

GREEN SUKUK IN SAUDI ARABIA: CHALLENGES AND POTENTIALS OF SUSTAINABILITY IN THE LIGHT OF SAUDI VISION 2030

Hebah Shalhoob *

* Department of Business Administration, The Applied College, King Abdulaziz University, Jeddah, Saudi Arabia
Contact details: Department of Business Administration, The Applied College, King Abdulaziz University, P. O. Box 80200, Jeddah, Saudi Arabia



Abstract

How to cite this paper: Shalhoob, H. (2023). Green sukuk in Saudi Arabia: Challenges and potentials of sustainability in the light of Saudi Vision 2030 [Special issue]. *Journal of Governance & Regulation*, 12(4), 351–360.
<https://doi.org/10.22495/jgrv12i4siart15>

Copyright © 2023 The Author

This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0).
<https://creativecommons.org/licenses/by/4.0/>

ISSN Online: 2306-6784
ISSN Print: 2220-9352

Received: 13.04.2023
Accepted: 08.12.2023

JEL Classification: O16
DOI: 10.22495/jgrv12i4siart15

This research aimed to provide insights into the green sukuk in Saudi Arabia regarding its challenges and potential of sustainability in the light of Saudi Vision 2030 for financing green projects. Moreover, it examines the current framework adopted by the Saudi Electricity Company (SEC) for facilitating transition to a low-carbon economy and circular economy, empowering communities, and enabling responsible business practices. Due to the nature of the topic, the research followed the descriptive research design. The results indicated that the issuance of green sukuk faces some challenges including lack of a clear definition, lack of awareness of its benefits, absence of a standard for measuring it, lack of institutional capacity, and the long time required to structure and legalize it. Consequently, a clear definition and measurement standard should be presented. Furthermore, the results of this research have implications for researchers, governments, policymakers, industries, businesses, investors and regulators regarding the development and raising of green sukuk.

Keywords: Green Sukuk, Challenges, Potentials, Sustainability, Saudi Vision 2030

Authors' individual contribution: The Author is responsible for all the contributions to the paper according to CRediT (Contributor Roles Taxonomy) standards.

Declaration of conflicting interests: The Author declares that there is no conflict of interest.

1. INTRODUCTION

Recently, there has been a global focus on the green economy to promote sustainable development through innovative green financial instruments like green sukuk. Green sukuk promotes sustainable economies with environmentally responsible investing. The worldwide society has promoted a green economy as a solution to financial, food, and climatic challenges. Green economies and sustainable development aim to integrate economic, social, and environmental gains (Brahim, 2018). Environmental sustainability is part of Sharia law and is culturally suitable for Islamic finance (Aliyu et al., 2017). Sustainable finance considers extra-financial reporting, such as social, environmental, societal, and governance data on

firm operations, according to Otek Ntsama et al. (2021). Thus, national development should include green projects. Financial institution instruments are integral to the financial system. Green sukuk's quick expansion in Islamic nations is beneficial.

Saudi Vision 2030 emphasizes economic and environmental sustainability (The Council of Economic Affairs and Development, 2016). Vision 2030 has always promoted sustainability. Saudi Arabia is starting a new era by aiming for net zero by 2060. Vision 2030 aims to accelerate the energy transition, satisfy environmental targets, and attract new investment. A vision that inspires and sustains the Saudis, the region, and the globe (Brahim, 2018).

Green bond is a popular sustainable finance idea. Its issuance was one of the most significant sustainable finance successes of the recent decade.

Even though it's structured like investment-grade bonds, its "use of proceeds" clause means the cash will be used for green investments (Maltais & Nykvist, 2020). Businesses are turning to green bonds for long-term financial success. 2013's \$11.042 billion green bond market climbed to 2014's \$36.596 billion. This increase changes the company's finances. Global green bond issuance reached \$47.593 billion in the first quarter of 2019 (Zhou & Cui, 2019).

Green sukuk is a reliable lending product. It funds renewable energy, climate change, and green projects. Thus, it has become popular in nations' and enterprises' socially responsible or impact investment strategies (Brahim, 2018). Green sukuk earnings can support building or government-funded green subsidies. Securitizing future cash flows from ring-fenced projects or assets that meet particular conditions might create green sukuk (Alam et al., 2016).

The current research aims to identify and analysed green sukuk issuance, and its potential and challenges on sustainability, in light of the Saudi Vision 2030.

The core contribution of the research is to add knowledge to the literature of finance on green sukuk, representing the need for more research to be conducted by offering a guide for more studies. Issuing this type of sukuk will promise sustainability, direct economics to new opportunities, strengthen internal relationships, improve risk management, and help decision-makers identify the causes that cause green sukuk challenges.

The research investigated the current status of the green sukuk initiative, the features of financial sustainability in Saudi Arabia, the challenges and potentials of implementing (issuing) green sukuk, and the current framework adopted by the Saudi Electricity Company. This is considered as an inspiration for the study and highlights the need for more studies in this area. This led to the following questions:

RQ1: What is the current status of green sukuk initiative?

RQ2: What are the current challenges of issuing green sukuk?

RQ3: What are the features of financial sustainability in Saudi Arabia in the light of Saudi Vision 2030?

RQ4: What are the potentials of implementing green sukuk?

RQ5: What is the current framework adopted by Saudi Electricity Company as a model?

The novelty of the research is raised as it is one of the few studies examining green sukuk in Saudi Arabia. The research provides a roadmap for further research regarding this point of the research area. It expects to overcome the gap by discussing green sukuk issuance, and its potential and challenges on sustainability, in the light of Saudi Vision 2030.

The remainder of this paper is structured as follows. Section 2 reviews the literature review and theoretical framework. Section 3 describes the methodology. Section 4 provides and discusses the research findings. Section 5 concludes the paper.

2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Ahlam and Abdel Majeed (2016) stressed the importance of green sukuk in funding sustainable infrastructure projects in Algeria, focusing on renewable energy and related technologies, to establish a green economy. Experts say green sukuk certification can assist Algeria move to a low-carbon economy by advancing the green economy. Chugan et al. (2017) examined green bonds and green project financing barriers and legislation. According to the research, green bonds have issues with issuer capability, bankable green projects, and investor awareness. A priority list of green projects, financial feasibility and pipeline openness for investors, and a collaborative platform for the government, banks, and investors can assist overcome these challenges, according to the report. Laskowska (2017) investigated green bond market development variables. Demand, supply, market reality, and projections determine ecological interactions, the data showed. The study suggests global debt markets might include green bonds. Hafay and Raheima (2018) used the Malaysian experience as a case study to emphasise the importance of green Islamic finance in achieving long-term development. The findings showed Malaysia's Islamic sukuk dependence. The green atmosphere helped it pioneer inventive Islamic financing.

