

## **Building Capacity for Green Economy: The Role of Islamic Finance**

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### **Abstract**

The subject of ethics has been widely debated in Islamic finance reflecting the importance of ethical considerations in environmental management. In recent decades, rapid growth in population, urbanisation, energy consumption and per capita income have increased the demand for natural resources causing substantial damage to the ecosystem. Sustainable development is concerned with human capabilities to manage natural resources so as to protect the environment and ensure future survival. Project funding by banks could strengthen guidelines for protecting the environment through

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investment in green or ethical projects. Ethical investments reduce the risk of environmental degradation by selecting green projects, including green technologies, suitable for the indigenous environment. Compliance with Islamic principles restricts Islamic financial institutions from financing enterprises that cause negative externalities. To this end, ethical investments should be integrated into the banking credit decision criteria to ensure that environmental protection is given priority in business decision-making. The paper maintains that investment in green projects represents new opportunities for Islamic banks to play an important role in sustaining development and responding to the challenges facing people worldwide.

**Keywords**

Environment, Islamic finance, ethical investment, *sukūk*, sustainable development.

*We do not inherit the earth from our fathers; we borrow it from our children.*

– Inuit saying

**Introduction**

Green investment has been widely circulated in environmental studies in recent years to increase awareness about environmental management and sustainable development. Recent global trends have shown substantial increase in consumption of natural resources, in particular nonrenewable resources, to meet rising demand. Demand for natural resources over the past century has increased sharply due to the emergence of mega trends driven by rapid population growth, urbanisation, high energy consumption, rising poverty and environmental mismanagement. The United Nations has identified 17 goals, also known as the Sustainable Development Goals (SDGs), providing targets for countries to work in the spirit of cooperation and partnership to sustain development and protect the environment.

Poverty, education, gender, equity and health are among the important challenges of the 2030 agenda.<sup>1</sup> The ability of the planet to supply the basic essentials and meet the people's basic needs will require global action involving all nations tackling issues commonly related to each other. The developing world is in a weak position to resolve all challenges on its own, and therefore, support from international institution, developed countries and other global bodies becomes essential for fostering growth and protecting the environment.

In the Muslim world, the challenge facing governments revolves around poverty alleviation and provision of equal economic opportunity—goals which empower society and strengthen economic stability. Equitable distribution of wealth and income encourages investment on the part of local entrepreneurs who increase their level of participation in the economy. Islamic countries have the dubious distinction of having the largest number of people living below the international poverty line under unsustainable conditions. Ethical investments serve an effective mechanism in promoting efficient resource allocation designed to meet basic human needs. Islamic finance contributes to the development of Muslim societies by supporting environmentally green projects.

This writing is aimed at examining the role that green investment plays in sustaining development. Meeting global environmental challenges will require environmentally-friendly investment to reduce the risks of pollution and minimise the impact of economic activities on the natural capital. The Islamic financial system is guided by the religious teachings clearly stated in the Sharī'ah, or the Islamic legal system. From an Islamic perspective, the environment is key to human survival. Without the environment, meeting basic needs is not possible. The Islamic financial system could play an important role in financing environmentally-friendly projects that ensure environmental protection and promote future sustainability.

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1. [https://en.wikipedia.org/wiki/Sustainable\\_Development\\_Goals](https://en.wikipedia.org/wiki/Sustainable_Development_Goals) (accessed on 1 June 2019).

## **Sustainable Development**

The United Nations 2030 Sustainable Development Agenda strives to ensure that “no one is left behind.” This emphasis suggests that sustainable development is inclusive comprising social, economic, financial, political and environmental forces, that is, it requires the participation and contribution of everybody. Sustainable development not only provides equal opportunity to all, but also ensures that everybody will have a say in decision-making. This corresponds to the Islamic inclusiveness concept of development, which emphasises the importance of participation of all in societal transformation. In other words, development improves the quality of life by providing inclusive support to all against poverty, inequality, injustices, discrimination and environmental degradation. The Shari‘ah comprises complex rules and norms, moral and ethical guidelines espoused by Islam, to which Muslims must adhere to fulfil their religious obligations.

It has been maintained that the economy is a subset of the ecosystem with limited resources to support economic growth.<sup>2</sup> Natural resources, existing in limited quantities, represent important inputs, which, if consumed efficiently, promote growth and increase welfare in an economy. Overtime, however, rapid population growth inducing excessive consumption could constrain economic growth as a result of depletion of natural resources. In other words, consumption, spurred by population growth, grows so large in relation to the human needs that the demand for natural resources outstrips supply creating supply shocks. Under such circumstances, it will be more appropriate to replace the concept of growth with the concept of development since the latter can be “sustained long-term” provided that renewable resources gradually supplant depletable resources and that population growth remains on par with the growth

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2. Herman Daly, “Ecological Economics and Sustainable Development,” *Selected Essays of Herman Daly* <https://econpapers.repec.org/bookchap/elgeebook/12606.htm> (accessed on 10 June 2019).

of renewable resources in aggregate. Daly's model advocates a "transition toward a steady-state economy that focuses on qualitative development, as opposed to quantitative growth" and proposes methods to sustain it. He rejects the conventional assumption of describing man as "economic man" due to the fact that man is a member of a community of men whose welfare cannot be realised in isolation from the welfare of others in the community.

