through webinars. In the world of technology, initiatives such as FinTech leverage blockchain and other technologies to focus on sustainability. However, the neutrality of Islamic finance contracts raises regulatory and legal challenges, indicating the need for sharia audits to curb the financing of carbon-intensive businesses [47].

Just like their conventional services, Islamic financial services are expected to be carbon-intensive due to their involvement in these sectors such as construction, transportation, and industry. However, several Islamic banks are trying hard to reduce their carbon footprint. Bank Negara Malaysia [48], for example, are adopting value-based intermediation, while others like Islamic Bank Bangladesh Limited, Minn Bali Pakistan, and Al Barakah Bahrain are taking voluntary steps to offset their carbon footprint. All AAOIFI and IFSB standards do not address the issue of carbon intensity in financing because these standards are adapted from IFRS and BCBS, respectively. Islamic banks, Takaful companies, and fund managers stand to gain from initiatives like the Malaysian VIII and the Indonesian mandatory sustainability reporting. The IsDB is paving the way in mainstreaming

sustainability Sukuk, serving as a beacon for other entities issuing Sukuk. This progress signals a promising future for Islamic finance in sustainability.

b) *Recent initiatives to make Islamic banking more sustainable*

a) CIBAFI Sustainability Guidelines

The General Council of Islamic Banks and Financial Institutions has issued its Sustainability Guidelines for Islamic Banks, comprising five principles. The guidelines are based on Maqasid Al Shariah, with special mention of environmental and social concerns, and aim to enhance Islamic banks' role in promoting climate-resilient and inclusive economic development. Since the guidelines were issued in April 2022, it is too early to comment on Islamic banks' response.

**Table 10.** CIBAFI Sustainability Focus Areas for Islamic Banks Sustainability

Sustainability Focus Areas	Sustainability Targets
Climate Action	<ul style="list-style-type: none"> <li>• Align the Bank's financing portfolio with the goals of the Paris Agreement.</li> <li>• Promote energy efficiency financings.</li> <li>• Promote responsible business practices such as zero-waste, zero-emissions, community impact, etc.</li> <li>• Develop green financial products such as green home financing, green cards, etc.</li> <li>• Issue green and SRI Sukuk.</li> <li>• Incorporate environmental due diligence into the lending process.</li> </ul>
Reduced Inequalities	<ul style="list-style-type: none"> <li>• Expand Islamic social financing to support low-income communities and promote financial inclusion.</li> <li>• Invest in projects targeting the education sector.</li> </ul>
Clean Water and Sanitation	<ul style="list-style-type: none"> <li>• Allocate a percentage of the Bank's financings to clean water and sanitation projects.</li> </ul>
Women's Economic Empowerment	<ul style="list-style-type: none"> <li>• Support women's economic empowerment projects.</li> <li>• Support financial literacy programs for women entrepreneurs.</li> </ul>

Source: [49]

b) VBI Guidelines

In 2018, the Central Bank Malaysia issued the Maqasid Al Shariah-driven value-based intermediation (VBI) framework for Islamic banks. The framework encourages Islamic banks to voluntarily adopt the Sustainable Finance paradigm of People-Planet-Profits (triple bottom line) in their business conduct [48]. Fig.8. Summarizes the VBI framework covering four key underlying thrusts, three areas for improvement in banking practice, and five areas of outcomes and stakeholders and their roles.