According to Zuhal and El-Shereif (2018), green funding, including green sukuk is a key way to help renewable energy and carbon-reduction countries. Their analysis indicated that Islamic countries may achieve sustainable growth through innovation and green sukuk investments. Green sukuk requires approval of the bond's environmental credit document and Islamic debt security. Abdullah and Keshminder (2022) conducted a study to determine the factors that influence green sukuk issuance as well as the processes that underpin these characteristics. The study's participants were Malaysian green sukuk issuers. Competitiveness, legitimacy, and environmental responsibility all had an influence on the issuing of green sukuk, according to the findings. The report advocated strengthening favourable legislative measures as well as relevant marketing and education techniques of the green agenda for a stronger green sukuk market.

Bin Zaidan et al. (2020) conducted a study to identify the global trend toward the green economy in recent years to achieve sustainable development by developing new financing tools, such as green instruments, which help countries transition from traditional economies to sustainable ones. The report recommends many changes to the green sukuk market: The green sukuk market has built a consistent reporting system that specifically identifies all parts of green sukuk to raise awareness of green sukuk and its key concepts, with an emphasis on green activities that should be included into national development.

Green sukuk market growth requires ethical governance, expertise, and awareness. Lebellet et al. (2020) conducted a study about how green bonds affect issuers' financial performance. 145 firms issued 475 green bonds. The data show that green bond issuances depress the market. According to

the study, these investors react similarly to green and convertible bonds. Gedikli et al. (2020) examined the benefits of sukuk for the Gulf Cooperation Council (GCC) economy and how it may boost economic growth in member states. The sukuk market might boost GCC macroeconomic performance. Sukuk markets' GCC debut will boost financial inclusion and economic growth. Keshminder et al. (2022) conducted a study to investigate green Sukuk issuer challenges, as well as the construction of a reconciled green sukuk issuance framework to support market growth with the right interventions. Four green sukuk issuers and four experts discussed. The green sukuk market has: 1) inferior green taxonomy, 2) difficulties recognizing green assets, 3) high costs, 4) no convincing advantages, and 5) exposure to higher-risk profiles.

Alwakid et al. (2021) conducted a study in Saudi Arabia to determine the influence of government assistance policies on green entrepreneurship. The major findings imply that government-backed environmental, innovation, and entrepreneurship initiatives benefit green entrepreneurship significantly. Lin and Hong (2021) used China as a case study to investigate how a transitional economy may develop a thriving green bond market in a short period of time. It finds that the Chinese government is crucial but changing. Government processes under various government structures can assist the green bond market growth. The paper proposes a market-oriented paradigm in which the government has a limited role in finance and governance and allows market forces to drive market efficiency. China has difficulties including low-quality information disclosure and private-sector underuse of green bond financing, according to the research. Basyariah et al. (2021) conducted a study to analyse the effects of macroeconomic and institutional stability on the expansion of the global sukuk market by controlling the effects of population.

This research uses panel data from the World Development Index as proxies for macroeconomic stability, such as gross domestic product (GDP) per

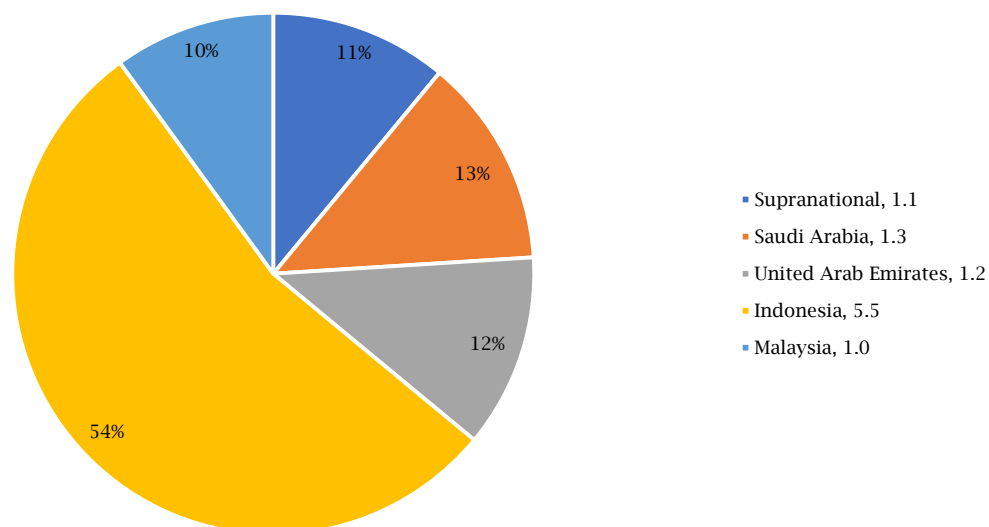
capita, exchange rate (ER), and inflation, as well as six aspects of the Worldwide Governance Indicators (WGI) as institutional proxies (voice and accountability, political stability and lack of violence, government effectiveness, regulatory quality, rule of law, and control of corruption), all of which were collected from the WGI-World Bank. To make the relationship between macroeconomics and institutions on the global sukuk market more robust, the population (POP) variable was incorporated as a control variable.

2.1. Green sukuk initiative

Malaysia, the United Arab Emirates (UAE), Saudi Arabia, Sudan, Pakistan, Bahrain, Iran, and Qatar issued sukuk after the 2008 financial crisis (Khodijah, 2018). Aljazira Capital (2010) found that Saudis prefer sukuk over bonds. Sukuk, unlike traditional bonds, is backed by physical collateral and gives investors proportional ownership of the underlying asset for a set period of time. Sukuk finance is rising in popularity due to stricter lending laws and equities market volatility.

Islamic finance gives governments a mechanism to support sustainable development goals (SDGs) initiatives that have been underutilized. Muslim and non-muslim countries use Islamic bonds (sukuk) to finance (Islamic Finance Council, 2021). Sukuk is the most common Islamic project finance vehicle. It's an investment certificate that gives investors a return based on the project's performance in exchange for prompt payback (Boutti & El Mosaid, 2015). Sukuk, based on Islamic shariah, must be devoid of *Riba*, doubt, speculation, and destructive and immoral behaviour. It needs actual assets to support the economy. Sukuk is growing globally. Non-muslim nations have joined the sukuk market (Noman et al., 2021). In September 2020, 11 entities from four countries (Indonesia, Saudi Arabia, UAE, and Malaysia) and a multilateral development bank issued \$10 billion in green sukuk. See the following figure.

Figure 1. Green sukuk issuance by country (US\$ billion)



Source: Azhgaliyeva (2021).

Sukuk, sometimes called “Islamic bonds”, do not pay interest and are not debt-based (Al Ajlouni & Habeeb, 2020). Bonds are debt with interest that must be paid, whereas Sukuks are not (Abalkhil, 2018).

Green bonds have become popular in green financing. Green bonds have grown quickly worldwide since 2013 (Zhou & Cui, 2019). Sukuk and bonds share ratings, issuance, redemption, and default provisions (Cakir & Raei, 2007).

The government may now raise funds for sustainable development via green sukuk. In March 2018, an Asian government issued the first green sukuk. This green sukuk will fund green infrastructure. Green sukuk is a new government funding method for sustainable development. Green sukuks support green infrastructure projects (Ramadhan & Wirnyanisih, 2020).