In "The Economics of Sustainable Development," Daly examines in detail the theory of ecological economics focusing on population, trade, sustainable development policy and production, putting a premium on the ethical foundation of ecological economics.<sup>3</sup> In his view, depletion of resources and the importance of the environment as important theoretical constructs, underpin the future sustainability of humanity on our planet. He further points out that, "In the empty world, it made economic sense to say that there was no conflict between economic growth and the ecosystem, even if it was not strictly true in a physical sense. But physical growth has transformed the empty world into a full world in which the remaining of the ecosystem is scarce."<sup>4</sup>

In this context, significantly, Daly posits a semantic correlation to the concept of the Islamic man in the Islamic economy. The Islamic man conducts himself according to an

...ideology or worldview which directs man towards a society free of contradictions...Whereas, the economic and social activities of the economic man are entirely based on his own judgment as to how to achieve objectives he has defined himself, the activities of the idle Islamic man are based on divine

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3. [http://library.uniteddiversity.coop/Measuring\\_Progress\\_and\\_Eco\\_Footprinting/Ecological\\_Economics\\_and\\_Sustainable\\_Development-Selected\\_Essays\\_of\\_Herman\\_Daly.pdf](http://library.uniteddiversity.coop/Measuring_Progress_and_Eco_Footprinting/Ecological_Economics_and_Sustainable_Development-Selected_Essays_of_Herman_Daly.pdf) (accessed on 23 June 2019).
  4. Herman Daly, *Economics for a Full World*, 2-3, <https://pandopopulus.com/wp-content/uploads/2016/07/Herman-Daly-ECONOMICS-FOR-A-FULL-WORLD.pdf> (accessed on 19 June 2019).

Islamic law, part of which is laid down and part of which has been left to human discretion.<sup>5</sup>

This underscores the need for an alternative approach that creates a balance between the ecosystem and human consumption. Initiatives at national, regional and global levels are essential for responding to the challenges of the “full world” so that new mechanisms can be established to redistribute resources in a manner that meets basic needs of population and sustains development of economies. The economy is a dependent subsystem of the environment which imposes constraints on growth if exploitation of resources exceeds the natural limit. Daly points out that to ensure sustainable scale, “any use of non-renewable resources should be coupled with investment in replacing the non-renewable resource with renewable alternatives, or coupling the non-renewable usage with a renewable offset.”<sup>6</sup>

Economic development is an integral dimension of sustainable development which aims to ensure that resources will be allocated to foster growth and support human survival. In other words, sustainable development is to create conditions for job creation and meeting peoples’ basic needs. Goal 9 of the Sustainable Development Goals—build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation—is a short phrase which raises many questions. Infrastructure empowers the society to reduce costs, alleviate poverty, and improve access to health care and education. Sustainable development measures economic growth in relation to the level of conservation of the natural environment. Natural capital, a product of the natural environment, is a critical input in the production of goods and services.

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5. Farhad Nomani and Ali Rahnama, *Islamic Economic Systems* (Kuala Lumpur: S. Abdul Majeed & Co., 1995), 43.
  6. Herman E. Daly, “Toward some operational principles of sustainable development,” *Ecological Economics* 2, Issue 1 (April 1990): 2. <https://www.sciencedirect.com/science/article/pii/0921800990010R> (accessed on 18 June 2019).

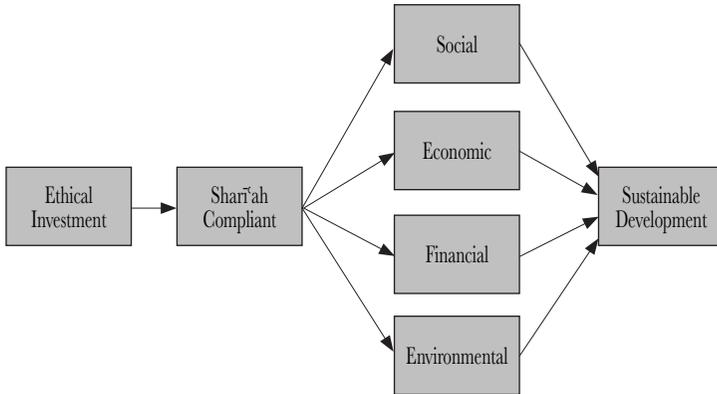


Figure 1

Framework for Shari'ah-Compliant Investments for Environmental Protection and Sustainable Development<sup>7</sup>

Figure 1 illustrates the linkages between ethical investments and sustainable development. It represents a linkage between Shari'ah compliant investments and the fulfillment of the core objectives of sustainable development. Ethical investment complies with the Shari'ah principles prohibiting all forms of unethical transactions which may cause damage to people or the natural environment. The inclusive concept of sustainable development in Islam requires the satisfaction of both spiritual and material conditions, the fulfilment of which Islam mandates as a religious duty. The Islamic financial system is well-structured to meet the needs of the economy by providing Shari'ah-compliant financial services serving the promotion of welfare and the fostering of growth. For example, profit-sharing investment in Islamic banking strengthens financial stability and enhances the ability of the economy to mobilise resources in an efficient manner. Financing is a powerful instrument in the allocation