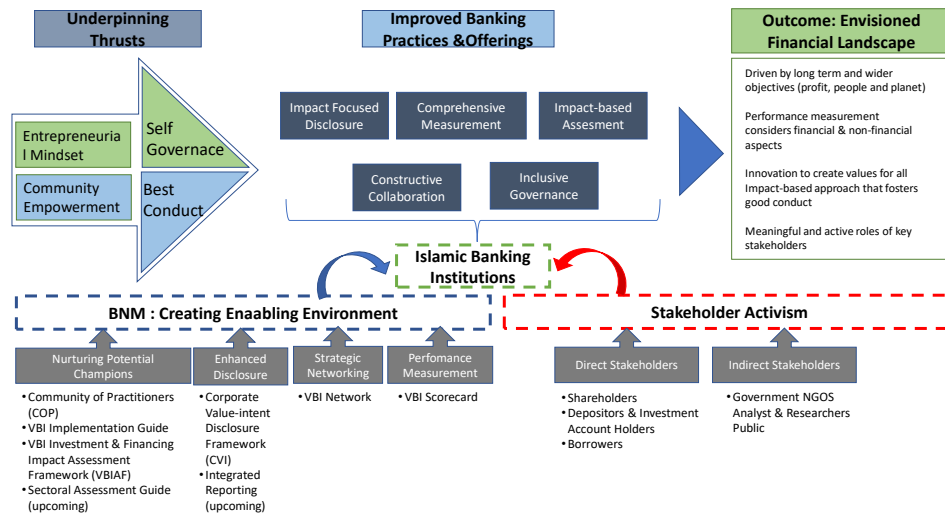


Fig.8. Value-Based Intermediation Framework [48]

### c) Islamic Capital Markets and Sustainability

The Shariah screening of investments in private and publicly listed companies represents a significant aspect of Islamic financial services. Dow Jones Islamic Market Indexes is one representative Shariah screening methodology. Accordingly, the following negative screening process is adopted to select companies for Shariah-compliant investments. This involves two steps:

**Step 1:** Non-permissible companies, such as those providing conventional financial services, supplying impermissible goods and services, and opposing humanitarian causes and human rights, are screened out.

**Step 2:** Companies are excluded if they meet the following criteria:

- More than 33% of their funding comes from debt.
- More than 33% of their assets are cash and interest-bearing securities.
- More than 33% of their assets are accounts receivables.
- More than 5% of their income is non-permissible.

Companies that pass this screening are considered suitable for Shariah-compliant investments. However, environmental, social, and governance (ESG) concerns are not a part of this screening. Neither the screening methodology is considering Maqasid Al Shariah perspectives. Therefore, a major opportunity is to integrate Shariah screening and ESG screening. Accordingly, once the companies are short-listed using the negative Shariah screening, the same companies can be short-listed further based on Maqasid Al Shariah and ESG concerns. In the Shariah-compliant list, some companies could be preferable to others from the sustainability perspective. Those investment opportunities, if taken, will support climate-resilient and inclusive transformation of businesses and economies.

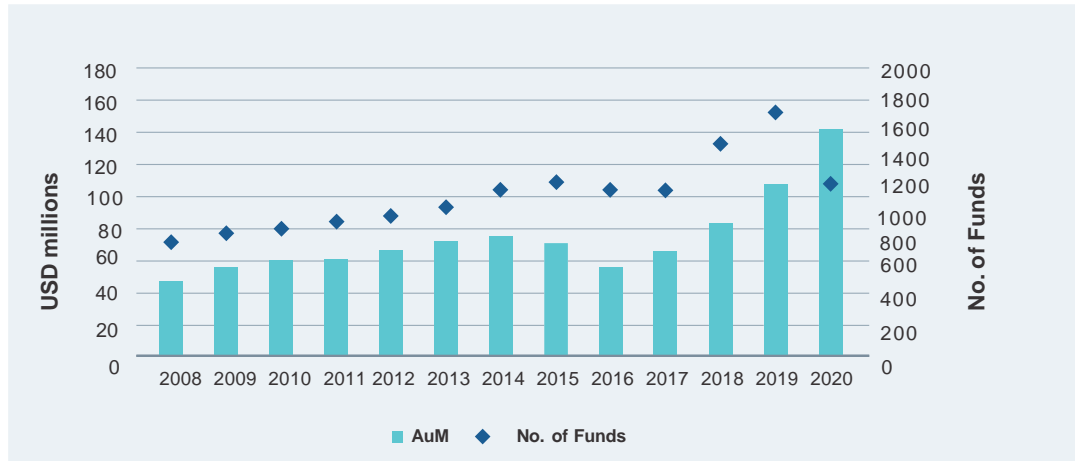


Fig.9. Islamic mutual funds numbers and \$ amount in millions [10]

#### d) Proposed Sustainable Ijarah Sukuk Structure

This proposed structure integrates green finance principles, bolstering climate resilience and fostering inclusive development. Aligning with the Sustainable Development Goals (SDGs) promotes a sustainable and prosperous future for all stakeholders. Other crucial initiatives, such as Green Islamic social and blended finance and the green digital transformation of Islamic finance, play pivotal roles in fortifying the Islamic finance sector. These efforts collectively contribute to green economic transformation and the realization of SDGs, ensuring a climate-resilient and inclusive development path.