The key benefit of a green sukuk over a non-green sukuk or a green bond is that it attracts more investors. A *green sukuk* attracts both green and Sharia-compliant investors, while a non-green sukuk and a green bond only attract non-green and conventional finance investors. Like a green bond, a green sukuk combines a normal sukuk with green components (The World Bank, 2020). The green sukuk market must change. Ethical issues demand strong governance, expertise, and understanding as the green sukuk market grows. Green sukuk should appeal to traditional investors if their profits outweigh their hazards (Bin Zaidan et al., 2020).

The characteristics of Islamic green sukuk are summarised as follows: it symbolizes the ownership of the holder or owner of common shares in income-generating assets, whether they be items, benefits, services, a combination of them, or moral rights, and not a debt due by their source. The prospectus states its legal nominal value. Sales and *Salam* sukuk are non-negotiable, however *Mudaraba*, *Musharaka*, and *Ijarah* are negotiable. The deed cannot be divided against the company, and if it is transferred to two or more people, one person must represent them all. The right to profit and the ability to suffer loss mean that the instrument’s owner shares in the profit according to the prospectus’ criteria, and the debtor is held liable in proportion to his sukuk (Lasoud, 2020).

2.2. The features of financial sustainability in Saudi Arabia in the light of Vision 2030

Globally, implementing the 2030 Agenda and the Sustainable Development Goals (SDGs) to achieve long-term sustainability through integrated green finance policies is a major problem. The 2030 Agenda promoted economic development, full and productive employment, and decent work for all. Sustainable economic growth requires society to provide quality employment that boost the economy and protect the environment (United Nations [UN], 2018).

The notion of sustainability has gotten a lot of attention in the modern world because of the growing desire to conserve the environment and establish a strong business image (Alseiri & Nobanee, 2020). Due to the interrelated expansion of the economy, society, and environment in the 21st century, the green economy and green finance have

driven economic progress. Since the United Nations Climate Change Conference of the Parties, global environmental governance has prioritized low-carbon green development to transition to a green economy. Green finance prioritizes human-environment interaction above traditional finance (Zhou & Cui, 2019).

Islamic funding is integral to “green” economics and ethical green project criteria. Thus, environmental preservation and sustainability support Islamic finance’s purpose of societal well-being. Sharia law and the UN SDGs aim to safeguard the environment and adapt to climate change (Obaidullah, 2018).

Financial institutions may expedite sustainability and carbon neutrality. Finance can boost sustainability. Investor concerns about stranded assets, climate policy and climate impact risks, who is financing unsustainable economic activity, and how environmental, social, and governance (ESG) dimensions affect asset financial performance (Maltas & Nykvist, 2020). Green bonds are fixed-income products that fund environmental projects. Green bonds vary from ordinary bonds in that the issuer guarantees to utilize the proceeds entirely to fund or re-finance green initiatives (Doronzo et al., 2021).

Saudi Vision 2030 emphasized modernizing laws to compete with industrialized nations. The Vision is to boost Saudi Arabia’s sukuk market and investment capability by investing in global giants and cutting-edge technologies. This ensures market makers in specific sectors and a competitive asset, finance, and investment management leader. All of this requires the formation of a sophisticated global financial and capital market to provide funding options and boost economic growth. As a result, investment and trading in the stock markets would be more accessible (The Council of Economic Affairs and Development, 2016).

Vision 2030 calls for creative and ethical energy and climate solutions worldwide. Saudi Arabia’s Group of 20 (G20) presidency supported the circular carbon economy (CCE). CCE reduces, reuses, recycles, and eliminates carbon while encouraging long-term economic development and variety. The world can fulfill energy and climate demands while pursuing sustainable growth by cutting emissions and increasing carbon capture, usage, and storage. Signature projects use Saudi Arabia’s substantial solar and wind power potential and energy efficiency investments to diversify energy resources and improve the Kingdom’s energy mix. Saudi Arabia’s vast solar and wind power potential and significant investments in sustainable technology have been used to diversify energy supplies and optimize the Kingdom’s energy mix. The 50% of electricity will be renewable by 2030. Renewable energy projects reduce emissions and electricity generation using high-value fuels, making them crucial to sustainability (Brahim, 2018).

Green bonds and sustainable financing should be the emphasis of sustainability policy. Green bonds finance climate change and environmental programs, boost energy efficiency, and decarbonize the economy (Haq et al., 2021). Climate change, seas and land-based ecosystems, sustainable consumption and production, and economic

sustainability include inclusive growth, jobs, infrastructure, and industrialization (Ismail, 2016).

The green finance market is a credit gateway for environmental protection funds, with the hope that social investment will channel funds into more socially acceptable economic development drivers. Sustainable investment has skyrocketed because of worries about global environmental sustainability and the necessity for enterprises to maintain their social license (Gilchrist et al., 2021).

2.3. The challenges of issuing green sukuk

Green sukuk is a popular climate-change funding instrument. However, as a novel instrument, it confronts its own set of challenges that need fast identification and government intervention to speed its growth (Keshminder et al., 2022). Issuing Islamic sukuk is hindered by the lack of qualified Islamic consultants and counselors (Altaieb & Alkhatib, 2016). Due to uncertainty around the word “green” and a lack of green sukuk awareness, stakeholders struggle to grasp the sukuk business process during project planning (Abubakar & Handayani, 2020; Setiawan et al., 2019).

Green sukuk faces several obstacles. First, the secondary market for green sukuk is small due to the small number of investors holding sukuk funds and other institutional investors that need a robust secondary market for liquidity. Second, green bonds/sukuk performance is neither standardized nor verified. Green sukuk may increase investor risk. Many environmentally friendly initiatives need new technology to construct and operate green technologies. Fourth, it's hard to convince investors that sukuk profits would be used wisely while meeting environmental standards (Brahim & Rezzig, 2018). Shariah experts are not involved in creating a robust regulatory framework for a fast-changing green sukuk market. No national green bond framework exists (Bahari et al., 2016).

The green sukuk market lacks data, making it hard to evaluate its performance and identify potential growth barriers. Thus, there is no market evidence that green sukuk yield higher returns to issuers. There is no evidence that green sukuk decreases capital costs for low-carbon projects or enterprises. As global demand for green bonds and sukuk rises, investors struggle to engage in their home markets due to definition and norm differences (Shishlov et al., 2016). Green standards are inconsistent despite independent verification agencies' attempts (Irvine et al., 2014).

The lack of institutional capacities related to the formulation and implementation of environmental policies is the biggest challenge facing many developing countries wishing to transition to a green economy, and this necessitates concerted efforts from all relevant authorities with the goal of building self-capacity in this field.

Green sukuk struggle to develop and spread due to several difficulties. These difficulties are legal, regulatory, or country assessment-related. Sukuk are hard to sell abroad. The creation of laws and regulations that make these sukuk acceptable to governments, investors, and politicians takes time, which raises sukuk costs. Creating a local legal and regulatory framework for these instruments is a short-term answer (Ahmed, 2020).