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7. Schematic developed by the authors.

of resources and plays an important role in the social, political, economic and environmental dimensions of society. Sustainable development is inclusive which aims to enhance the capacity of societies to correct imbalances and foster growth.<sup>8</sup>

It is difficult to promote the societal well-being without a healthy environment. Ethical investments are critical for enhancing environmental capabilities and supporting sustainable development. The core concept of Brundtland definition of sustainable development is: “meeting the needs of the present without compromising the ability of future generations to meet their own needs.”<sup>9</sup> Ethical investment increases the potential to meet people’s needs and preserve human sustainability. Investment in the Islamic economy promotes human welfare by empowering society to engage in productive activities without causing harm to the natural environment. The social dimension of sustainable development requires fair and just redistribution of society’s resources so that equal opportunity is provided to all people to participate and contribute to the development of the economy. Use of natural resources in relation to consumption must demonstrate balance to reduce environmental risks. Revenues derived from natural resources need to be allocated to producer goods not just to consumer goods and, with respect to the latter, premium must be placed on fulfilling basic human needs at the expense of luxury goods demanded by elites.

Environmental protection creates conditions that increase productivity and foster economic growth. Through sustainable development, in which the environment can be relied upon to supply natural resources to meet basic needs and enhance social welfare, efficient allocation of resources increases productivity without harming the environment. In such green

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8. Amer Al-Roubaie, “Al-Attas’s Concept of Happiness: A Reflection on the Contemporary Meaning of Development,” in *Knowledge, Language, Thought and the Civilization of Islam*, ed. Wan Mohd Daud and Muhammad Zainiy Uthman (Skudai: Penerbit UTM, 2010), 321–349.
  9. Harlem Brundtland, *Our Common Future* (1987), 41, <https://www.kdp.org/initiatives/pdf/BrundtlandReport.pdf> (accessed on 1 June 2019).

economies predicated on environmental protection, employment opportunities are generated that serve to raise the standard of living and support human basic needs, the provision for which stimulates social cohesion insofar as all members of society share in progress.

Judicious and equitable income reinvestment is the cornerstone of a self-generating mechanism designed to increase value and prolong natural capital, a product of the natural environment which is critical for supplying the necessary resource for producing goods and services in the global economy. Feckless consumption of resources, on the other hand, engenders depletion of the natural capital deducing sustainability. Environmental degradation is linked to unbalanced economic growth and excessive consumption of natural resources.

In 1972, the publication of *The Limits to Growth* by the Club of Rome examined the five important factors that determine the limit to growth. These include population, agricultural production, nonrenewable resource depletion, industrial output, and pollution generation. The Club of Rome concludes: "If the present growth trends continue in world population, industrialization, pollution, food production, and resource depletion continue unchanged, the limits to growth on this planet will be reached sometime within the next one hundred years. The most probable result will be a rather sudden and uncontrollable decline in both population and industrial capacity."<sup>10</sup> However, the book also conveys a message of hope by stating that, "Man can create a society in which he can live indefinitely on earth if he imposes limits on himself and his production of material goods to achieve a state of global equilibrium with population and production in carefully selected balance."<sup>11</sup> The environment is an integral element of the social equilibrium enabling societies to meet human needs and support life on our planet Earth. "All

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10. Donella H. Meadows, et al., *The Limits to Growth* (New York: Universal Books, 1972), 29.

11. *Ibid.*, 211.

economic activity ultimately depends on services provided by nature, estimated to be worth around US\$125 trillion a year.”<sup>12</sup>

### **Shari‘ah-compliant Transactions**

Investment in Shari‘ah-compliant projects not only protects the environment, but also offers solutions to poverty reduction, economic growth, job creation and gender equality. The principles of sharing profit and losses encourage productive enterprises to engage in activities which are aimed at increasing output, generating income and creating jobs. By discouraging financial speculation, it is unlikely that the Islamic economy will experience a high degree of financial instability and cyclical fluctuations. Recent experience with the global financial crisis has shown that the crisis had much less impact on the Islamic financial institutions compared to the conventional ones.

Islamic economics provides an alternative approach to development based on fairness and equity in the distribution of resources. Islamic economics is inclusive in that it provides equal opportunity to all and, thereby, promotes equity, justice, and shared prosperity. Approval of project financing by Islamic banks can be subject to analysis of the level of positive resource allocation and the level of environmental protection expected to be engendered by the project. Ethical investment mandates that Islamic banks earmark finance for green investment that is characterised by a high level of environmental protection minimising negative externalities and maximising positive externalities associated with a project. Risk sharing, as practised in Islamic transactions, strengthens contract enforcement by both parties in order to minimise environmental risk and increase the prospects for profitability. Debt-based financing by Islamic finance promotes social inclusion through risk-sharing contract,

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12. World Wildlife Fund (WWF), *Living Planet Report 2018*, p. 6 at <https://www.worldwildlife.org/pages/living-planet-report-2018> (accessed on 2 June 2019).

which requires all parties to fulfill all obligations, including those appertaining to environmental protection, agreed upon in the contact. To this end, Shari'ah-compliant investment contributes not only to the enforcement of ethical business transactions, but also to sustainable development of the Islamic economies.