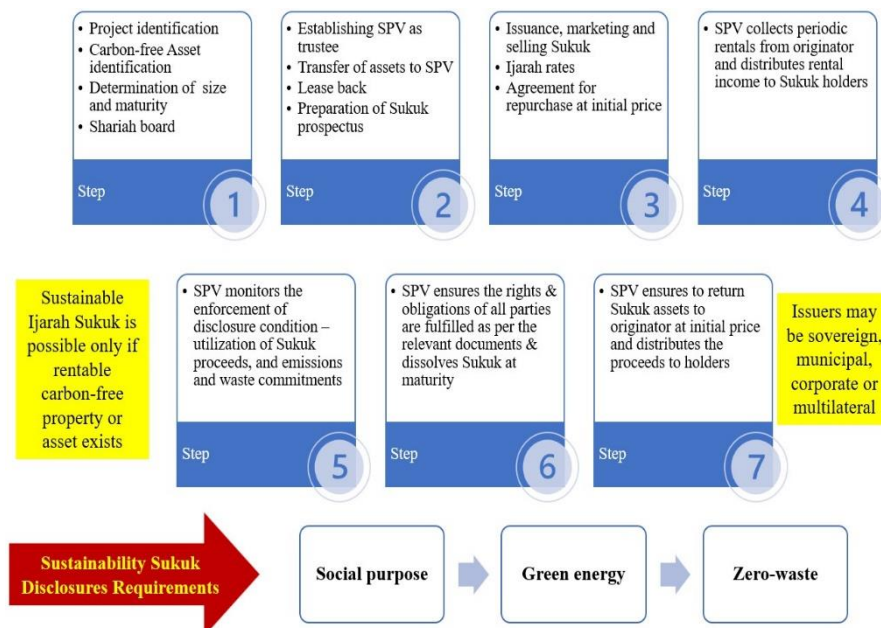


Fig.10. Sustainability Sukuk Ijarah (Class Material)

## 4. Conclusion

Islamic finance has a unique opportunity to contribute to SDGs and green projects. The growing demand for ethical and Shariah-compliant green investments has allowed Islamic finance to become a major player in the global financial system. It serves as both a guideline and a structure for a socially responsible and long-term financial system.

Regarding Islamic finance's role in the green transition, there are still areas for research. The international financial architecture and national financial infrastructure are changing rapidly with a

particular focus on the role of financial services and companies in addressing global warming and meeting the goals of the Paris Agreement. Islamic economics and finance were founded on the principle of responsibility, and there is a shift towards greater accountability within the existing legal and regulatory framework. The role of Islamic financial architecture and infrastructure in this discussion is crucial. Islamic finance is a relatively small part of the global financial infrastructure and cannot be developed in isolation. The country must adapt quickly and collaboratively to changing global climate policies and disruptive opportunities. The need to reorganize sharia governance, teaching programs, research and product development is an important part of financial infrastructure, and aspects of Islamic economics and finance.

The most major institutions of Islamic financial architecture and infrastructure, the IFSB and AAOIFI, have yet to respond to changes within their respective mandates. Climate-related risks and governance disclosures are the focus of the IFSB, while integrated reporting and integration are the focus of the AAOIFI. Some of the most influential national institutions, including BNM and OJK, have launched broad national strategic initiatives to address climate change-related commitments. Meanwhile, the IsDB has taken significant steps in climate policy and response to the SDGs. Increasing the focus on climate change in the IsDB scholarship program is one of many positive efforts. The enhanced focus on climate change in the IsDB scholarship program is one of numerous positive efforts.

The upgrading of these publications will facilitate discussion on member nations' transition to green economies and the critical role of Islamic economics and finance in this process. There is a long list of organizations that assist Islamic finance's design and infrastructure. However, Islamic social finance elements such as Awqaf can contribute to green transitioning, but they have no integrated global presence for now. To overcome this, a global association must be set up for Awqaf to tap its potent role in attaining global SDGs and green transitioning.

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