The current regulatory framework may not be enough to let Islamic institutions capitalize on the growing demand for socially responsible investments. Due to a dearth of shariah expertise, a credible regulatory framework for a rapidly expanding green sukuk market cannot be built. Green initiatives require modern technology, hence green sukuk may be riskier (Tabassum et al., 2019).

Nehal (2021) listed several challenges of green sukuk. Green sukuk may be riskier due to its high technological content. Green sukuk might boost the Islamic capital market. It has a small secondary market, which investors require for liquidity. Green sukuk performance is untested. Green sukuk requires strict supervision due to its significant amounts of money. Most Islamic financial instruments mimic conventional ones. Sukuk market behaviour mimics conventional bonds (Bahari et al., 2016). Lack of understanding of the potential benefits of a market Green Sukuk and associated international regulations and standards are major obstacles (Azaizia, 2020).

2.4. The potential of implementing green sukuk

Green securities should attract investors wishing to diversify their portfolios and support environmental projects (Doronzo et al., 2021). The Islamic Development Bank (IsDB) issued green sukuk first (The World Bank, 2020). Green bond issuance announcements boost stock prices, profitability, operational performance, innovation capability, and investor interest (Zhou & Cui, 2019). Green sukuk programs can provide affordable, sustainable energy to everyone, alleviating poverty and inequality (Nehal, 2021).

Green sukuk can enhance the market and bridge traditional and Islamic currencies. If they meet these criteria and fund a sustainable initiative, investors may be interested. Green sukuk gives investors great confidence that their money will be used to a specific extent and that sukuk funds will be invested in known assets and projects in conformity with Islamic Shariah criteria. They help environmental investors close the fixed-income gap (Brahim & Rezzig, 2018). Global sukuk issuers may expand funding if the market recovers. Sustainable, green, and hybrid sukuk will also innovate (Keshminder et al., 2022).

Green sukuk's clever, adaptable nature helps it gain popularity (Taoual, 2016). To overcome green sukuk's challenges, policy incentives can help the domestic market and advise investors to invest in *sukuk* that meets their needs (Azaizia, 2020). Common responsible finance sukuk requirements may help the market grow and spread (Richardson, 2020).

Green sukuk's flexible payment intervals can improve credit quality and save costs by concentrating on the project's long-term deadlines (Curley, 2014). Green sukuk stakeholders will benefit from a uniform reporting system that outlines all green sukuk characteristics. Green sukuk definitions are still unclear (Tabassum et al., 2019).

Green sukuk instruments have several benefits over private finance techniques. First, they are marketable capital market instruments with easy transferability and exit. Second, risk diversification may be offered through green sukuk based on

a portfolio of projects. This might solve renewable energy deployment's economic feasibility problems (Alam et al., 2016). Green sukuk, according to Gianfrate and Peri (2019), can increase a firm's worth in the short run since the cost of less-than-certified tokens exceeds the issuer's interest. When a firm offers green sukuk to benefit shareholders, its shares will be more liquid (Tang & Zhang, 2020). Capital-intensive institutional activities can be funded with green sukuk (Flammer, 2020).

Long-term funding makes sukuk issuance desirable. *Green sukuk* is necessary for environmental protection (Abdullah & Nayan, 2020). It can fund expensive institutional projects. *Green sukuk* has enhanced companies' environmental performance, lowering manufacturing carbon emissions and increasing green patents and investors (Wang, 2021).

2.5. The current framework adopted by the Saudi Electricity Company as a model

There is a growing demand for electricity in Saudi Arabia due to the country's rising population. The administration wants to reduce fossil fuel use, aggressively introduce renewables and nuclear electricity, and increase efficiency while increasing generation capacity to 120 gigawatts (GW) by 2032. The Kingdom also plans to liberalize the industry and increase private sector participation (El Tahir & Khunkaev, 2017). Saudi Electricity Company, a state-controlled listed electric utility, launched two gas-fired integrated solar combined cycle tenders for Dibba City. It is Saudi Arabia's main conventional energy procurer and has a well-oiled independent power project procurement strategy. One of the world's largest independent power projects, it funded the 1,200-megawatt (MW) Rabigh 1 project, the 1,729-megawatt Riyadh PP11 project, and the colossal 3,927-megawatt Qurayyah project (Stevens, 2013). SEC was the first utility firm in the Middle East to issue a green sukuk, and it was the largest Green/ESG corporate issuance in the Kingdom in 2020 (Saudi Electricity Company, 2021).

The generation, transmission, and distribution of electricity inside the Kingdom, the GCC's largest economy, are the main economic operations of the SEC Group. The SEC's sustainability approach is based on three major ESG goals: 1) easing the transition to a low-carbon and circular economy, 2) empowering our people and communities, and 3) facilitating ethical business practices (Custers, 2020). Renewable power generation can aid in the achievement of wider environmental goals, such as lowering greenhouse gas emissions (El-Katiri & Husain, 2014; Krupa & Poudineh, 2017).

Saudi Power Company and its affiliates (the SEC Group) are the Kingdom's main energy producers and oversee power transmission and distribution. It's still the region's biggest electricity provider. SEC's strategy also aims to improve power plant efficiency and transition to a cleaner energy mix, including the complete displacement of liquid fuel by 2030, increase environmental compliance, improve the reliability of the electricity transmission network to enable renewable energy production and improve its interconnectivity, both internationally

and within the Kingdom. These include automating distribution networks and improving end-user satisfaction in the Kingdom (Saudi Electricity Company, 2021).

The "framework" applies to green sukuk issued by the Securities and Exchange Commission (SEC) on or after June 2020. Proceeds usage and management are governed by the SEC green sukuk framework. The SEC shall oversee and allocate 100% of sukuk issuance net proceeds to eligible green projects. The sukuk's net revenues will support or refinance projects in one of two green project categories ("eligible categories"): energy efficiency or renewable energy. SEC's green sukuk framework has numerous pillars. First, SEC's Green Financing Committee evaluates and selects projects to be financed and/or refinanced and reviews this framework regularly. Second, use of funds eligible project types (renewable energy and energy efficiency). Project selection and assessment is another pillar. Proceeds management involves systematic internal monitoring of allotted monies. Each green sukuk's net revenues will be deposited to a designated sub-account and put aside for distribution to eligible projects. If the project becomes ineligible, delayed, or divested, the Issuer will replace it with another Eligible project and reallocate the funds within 12 months. Reporting and external assessment also involve an annual allocation report that will be audited (Saudi Electricity Company, 2021; Vigeo Eiris, 2020).