Islamic finance is a branch of the Islamic economic system that complies with religious teaching as stated in Islamic Shari'ah or Islamic legal system. Shari'ah-compliant business transactions advocate ethical guidelines and avoid engagement in unlawful activities that cause harm to society's productive and consumption systems. Finance in Islam adheres to moral teaching that helps society to rise above materialism as well as strengthens the principles of public goods and social justice.

Islamic finance refers to provision of financial services in accordance with Shari'ah Islamic law, principles and rules. Shari'ah does not permit receipt and payment of "ribā" (interest), "gharār" (excessive uncertainty), "maysīr" (gambling), short sales or financing activities that it considers harmful to society. Instead, the parties must share the risks and rewards of a business transaction and the transaction should have a real economic purpose without undue speculation, and not involve any exploitation of either party.<sup>13</sup>

The prohibition of *Ribā* or interest payments on financial transactions or fixed returns on debt securities is to prevent exploitation and promote justice in society. In the capitalist system, interest payment enriches those with large financial assets by earning income from nonproductive source, mainly interest payments. Exercising control over large share of means of production makes the productive system bias towards a few rich and influential leaving the majority with little or no

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13. International Monetary Fund (IMF), *The IMF and Islamic Finance* (2017). <https://www.imf.org/external/themes/islamicfinance/index.htm> (accessed on 26 June 2019).

access to financial support to invest in the economy. Islamic financial transactions comprise mainly asset-backed financing which helps job creation and profit generation. In the Islamic economy, money is a medium of exchange and its main purpose is to facilitate market transactions. Islamic modes of financing which include *muḍārabah*, *mushārah* and *murābahah* represent an investment in real asset. They will ensure profit and add value to the national economy.<sup>14</sup> In the Islamic economy, finance is an integral element of the national economic policy the objective of which is to finance projects and reduce the risk of environmental degradation. Such integration encourages green investment by allocating financial funding into projects more friendly to the environment. In doing so, the Islamic financial system could play an important role in future sustainability by financing productive projects which are aimed at increasing productivity and reducing the risk of resource depletion.

The Islamic financial system is driven by moral and ethical guidelines and therefore, funding of business projects becomes in favour of environmentally friendly market activities to ensure environmental protection and sustain growth. Under such financing, investment in the economy complies with the norms of Islamic finance which mobilises funds and investment for promoting sustainable development. However, the effectiveness of the Islamic financial services in achieving the national objectives requires strong government support to strengthen the guidelines of the Shari‘ah compliance and realise the full potential of Islamic finance in achieving the national objectives, including the environment. Investment in real assets strengthens the creation of linkages which encourages business activities and promotes economic diversification. Economic development is a process of structural transformation which is aimed at creating linkages that increase interrelationships among various sectors

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14. Further details regarding the Islamic mode of finance and shari‘ah-compliant investment appear in Moutaz Abojeib, et al. eds., *Islamic Economics* (Kuala Lumpur, Malaysia: International Shari‘ah Research Academy for Islamic Finance [ISRA], 2018).

of the economy. Economic stimulus entails building capacity for development through fiscal and trade linkages to accelerate the process of change and broaden the economic structure.

In Islam, resources are to be shared among the society members so as to strengthen the Islamic fundamentals of equity and justice. In a Muslim society, all individuals must be given equal access to financial resources to increase participation and contribute to investments. Food security is important for improving the living standards. Consumption and the use of natural resources must be efficient to reduce environmental degradation. Muslim countries have an obligation not to squander revenues from natural resources on superfluous consumption. Instead, it is incumbent on them to reinvest the income into green projects that prolong natural capital. Excessive consumption of non-renewable resources engenders depletion of natural capital at the cost of sustainability. Environmental degradation is linked to the slowing of economic growth.

### **Islamic Financial Institutions**

Islamic finance can serve as a mechanism for redistribution of resources in Muslim society to promote equity and achieve development objectives. Collection of *zakāt*, *awqāf*, and *qard hasan* could provide people with the support they need to fight poverty, acquire knowledge, and enhance capabilities to actively participate in the economy. *The Global Report on Islamic Finance* estimates that for most countries in South and Southeast Asia and Sub-Saharan Africa, “the resources needed to alleviate deprivation could be met adequately if the potential of institutions of *zakāt* and *waqf* were realized, even if only in part.”<sup>15</sup> Environmental protection puts in place an economic regime that increases productivity and economic growth in the long term.

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15. *Islamic Finance: A Catalyst for Shared Prosperity* (Washington: World Bank, 2016), 5, <http://www.tkbb.org.tr/Documents/Yonetmelikler/Global-Report-on-Islamic-Finance-Islamic-Finance-A-Catalyst-for-Shared-Prosperity-Dr-AhmedMohamedAli.pdf> (accessed on 6 June 2019).