SEC pays the capital expenses of connecting new renewable energy sources to the grid, including wind, plant, and station. SEC has approved a budgeted capital spending of Saudi Arabian riyal (SAR) 1.85 billion (US\$494 million) to integrate the Kingdom to the grid, phase 2 and 3 renewable energy capacity projects in accordance with the national renewable program, and to spend until 2023. The SEC expects these projects to increase grid-connected renewable energy capacity to 4,870 MWac. SEC expects cumulative investment in renewable energy integration projects to reach SAR 7.1 billion by 2025, adding 19 GWac to the grid (Saudi Electricity Company, 2021). The corporation expects 4.2 GW of renewable capacity additions by 2022 and 27.6 GW by 2030. The company also promises to eliminate inadvertent contamination and protect wildlife. The company's code of conduct and ethics encourages career management and training. Saudi Electricity Company has made a quantified commitment to employee and contractor health and safety: zeroing deaths (Vigeo Eiris, 2020).

SEC initiated a Smart meter (SM) and Distribution automation (DA) program to install smart meters and automate the distribution grid. As of 30 September 2021, SEC has installed 10.4 million smart meters, which will benefit the entire Kingdom by achieving the highest accuracy in monitoring consumption, improving service quality, increasing customer satisfaction, and optimizing natural and financial resources. Smart meters will optimize the Kingdom's energy usage, network demand-size control and power availability. Decentralized, adaptive, low-carbon energy systems require smart meters. Smart meters assist customers and energy providers (Saudi Electricity Company, 2021; Vigeo Eiris, 2020).

3. RESEARCH METHODOLOGY

The current research employs a qualitative descriptive research method to suit its purpose and scope of highlighting the challenges and potentials of green sukuk as a financial instrument to develop environmental funds in Saudi Arabia.

Secondary data were gathered through literature data collection techniques on research articles from various magazines, articles, published access journals, newspapers and public and government portals. The data were collected to reach the results, draw conclusions and come up with recommendations for developing a sustainable green economy in light of Saudi Vision 2030, in addition to a case study method.

The sample papers were gathered from a number of journal databases, including Google Scholar, Web of Science, Emerald in Sight, Pearson, and ProQuest. The interpretive technique is used to compile, choose, and categorize the research papers.

It used a collection of papers extracted from various academic journals and rearranged chronologically. After screening the abstracts, seven studies were deleted for not meeting criteria. After full manual search and thorough screening of the articles, four relevant articles were added. Additionally, the time frame for collecting data was from September 2021 to May 2022.

To organize the current evidence, it carried out a systematic literature review in accordance with Tranfield et al. (2003), who see a literature review as a critical instrument in managing the diversity of information for a given academic question.

For the review procedure, five phases were determined. First, identifying keywords and searching phrases for the systematic search. Second, is filtering the outcomes. Third, evaluating the quality of the studies. Fourth, data extraction and synthesis were included in the systematic review. Finally, in terms of the case study, the Saudi Electricity Company was selected and analyzed as it is the first green Sukuk issued in Saudi Arabia.

4. RESULTS AND DISCUSSION

In the light of attempting to control the environmental changes around the world, several terms have been appeared in the world of bonds and sukuk, such as green and climate bonds. Green bonds are financial securities that are issued to increase funding for climate or environmental projects. Green sukuk, on the other hand, is the Islamic equivalent. Green sukuk is a massive phase that will hopefully bridge the gap between conventional and Islamic financing. The World Bank issued the first green bonds in 2008 as an innovative tool to attract funds from fixed income investors to support The World Bank financing to qualifying climate change mitigation and adaptation projects. Recently, green sukuk is getting more attention as the main resources of environmental financing and transition to a low-carbon economy. The global green sukuk market is also developing rapidly.

Saudi Arabia's Vision 2030 promotes sustainable development through green finance and green sukuk. Green finance benefits the environment (Rapi et al., 2021). Limiting global warming to 1.5 degrees Celsius and preventing catastrophic climate change requires green financial mobilization. The government would have to redirect funding.

Green sukuk supports low-carbon investing. Green sukuk, a novel, low-issuance product, follows Islamic law. Innovative Islamic financial instruments like green sukuk help the SDGs as Islamic banking grows (Islamic Finance Council, 2021).

Saudi Arabia has long led the global oil industry, boosting global economic growth. Saudi Arabia's Vision 2030 prioritizes sustainability in policy, investment, planning, and infrastructure. Vision 2030 inspires people worldwide to solve today's energy and climate problems creatively and responsibly (Clarke, 2007). Green sukuk to fund sustainable infrastructure can help grow this market and bridge the gap between conventional and Islamic finance. Environmentalists and sukuk investors want their money to represent their principles. Sukuk investors and traditional environmental investors may be interested in green sukuk funding and environmentally friendly infrastructure projects like renewable or clean energy projects because sukuk are based on a specific pool of assets (Brahim & Rezzig, 2018). Despite its benefits, green sukuk has various challenges. Issuers have limited credit absorption capacity and green sukuk standards costs, according to the literature. Investors have limited investment pipelines, data and analytical skills, and a lack of green sukuk indices, listings, and ratings (Azhgaliyeva et al., 2020). Legal and regulatory frameworks must be revised to promote green capital markets (Ahmed, 2020). To raise awareness, the government must deploy many marketing methods. Issuer capabilities, project sources, large-scale issuance, stakeholder involvement, and support for green bond standards will influence green bond growth (Chugan et al., 2017).

More government involvement is needed to boost green sukuk and lead the green agenda. Since green sukuk is new, the government should issue it (Keshminder et al., 2022). The government may sell Green sukuk to foreigners to support green initiatives. Crowdfunding allows people to donate to shariah-compliant public projects that benefit the public. Zero-coupon sukuk and blockchain-based Islamic financial solutions can also be launched using the same methodology. Islamic crowdfunding can generate the maximum money for green sukuk and comparable projects while gaining certification from international rating organizations and climate action programs (Nehal, 2021).

Renewable energy strategies and execution will require closer cooperation between governments and industry players. Market circumstances may offer a once-in-a-lifetime opportunity. Creative finance with a new business model must replace debt-based financing, which may have contributed to the 2008 global financial crisis (El Tahir & Khunkaev, 2017). If risk-adjusted returns and promotion are good, traditional investors should like sukuk (Brahim & Rezzig, 2018). Furthermore, because the green sukuk market is still developing, governments should make greater efforts to expand the green sukuk market internationally. To raise investor knowledge of green sukuk and sustainable environment initiatives, a variety of dependable investment channels may be used. Innovative green Islamic finance systems can help to enhance the green economy. During crises and pandemics, such as the unique COVID-19 pandemic, governments might provide special green sukuk to entice investors.

5. CONCLUSION

This research identified and analyzed the green sukuk issuance, its challenges and potential for sustainability in the light of Saudi Vision 2030. It hence drew the following important findings. There are a number of challenges to the issuing of green sukuk, including a lack of institutional capacity, a lack of institutional understanding of its advantages, a lack of a standard for assessing it, and the lengthy process needed to structure and authorise it. The results have several implications (theoretical and practical). In terms of the theoretical implications, this research contributes to the literature by validating the challenges and potential of green sukuk on sustainability. The results also could help financial regulators develop green sukuk guidelines. Though, it contributes to knowledge by adding literature on green sukuk/bonds and sustainability to the existing body of accounting and finance in Saudi Arabia or abroad. The current research has certain limitations. It is restricted to discussing green sukuk in Saudi Arabia. It can be replicated on a larger sample. Additionally, it employs a qualitative descriptive research method to suit its purpose. Secondary data were gathered through literature data collection techniques on research articles from various references, in addition to a case study method. Further research is recommended to utilize an instrument e.g., questionnaire to collect data quantitatively.

The results of this research offer practical implications for different stakeholders, such as financiers, consultants, investors, policymakers, government and the community in the context of the potential effects of green bonds and sustainability, this study may be useful in their future financial plans and decisions as being environmentally friendly and sustainable.

Moreover, it informs many organizations to promote green sukuk investment and take into account their involvement in social concerns. To

implement green sukuk, policymakers and the government should offer enough assistance. The findings primarily suggest that Saudi SMEs should begin planning to incorporate ESG principles into their operations and publish ESG reports regarding those activities.

Due to the global concern about implementing a green economy as a response to reduce the effects of climate change, green sukuk has become a necessary financial instrument. In the light of Saudi Vision 2030, Saudi Electricity Company has issued the first green sukuk framework. Green sukuk as a new instrument encourages governments to increase fund to carryout sustainable development projects. It provides a unique opportunity to mobilize economy for energy renewable energy projects and efficiency. Since green sukuk concerns with ecologically sustainable initiatives, it appeals to many investors. Nevertheless, green sukuk issuance faces some challenges such as the lack of clear definition, lack of awareness regarding its benefits, the absence of green sukuk measurement standard and strong framework, the lack of institutional capacities in terms of formulating and implementing environmental policies, and the length of time to structure and legalize green sukuk. Moreover, a clear definition should be stated to reinforce green sukuk issuance. Governments should increase the investors' awareness about the benefits of green sukuk. Additionally, a strict measurement standard is highly recommended. To attract more investors, green sukuk can be issued in different foreign currencies. Furthermore, governments and economy stakeholders should cooperate to carry out green projects and broaden green sukuk market and foreign investment.

Future studies might employ qualitative approaches such as interviews and questioning, as well as quantitative ones. Moreover, few researches have been conducted on green sukuk in Saudi Arabia. More study requires a broader geographic scope.

REFERENCES

1. Abalkhil, W. A. A. (2018). *Islamic finance in Saudi Arabia: Developing the regulatory framework* [Doctoral dissertation, University of Exeter]. University of Exeter. <http://hdl.handle.net/10871/33596>
2. Abdullah, M. S., & Keshminder, J. S. (2022). What drives green sukuk? A leader's perspective. *Journal of Sustainable Finance & Investment*, 12(3), 985–1005. <https://doi.org/10.1080/20430795.2020.1821339>
3. Abdullah, N., & Nayan, M. A. (2020). Green sukuk: Financing the future to sustainable environment. *International Journal of Zakat and Islamic Philanthropy*, 2(2), 14–23. http://journal.zakatkedah.com.my/wp-content/uploads/2020/09/Vol2_2_14-23.pdf
4. Abubakar, L., & Handayani, T. (2020). Green sukuk: Sustainable financing instruments for infrastructure development in Indonesia. In *Proceedings of the 1st Borobudur International Symposium on Humanities, Economics and Social Sciences (BIS-HESS 2019)*. Atlantis Press. <https://doi.org/10.2991/assehr.k.200529.206>
5. Ahlam, M., & Abdel Majeed, Q. (2016). Madaa 'iimkaniat alaistifadat min alsukuk alkhadra' fi tamwil masharie altaaqat fi aljazayir [The extent of benefit possibility from green sukuk in financing energy projects in Algeria]. *Journal of the Institute of Economic Sciences*, 20(2), 123–156. <https://www.asjp.cerist.dz/en/article/51461>
6. Ahmed, M. (2020). Alsukuk alkhadra' [Green sukuk]. *Middle East Research Journal*, 8(58), 207–254.
7. Al Ajlouni, A. T., & Habeeb, M. A. A. (2020). Municipal sukuk as a model for financing municipalities and public service institutions in Saudi Arabia. In *the Fifth International Conference of Faculty of Business "Roadmap for a Sustainable Development"*. <https://doi.org/10.2139/ssrn.4101102>
8. Alam, N., Duygun, M., & Ariss, R. T. (2016). Green sukuk: An innovation in Islamic capital markets. In A. Dorsman, Ö. Arslan-Ayaydin, & M. B. Karan (Eds.), *Energy and finance: Sustainability in the energy industry* (pp. 167–185). Springer. https://doi.org/10.1007/978-3-319-32268-1_10
9. Aljazira Capital. (2010). *Saudi capital market financing role*. https://www.aljaziracapital.com.sa/en/page/awareness_detail/1912
10. Aliyu, S., Hassan, M. K., Mohd Yusof, R., & Naiimi, N. (2017). Islamic banking sustainability: A review of literature and directions for future research. *Emerging Markets Finance and Trade*, 53(2), 440–470. <https://doi.org/10.1080/1540496X.2016.1262761>
11. Alseiyari, K., & Nobanee, H. (2020). *The role of green bonds in aiding sustainable development*. <http://surl.li/lnrcp>