Development is sustainable only when the environment exhibits resilience manifesting an uninterrupted capacity to continue to supply natural resources to meet basic needs and enhance social welfare. Efficient allocation of resources will engender maximisation of productivity with minimisation of negative environmental externalities.

Conversely, inefficient resource allocation could engender negative social externalities leading to a fracturing of civil society. Lack of opportunities for supporting basic needs jeopardises social cohesion in violation of Islamic economics: that all must share in progress. Lack of employment opportunities causes national incomes to fall and the standard of living to decline. In Islam, resources are to be shared among the society members to strengthen the Islamic fundamentals of equity and justice. In Islamic finance, all individuals must be given equal access to capital resources that serves to increase participation and contribute to investment. Food security is paramount for improving the living standards of particularly least developed countries in which populations lack uniform access even to clean water.

Islamic social finance could play a crucial role in environmental protection and sustainable growth. In the Islamic economy, such institutions as *zakāt*, *ṣadaqāt* and *waqf* (Islamic endowment) as well as other contributions provide additional liquidity for investments in environmentally-friendly projects. Such investment adheres to the dictates of the Sharī'ah guidelines revolving around meeting basic human needs and improving social welfare. Financial inclusion is an important mechanism for environmental protection providing all economic players with equal opportunities to participate in the ethical production and consumption of natural resources. "Islamic social finance that includes the provision of microfinance along with safety nets and social goods could be a powerful tool to fight financial exclusion and poverty and enhance shared prosperity."<sup>16</sup> Investments in

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16. Ibid., 153.

conformity with the Shari'ah prohibit wanton exploitation of natural resources so as to ensure harmony between human activities and the natural environment. Unlike states beholden to pure capitalism, the Islamic state can intervene to correct market imperfections and reduce the risk of environmental degradation. In Islam, the state intervenes not only to protect the public interest, but also to ensure that the Shari'ah guidelines are implemented.

Islamic finance contributes to sustainable development through ethical investments that require environmental protection and meet people's basic needs. Sustainability advocates allocation of resources to prolong the lifespan of these resources to continue providing the basic inputs needed for improving the quality of life. Because of the transformative and sustainable nature of the new development agenda, all possible resources must be mobilised if the world is to succeed in meeting its targets. Given the principles of Islamic finance that support socially inclusive and development-promoting activities, the Islamic financial sector has the potential to contribute to the achievement of the SDGs.<sup>17</sup>

Guided by ethical principles, Islamic finance creates balance between the present and future consumption through waste reduction and pollution control. Investments in projects that are environmentally friendly, including renewable energy, enhance financial inclusion and increase financial stability which reduce the risk of environmental degradation and stimulate growth. Islamic modes of investments involve risk sharing which strengthens the banking sector contribution, especially for small and medium enterprises, to environmental management as a means of risk reduction. Institutions such as the Islamic Development Bank (IDB), International Islamic Financial Market (IIFM) and Islamic Financial Services Board (IFSB) can contribute to environmental protection by investing in sustainable projects to support the implementation of Sustainable Development Goals. Islamic finance must contribute to development by

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17. Ibid., 3.

“fulfilling broader social and ethical objectives and using more participatory forms of financing.”<sup>18</sup>

The Islamic financial system derives its fundamentals from the Shari’ah code of ethical and moral practices including market activities and investment allocations. The Shari’ah underscores the importance of the environment for the survival of the ecosystem, and therefore, damage to the environment constitutes violation of the religious teaching by practising unlawful market activities and causing damages to the environment. In this respect, the Shari’ah provides the legal framework for the functioning of the Islamic economic system including Islamic finance. For example, the prohibition of *Ribā* is to enforce the principle of justice and equity among members of the community by distributing resources in a fair and just manner to reduce poverty, improve productivity, increase efficiency and provide equal opportunity.

It is unethical in Islam to invest in projects that cause harm to people. Market activities and exploitation of natural resources could produce negative externalities which violate the code of Islamic ethics by practising unlawful business activities. Money in Muslim societies contributes to job creation and wealth distribution through investment in real assets, i.e. investment allocations are to improve the welfare of the community, especially the poor and destitute. Human survival is linked to the natural environment for providing the basic essentials and thus investment in the Islamic economy need not generate excessive profits at the expense of the needy in society. The Islamic economic system is to create such equilibrium by making use of resources to produce goods and services that meet people’s basic needs instead of promoting consumerism through the production of materialistic goods. Unlike capitalism

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18. Habib Hamed, *Contribution of Islamic Finance to 2030 Agenda for Sustainable Development* (United Nations, 2017), 5, [http://www.un.org/esa/ffd/high-level-conference-on-ffd-and-2030-agenda/wp-content/uploads/sites/4/2017/11/Background-Paper\\_Islamic-Finance.pdf](http://www.un.org/esa/ffd/high-level-conference-on-ffd-and-2030-agenda/wp-content/uploads/sites/4/2017/11/Background-Paper_Islamic-Finance.pdf) (accessed on 22 June 2019).

in which individuals decide on what the society should produce, the Islamic economic system makes it the responsibility of the community to see that the basic needs of all members of society are well guarded. The Shari'ah condemns the concentration of wealth in the hands of a few to ensure equal access to resources and promote justice. In accordance with the Shari'ah, Muslims are answerable to their actions with regard to the use or abuse of resources which they accept as a trust from Allah.