12. Altaieb, G. S., & Alkhatib, A. Y. (2016). Sovereign Islamic sukuk and the economic development: A case study of Jordan. *European Journal of Business and Management*, 8(32), 115–118. <https://core.ac.uk/download/pdf/234627602.pdf>
13. Alwakid, W., Aparicio, S., & Urbano, D. (2021). Governmental supportive policies for green entrepreneurial activity in Saudi Arabia: An institutional analysis. In N. Faghih, & A. H. Samadi (Eds.), *Legal-economic institutions, entrepreneurship, and management: Perspectives on the dynamics of institutional change from emerging markets* (pp. 177–197). Springer. https://doi.org/10.1007/978-3-030-60978-8_8
14. Azaizia, S. (2020). Green bonds as a mechanism to support financing environmentally responsible investments – An analytical study of the global trend. *Dirassat Journal Economic Issue*, 11(2), 1–17. <https://doi.org/10.34118/djei.v11i2.720>
15. Azhgaliyeva, D. (2021). *Green Islamic bonds*. Asian Development Bank Institute. <https://www.adb.org/sites/default/files/institutional-document/691951/ado2021bn-green-islamic-bonds.pdf>
16. Azhgaliyeva, D., Kapoor, A., & Liu, Y. (2020). Green bonds for financing renewable energy and energy efficiency in South-East Asia: A review of policies. *Journal of Sustainable Finance & Investment*, 10(2), 113–140. <https://doi.org/10.1080/20430795.2019.1704160>
17. Bahari, N. F., Ahmad, N. W., Shahar, W. S. S., & Othman, N. (2016). A review on the potential growth of Sukuk, issues and its challenges. In *Proceeding of the 2nd International Conference on Economics & Banking 2016 (2nd ICEB)* (pp. 395–403).
18. Basyariah, N., Kusuma, H., & Qizam, I. (2021). Determinants of sukuk market development: Macroeconomic stability and institutional approach. *The Journal of Asian Finance, Economics, and Business*, 8(2), 201–211. <https://doi.org/10.13106/jafeb.2021.vol8.no2.0201>
19. Bin Zaidan, F., Bodia, F., & Shleihy, E. (2020). Alsukuk alkhadra': Sinaeat maliat mustadanamat — Ruyat ealamia [Green sukuk: A sustainable financial industry — World view]. *Revue des Reformes Economique et Intégration dans L'économie Mondiale*, 14(1), 278–289. <https://www.asjp.cerist.dz/en/downArticle/211/14/1/115340>
20. Boutti, R., & El Mosaid, F. (2015). Sukuk ou les green sukuk: Une opportunitè prometteuse pour le financement des energies renouvelables [Sukuk or the green sukuk: A promising opportunity for the financing of renewable energies]. *Revue de Recherches en Economie et en Management Africain*, 2(2), 4–33. <https://revues.imist.ma/index.php/CREMA/article/view/8163/4608>
21. Brahim, C. T. (2018). The role of green Islamic sukuk to the promotion of sustainable development objectives. *Journal of the New Economy*, 1(20), 186–207. <https://www.asjp.cerist.dz/en/downArticle/296/9/3/60503>
22. Brahim, C. T., & Rezzig, K. (2018). The contribution of green Islamic sukuk to the promotion of sustainable development objectives-opportunities and challenges. *Journal of the New Economy*, 9(3), 186–206. <https://www.asjp.cerist.dz/en/article/60503.Chung>
23. Cakir, S., & Raeli, F. (2007). *Sukuk vs. Eurobonds: Is there a difference in value-at-risk* (IMF Working Paper No. WP/07/237). International Monetary Fund. <https://doi.org/10.2139/ssrn.1087156>
24. Chugan, P. K., Mungra, Y., & Mehta, K. (2017). Challenges and policy implications for marketing green bonds. In T. Joshi, J. P. Aagja, & S. Parashar (Eds.), *Consumer behaviour & contemporary marketing strategy* (pp. 371–384). Excel India Publishers. <https://ssrn.com/abstract=2937627>
25. Clarke, K. (2007). A modernization paradox: Saudi Arabia's divided society. *Harvard International Review*, 29(3), 30–33. <http://www.jstor.org/stable/43650210>
26. Curley, M. (2014). *Finance policy for renewable energy and a sustainable environment* (1st ed.). CRC Press. <https://doi.org/10.1201/b16693>
27. Custers, D. (2022). *Visiting Riyadh: A look at Saudi Arabia's social and cultural transformations*. STIMSON. <https://www.stimson.org/2022/visiting-riyadh-a-look-at-saudi-arabias-social-and-cultural-transformations/>
28. Doronzo, R., Siracusa, V., & Antonelli, S. (2021). *Green bonds: The sovereign issuers' perspective (Markets, infrastructures, payment systems)* (Working Paper No. 3). <https://doi.org/10.2139/ssrn.3854966>
29. El-Katiri, L., & Husain, M. (2014). *Prospects for renewable energy in GCC states: Opportunities and the need for reform* (OIES Paper No. MEP 10). Oxford Institute for Energy Studies. <https://doi.org/10.26889/9781784670092>
30. El Tahir, H., & Khunkaev, S. (2017). *Responsible investment: New thinking for financing renewable energy*. Deloitte. <https://ceif.iba.edu.pk/pdf/DeloitteReport.pdf>
31. Flammer, C. (2020). Green bonds: Effectiveness and implications for public policy. *Environmental and Energy Policy and the Economy*, 1(1), 95–128. <https://doi.org/10.1086/706794>
32. Gedikli, A., Erdogan, F., & Taş, C. Y. (2020). An investigation of sukuk in the GCC countries. *Bilimname*, 2020(42), 7–40. <https://doi.org/10.28949/bilimname.799483>
33. Gianfrate, G., & Peri, M. (2019). The green advantage: Exploring the convenience of issuing green bonds. *Journal of Cleaner Production*, 219, 127–135. <https://doi.org/10.1016/j.jclepro.2019.02.022>
34. Gilchrist, D., Yu, J., & Zhong, R. (2021). The limits of green finance: A survey of literature in the context of green bonds and green loans. *Sustainability*, 13(2), Article 478. <https://doi.org/10.3390/su13020478>
35. Hafay, A., & Raheima, S. (2018). Altamwil al'iislatmiu al'akhdar wadawruh fi khidmat altanmiat almustadama (alsanadat al'iislatmiat alkhadra' fi malizia 'unmudhaja) [Green Islamic finance and its role in the service of sustainable development (Green Islamic bonds in Malaysia as a model)]. *Journal of Economic Notebooks*, 9(2), 336–348. <https://www.asjp.cerist.dz/en/article/67953>
36. Haq, I. U., Chupradit, S., & Huo, C. (2021). Do green bonds act as a hedge or a safe haven against economic policy uncertainty? Evidence from the USA and China. *International Journal of Financial Studies*, 9(3), Article 40. <https://doi.org/10.3390/ijfs9030040>
37. Islamic Finance Council. (2021). *Innovation in Islamic finance: Green sukuk for SDGs*. https://www.ukifc.com/wp-content/uploads/2021/09/UKIFC21_Green_Sukuk_v1-2_20210927.pdf
38. Irvine, L., Griffy, M. P., & Cowman, A. (2014). Green sukuk: The race to be first. *Islamic Finance News*, 44, 28–30. <https://www.gulfcapitalmarket.org/wp-content/uploads/2017/05/Green-Sukuk-The-Race-to-be-First.pdf>
39. Ismail, A. G. (2016). *Sustainable development goals and the role of Islamic finance* [PowerPoint slides]. Kolej Universiti Islam Antarabangsa Selangor. <http://surl.li/logqm>
40. Keshminder, J. S., Abdullah, M. S., & Mardi, M. (2022). Green sukuk — Malaysia surviving the bumpy road: performance, challenges and reconciled issuance framework. *Qualitative Research in Financial Markets*, 14(1), 76–94. <https://doi.org/10.1108/QRFM-04-2021-0049>