There are over 6,000 verses in the Quran, of which more than 500 deal with natural phenomena. Allah repeatedly calls on us to reflect on His signs, which include all aspects of nature such as trees, mountains, seas, animals, birds, stars, the sun and the moon-and our hearts. Islamic jurisprudence contains regulations concerning the conservation and allocation of scarce water resources, for the conservation of land and special zone of graded use; for the establishment of rangelands, wetlands, green belt and for wildlife protection and conservation.<sup>19</sup>

### **Green Investment**

In recent years, the debate about the green economy has been widely circulated in the literature on sustainable development reflecting the concern about the rapid consumption of natural resources and the need for greater protection for the environment. The green economy is defined as one that “results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities.”<sup>20</sup> Excessive

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19. “Islam and the Environment,” *The Times of India*, <https://timesofindia.indiatimes.com/Islam-and-environment/articleshow/7053540.cms> (accessed on 26 June 2019).

20. *Green Economy*, United Nations Environmental Programme (UNEP) (2010), 9, [https://wedocs.unep.org/bitstream/handle/20.500.11822/8659/-%20Green%20economy\\_%20what%20do%20we%20mean%20by%20green%20economy\\_%20-2012Main%20briefing%202012--Final.pdf](https://wedocs.unep.org/bitstream/handle/20.500.11822/8659/-%20Green%20economy_%20what%20do%20we%20mean%20by%20green%20economy_%20-2012Main%20briefing%202012--Final.pdf) (accessed on 25 June 2019).

exploitation of natural resources has caused substantial damage to the environment not only in depletion of natural resources, but also affecting people's health and living standards. As a consequence, the calls for green investment have increased in demanding policy makers, businesses and consumers to contribute to environmental management by reducing waste and adapting environmentally-friendly technologies. Green investing refers to investment in selected industries which are friendly to the environment including renewable energy, electric cars, smart cities and green building. For example, energy efficiency productive activities offer reduction in energy consumption, which saves the atmosphere from more pollution. The green economy fosters productivity and promotes sustainable development by making sure that linkages among various sectors of the economy contribute to waste reduction, poverty alleviation, energy efficiency, and provide equal opportunity for all members of the society.

Production and consumption are among the important activities that are directly linked to the environment. Currently, the production and consumption of resources are responsible for environmental degradation, which, besides undermining sustainability, negatively impact human well-being. Green investment not only reduces the risk of environmental degradation but also improves the quality of life by aligning consumption with production of natural resources. From an Islamic point of view, waste and excessive consumption of resources violates the Sharī'ah. Muslims are instructed to be moderate in consumption by allocating resources in a way that assures the meeting of the basic needs of every member of society. In the meantime, they must work towards increasing the sustainability of resources through better management systems, more environmentally friendly investments and fair distribution of resources.

Substantial progress has been made towards environmental protection through green investments, especially in renewable energy. Achievement of the United Nations 17 Sustainable Development goals will require investment in renewable energy to

foster economic growth and support the environment. Globally, investment in renewable energy has reached \$2.2 trillion since 2010. In 2017, the global green bond market reached \$155.5 billion which will have substantial impact on human sustainability. Green investment reserves resources to meet future demand as well as reduces social costs. Countries exhibiting high population growth could benefit from investment in green projects. In these countries, governments allocate large amounts of funding for public programmes and, therefore, the government can take the lead by setting an example by promoting environmentally-friendly investment. Green investment should be an integral part of the national strategy for the environment. The investment combines environmental protection with economic growth. Governments worldwide should adapt green growth policies by providing incentives and subsidies for investors in various sectors to minimise the impact of human activities on the environment.<sup>21</sup>

Environmental protection requires collective efforts on behalf of both local authorities and international agencies to construct strategies and formulate policies which are aimed at reducing pollution and reducing the risk of environmental degradation. Education, public awareness, waste reduction and knowledge of the environment are among the important initiatives that countries need to pursue in order to address the challenges facing the environment. The role of public institutions could have substantial impact on environmental protection through the introduction of administrative, legal, financial, and technical support. Market activities, including investment, must be monitored to ensure that the environment is addressed in decision makings and business transactions. Multinational activities and flows of FDI, especially in developing countries, must also be addressed in national policies concerning the environment to provide protection for natural resource exploitation and strengthen the foundation for sustainable development.

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21. "Global green bond issuance hit record \$155.5 billion in 2017-data," Reuters. <https://www.reuters.com/article/greenbonds-issuance/global-green-bond-issuance-hit-record-155-5-billion-in-2017-data-idUSL8NIP5335> (2018) (accessed on 26 June 2019).

Green policies foster economic growth and reduce the social cost by increasing the life span of nonrenewable resources and lowering the risk of depletion of the society's natural capital. Green policies also involve the adaptation of green technologies which encourage investors to select green investments more friendly to the environment. To this end, green policies can contribute to human development through poverty alleviation, job creation, environmental risk reduction and income stability, especially for countries heavily dependent on natural resources to support development.

The creation of knowledge spillovers stimulate economic diversification and encourage private sector participation in the economy. Knowledge for development encourages dissemination of innovation and improves sectoral productivity. In many developing countries, the public sector provides large amounts of goods and services consumed by individuals and businesses which make the government responsible for environmental protection by choosing environmentally-friendly investment and strengthening the fundamentals for sustainable development. Governments should encourage green technologies as an alternative to traditional technologies in order to achieve more resource efficient, clean, and resilient growth.<sup>22</sup> Several environmental objectives can be achieved by adapting green technologies including pollution reduction, mitigate climate change through the supply of clean energy, wealth creation from stable and sustainable biodiversity and improving competitiveness through cost reduction and efficient allocation of resources.

In a recent publication by the Malaysian International Islamic Financial Centre Community titled *Islamic Finance Ready to Finance a Greener World*, initiatives were explored to promote sustainable development through green investment. The study examines the global concern over the environment and the potential impact that the current environmental challenges will

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22. "Inclusive Green Growth: The Path to Sustainable Development," World Bank <http://documents.worldbank.org/curated/en/368361468313515918/pdf/691250PUB0Publ067902B09780821395516.pdf> (accessed on 15 May 2019).

have on future sustainability. Resource availability to meet the basic need for the increase in population, including food, water and energy may be constrained by environmental degradation, pollution, climate change and depletion of nonrenewable resources.

### **Green Sukūk**

Recently, Islamic financial institutions have been issuing green *sukūks* (bonds) to support green investments and strengthen the guidelines for protecting the environment. *Sukūk*, also known as Shari‘ah compliance bonds, are Islamic bonds with similar features to those of conventional bonds except that *sukūk* grant investors a share of an asset instead of an ownership of debt. These *sukūk* pay dividends earned from income invested in real assets subject to both profits and losses. Currently, several Muslim countries, including corporations, governments and financial institutions, issue *sukūk* to finance businesses which comply with the Shari‘ah by paying profits rather than interests.

Islamic *sukūk* could provide solution to depletion of resources by encouraging investment in alternative sources. Production of goods and services require making choices among alternatives to maintain ecological balance and ensure future sustainability. Incentives for investment in alternatives will encourage investors to promote innovation and enhance creativity to develop new products and discover new techniques. At present, *sukūk* represent one of the key Islamic capital market instruments in compliance with the Shari‘ah used to finance long term projects. In its 2016/2017 edition, the “Islamic Economy Report” indicates that the Shari‘ah-compliant assets financed by *sukūk* accounted for \$342 billion in 2017. Reflecting the importance of *sukūk*, the Islamic capital market provides long term investment which impacts sustainable development by approving loans to environmentally-friendly projects. Issuance of *sukūk* can influence investor choices by linking financing to Shari‘ah compliance to strengthen environmental protection and increase

productivity of natural resources. Excessive exploitation of non-renewable resources causes reserves to decline overtime which requires adequate management system to control consumption of resources and ensure sustainability.<sup>23</sup>

The United Nations Commission on Trade and Development in 2010 estimated that US\$5 trillion to US\$7 trillion in annual investments would be needed until 2030 to fund the 17 Sustainable Development Goals in developing countries.<sup>24</sup> A large number of Muslim countries still suffer from low productivity and inadequate infrastructure to alleviate poverty and improve the quality of life. *Sukūk* issuance to finance infrastructure enhances Muslim capabilities to protect the environment and sustain development. Countries with large population such as Indonesia, Pakistan, Bangladesh, Nigeria and Egypt can benefit from ethical investments to balance development and reduce the cost of pollution and waste. In March 2018, the government of Indonesia issued the equivalent of \$1.25 billion sovereign green *sukūk* to be used exclusively for funding climate change in compliance with Islamic Shari‘ah.

The main objective of Islamic finance is to add value to the total output through investment in real assets. In other words, investment via *sukūk* issuance must be selective to comply with the principles of “ethical investing,” “green investing” and socially responsible investing. In the Islamic framework, business activities are in compliance with the principles of the Shari‘ah which impose restrictions on investment in non-lawful and unethical transactions. Operations of Islamic financial institutions cannot deviate from such ethical practices and therefore, funding for investment in the Islamic economy must fulfil the religious norms and beliefs stated by the Shari‘ah. Islam stresses on creating a balance between production and consumption to ensure future sustainability and environment protection.

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23. Ibid.

24. “Islamic Green Finance: Development, Ecosystem and Prospects in 2019,” World Bank Group 2019. <http://documents.worldbank.org/curated/en/591721554824346344/pdf/Islamic-Green-Finance-Development-Ecosystem-and-Prospects.pdf> (accessed on 26 June 2019).