41. Khodijah, I. (2018). The role of Islamic finance in economic development. *IQTISHADUNA: Jurnal Ilmiah Ekonomi Kita*, 7(2), 131-143. <http://ejournal.stiesyariahbangkalis.ac.id/index.php/iqtishaduna/article/view/135>
42. Krupa, J., & Poudineh, R. (2017). *Financing renewable electricity in the resource-rich countries of the Middle East and North Africa: A review* (OIES Paper No. EL 22). Oxford Institute for Energy Studies. <https://doi.org/10.26889/9781784670788>
43. Laskowska, A. (2017). The green bond as a prospective instrument of the global debt market. *Copernican Journal of Finance & Accounting*, 6(4), 69-83. <https://doi.org/10.12775/CJFA.2017.023>
44. Lasoud, R. (2020). Alsukuk al'iislatmiat alkhadra' namudhaj waeid liltamwil al'iislamii: Eurid libaed altajarib alealamia [Green Islamic sukuk is a promising model for Islamic finance: Presentation of some international experiences]. *Nour Journal of Economic Studies*, 6(10), 279-294. <https://search.emarefa.net/detail/BIM-1086066>
45. Lebelle, M., Lajili Jarjir, S., & Sassi, S. (2020). Corporate green bond issuances: An international evidence. *Journal of Risk and Financial Management*, 13(2), Article 25. <https://doi.org/10.3390/jrfm13020025>
46. Lin, L., & Hong, Y. (2021). Developing a green bonds market: The case of China (Working Paper No. 21/01). *European Business Organization Law Review*. <https://doi.org/10.2139/ssrn.3880280>
47. Maltas, A., & Nykvist, B. (2020). Understanding the role of green bonds in advancing sustainability. *Journal of Sustainable Finance & Investment*, 1-20. <https://doi.org/10.1080/20430795.2020.1724864>
48. Nehal, S. (2021). Green sukuk — A viable global financing option for climatic and environmental revolution (A practical instrument for the development of sustainable energy projects in Pakistan). *Karachi Islamicus*, 3(1), 1-16. <http://karachiislamicus.com/index.php/ki/article/view/36/23>
49. Noman, A. H. M., Pervin, S., & Alam, M. M. (2021). Financing renewable energy sector (RES) innovations. In W. Leal Filho, A. Marisa Azul, L. Brandli, A. Lange Salvia, & T. Wall (Eds.), *Affordable and clean energy* (pp. 645-654). Springer. https://doi.org/10.1007/978-3-319-95864-4_43
50. Obaidullah, M. (2018). Managing climate change: The role of Islamic finance. *Islamic Economic Studies*, 26(1), 31-62. <https://doi.org/10.2139/ssrn.3303687>
51. Otek Ntsama, U. Y., Yan, C., Nasiri, A., & Mbouombou Mboungam, A. H. (2021). Green bonds issuance: Insights in low- and middle-income countries. *International Journal of Corporate Social Responsibility*, 6(1), Article 2. <https://doi.org/10.1186/s40991-020-00056-0>
52. Ramadhan, I. A., & Wiryaningsih. (2020). Green sukuk issuance as an investment instrument for sustainable development. In *Proceedings of the International Conference on Law, Governance and Islamic Society (ICOLGIS 2019)*. Atlantis Press. <https://doi.org/10.2991/assehr.k.200306.189>
53. Rapi, K., Maisarah, S., Rambe, S. A. F., Chandra, W., & Rahmana, A. (2021). Green finance for the era of post COVID-19: A systematic literature. In *Proceedings of the Conference Towards ASEAN Chairmanship 2023 (T-A-C 23 2021)*. Atlantis Press. <https://www.atlantis-press.com/proceedings/t-a-c-23-21/125965523>
54. Richardson, E. (2020). Standardising responsible Islamic finance: A review of green, social and sustainability sukuk. *Kilaw Journal*, 8(8), 189-225. <https://doi.org/10.54032/2203-008-986-012>
55. Saudi Electricity Company. (2020). *Green sukuk framework*. https://www.se.com.sa/-/media/sec/Investors/Debt-Investors/Green-Sukuk/Green_Sukuk_Framework_Final.ashx
56. Saudi Electricity Company. (2021). *SEC green sukuk report*. <https://www.se.com.sa/en/Investors/Column2/Debt-Investors/Green-Sukuk>
57. Setiawan, A., Asidiq, Y., & Sholihin, R. I. (2019). A evaluation of publishing green sukuk in Indonesia. In *Proceeding ASEAN Youth Conference*. <https://www.studocu.com/id/document/universitas-islam-indonesia/economic/a-evaluation-of-publishing-green-sukuk-in-indonesia/44899178>
58. Shishlov, I., Morel, R., & Cochran, I. (2016). *Beyond transparency: Unlocking the full potential of green bonds*. Institute for Climate Economics. <https://www.cbd.int/financial/greenbonds/i4ce-greenbond2016.pdf>
59. Stevens, S. (2013). Islamic bonds go mainstream. Project Finance Newswire. <https://www.projectfinance.law/media/1580/pfn1013.pdf>
60. Tabassum, A., Diengdoh, M., & Vincent, G. (2019). Green sukuk: Challenges and potential. *International Journal of Social Science and Economic Research*, 4(2), 1461-1470. https://ijsser.org/files_2019/ijsser_04_106.pdf
61. Tang, D. Y., & Zhang, Y. (2020). Do shareholders benefit from green bonds? *Journal of Corporate Finance*, 61, Article 101427. <https://doi.org/10.1016/j.jcorpfin.2018.12.001>
62. Taoual, S. (2016). *Sukuk: A potential for stability and development in the GCC* (Economics Discussion Papers, No 2016-7). Kingston University. <https://eprints.kingston.ac.uk/id/eprint/34924/>
63. The Council of Economic Affairs and Development. (2016). *Saudi Vision 2030*. https://www.vision2030.gov.sa/media/rc0b5oy1/saudi_vision203.pdf
64. The World Bank. (2020). *Pioneering the green sukuk: Three years on*. <https://doi.org/10.1596/34569>
65. Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management*, 14(3), 207-222. <https://doi.org/10.1111/1467-8551.00375>
66. United Nations (UN). (2018). *The 2030 agenda and the sustainable development goals: An opportunity for Latin America and the Caribbean* (LC/G.2681-P/Rev.3). <https://repositorio.cepal.org/server/api/core/bitstreams/6321b2b2-71c3-4c88-b411-32dc215dac3b/content>
67. Vigeo Eiris. (2020). Second party opinion on the sustainability of Saudi Electricity Company green sukuk framework. <https://www.moodys.com/web/en/us/hosted-assets/spo-20200602-vigeoeiris-spo-sec-vf-copy.pdf>
68. Wang, Y. (2021). Analysis on the development of green bonds in China. In *Proceedings of the 1st International Symposium on Innovative Management and Economics (ISIME 2021)*. Atlantis Press. <https://doi.org/10.2991/aebmr.k.210803.035>
69. Zhou, X., & Cui, Y. (2019). Green bonds, corporate performance, and corporate social responsibility. *Sustainability*, 11(23), Article 6881. <https://doi.org/10.3390/su11236881>
70. Zuhail, H., & El-Shereif, O. (2018). Ahamiyat altawajuh nahw altamwil al'iislamii al'akhdar (alsanadat al'iislatmiat alkhadra'a) litaeziz altanmiat almustadamat mae al'iisharat 'iilaa halat malizia [The importance of going towards Green Islamic Finance (green Islamic bonds) to promote sustainable development with reference to the case of Malaysia]. *Journal of Business and Finance Economics*, 3(2), 49-68. <https://search.emarefa.net/detail/BIM-939961>