Green bonds are used to finance projects that are environmentally-friendly to reduce environmental degradations. It usually covers infrastructures such as energy, water, transport and land use. According to Bloomberg, the value of green bonds sold in 2018 accounted for \$580 billion. In 2019, the value of green bonds sold is expected to reach \$180 billion. More than 50 countries are involved in issuing green bonds mainly to support environmental management. Over the last two years, global socially responsible investments have reached \$30.7 trillion.<sup>25</sup>

Partnership in Islamic finance could broaden financial inclusion by providing opportunities to all members of society to engage in market activities. In capitalism, those without capital including the poor, women, minorities and the disabled may have difficulty to gain access to finance and become entrepreneurs. Farmers are equally allowed to obtain loans to finance agricultural production and improve food security. In Muslim countries, Islamic finance provides an opportunity for religious people who are not willing to use conventional finance for business undertaking. Similarly, women in many Muslim countries cannot obtain loans to start businesses and support their families. Islamic finance provides equal opportunity to those with good ideas and have the potential for success in the marketplace. However, out of the 1.5 billion Muslims in the world, less than 20 per cent makes use of the banking system, reflecting the low contribution of financial institutions to development in Muslim countries.

The current size of the Islamic finance market has been estimated to range from \$1.66 trillion to \$2.1 trillion with expectations of market size to be \$3.4 trillion by end of 2018. The expansion in the Islamic financial markets is due to the rapid growth in Islamic windows by conventional banks both in Muslim and non-Muslim countries. Among the Muslim countries,

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25. "What are Green Bonds and How Green is Green" *Bloomberg Businessweek* (2019). <https://www.bloomberg.com/news/articles/2019-03-24/what-are-green-bonds-and-how-green-is-green-quicktakea>. (accessed on 16 June 2019).

Malaysia is the main driver of *sukūk* issuance commanding a market share of 46.4 per cent of the issuance in 2016. The Gulf Cooperation Council comes second to Malaysia in *sukūk* issuances accounting with a market share of 26.6 per cent followed by Indonesia accounting for about 10 per cent of the total *sukūk* issuances.<sup>26</sup>

## **Conclusion**

The discussion in this article has focused on ethical investments and the impact that these investments could have on sustainable development. Ethical investments are environmentally-friendly projects of which the objective is to minimise the risk of damage to the environment and foster economic growth. Damage to the environment is due to human activities, mainly production and consumption of natural resources, rapid exploitation of natural resources reduces the Earth capacity to meet people's basic needs and sustain development. Environmental management is concerned with the allocation of natural resources, especially the non-renewables in a productive manner to ensure future sustainability and maintain social equilibrium.

Islamic finance could play an important role in strengthening the fundamentals for environmental management and sustaining development. According to the Islamic law, human business activities, including investments, must comply with the teachings of the Shari'ah which prohibit waste and excessive use of natural resources. In Islam, man is entrusted with the utilisation of resources not only to endorse the Islamic principles of freedom, equity and justice, but also to ensure that equal access to resources will be given to all members of the Muslim community. Monopoly, waste, excessive consumption and pollution are considered unlawful practices, and therefore,

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26. "Global 2016 Sukuk Market: A Record Year for Corporate Issuance," Bank Negara Malaysia (2017). [http://www.mifc.com/index.php?rp=sukuk\\_report\\_270317.pdf](http://www.mifc.com/index.php?rp=sukuk_report_270317.pdf) (accessed on 25 June 2019).

people must avoid practising such activities. Indeed, natural resources in Islam are viewed as God's gift to all and therefore, access to such resources should not be limited to privileged individuals or monopolies.

Ethical investments are environmentally-friendly business-related activities aiming at minimising the risk of environmental degradations and increasing the country's capabilities to reduce pollution. The Islamic financial system imposes restrictions on production and consumption of goods and services to reduce waste and ensure equal access to natural resources. The modes of Islamic finance involve specific reference to the environment by financing ethical projects that ensure environmental protection and productivity growth. Islam endorses ethical investments that encourage investors to select projects friendly to the environment.

The objective of investment in the Islamic economy is to support equity in the distribution of income and wealth as well as to restore stability and confidence in the economy. Socially-desired investment, driven by ethical guidelines, enforces certain restrictions on production and consumption of resources which in turn channel environmental protection and sustainable development. The Islamic financial system prohibits lending that is considered unethical and promotes business transactions involving both risk and profits to achieve equity and strengthen the principle of social justice.

Not only does the environment meet the immediate needs of people, but it is also responsible for the existence of life on our planet earth. Islam has an effective and comprehensive solution to the current challenges facing the environment. Islamic Sharī'ah provides a guiding light to promote sustainable development. Islam commands Muslims to avoid doing mischief and waste resources as such acts cause environmental degradation. Being a *Khalīfah*, man is entrusted with allocation of the natural resources to ensure the survival of all creatures. Any form of corruption, including environmental corruption is not acceptable from the Sharī'ah perspective.

Environmental sustainability is inclusive by actively including the participation of all citizens in the management of natural resources. The main objective of sustainable development is to protect peoples' rights to gain equal access to resources and ensure that equity and justice are implemented. Islam provides protection against unjust and discriminatory practices by endorsing ethical and moral guidelines of conduct in all aspects of human life including market transactions. Social exclusion, poverty and inequalities are not supposed to be practised in Muslim societies. Economic development in Islam is to achieve social cohesion by protecting people against any forms of injustices. Thus, reducing inequalities and including every citizen to participate fully in society is an important feature of Muslim societies.

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