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THE ROLE OF GREEN BONDS IN ENHANCING ENERGY SECURITY IN JORDAN

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Abstract

This policy brief aims to provide recommendations for the utilisation of green bonds as a financial instrument in enhancing energy security in Jordan. The brief examines the European Union (EU) green bond market, with a particular focus on the French green bond market, and the European Green Bond Standard (EuGB), including regulatory frameworks and lessons learned to identify key insights and best practices applicable to the Jordanian context. The subsequent section will provide an overview of the energy landscape in the Mediterranean region, highlighting disparities, and discussing the critical role of green bonds in addressing energy security challenges. This will be followed by an overview of green bonds providing some background, history and types. Then, the brief will explore the French green bond market providing details on the current status, policies and contribution to energy security and comparing it with the current status of the green bond market and potential in Jordan. Finally, the paper concludes with policy recommendations on the utilisation of green bonds in Jordan for energy security.

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Introduction

The Mediterranean region, spanning both its Northern and Southern shores as shown in Figure 1, accounts for 7% of the total global energy demand (OME, 2022). The disparity in energy demand across the Mediterranean is substantial and starkly contrasting. In the Northern Mediterranean, energy demand has decreased by around 4% since 2010, attributed to moderate population growth, decelerating gross domestic product (GDP) growth and enforced energy efficiency measures. Conversely, the Southern Mediterranean has experienced a 6% increase in energy demand, driven by increased economic development accompanied by population growth (Drobinski et al., 2020). Future projections anticipate the current trend to persist (OME, 2022). Despite this divergence, both shores share a common vulnerability rooted in the heavy reliance and dependency on energy imports, mainly fossil fuel as it accounts for 65% in the North opposite to a staggering 92% in the South, exposing a vulnerability in energy security in the region (OME, 2022).

Figure 1: The Mediterranean Region (Mediterranean Energy Perspective 2015)

Southern Mediterranean		Northern Mediterranean	
Southwest	**Southeast**	**Northwest**	**Northeast**
Morocco	Turkey	Portugal	Croatia
Algeria	Lebanon	Spain	Bosnia and Herzegovina
Tunisia	Jordan	France	Serbia
Libya	Palestine	Italy	Montenegro
Egypt	Syria	Slovenia	Albania
	Israel	Malta	Greece
			Cyprus

The EU, including Northwest Mediterranean countries, have always had energy security as a priority on their agenda, especially with the high degree of dependency on energy imports, reaching a significant 55.5% in 2021 (Eurostat, 2021). Before the Russian-Ukraine war, Russia was one of the main suppliers for their energy needs, with 45% of gas, 27% of oil, and 46% of coal. As a result of the conflict, energy ties were broken between the EU and Russia, as the EU implemented multiple sanction packages on Russian imports, leading to a drastic reduction of 9% and 100% in oil and coal imports respectively in 2023. On the other hand, Russia made major decisions to decrease its natural gas supply to the EU by 83% (McWilliams et al., 2024; European Council, 2024). This situation has resulted in a substantial surge in energy prices within the EU, with oil, coal and gas prices rising by 40%, 130%, and 180% respectively, demonstrating the vulnerability of the EU's energy security (European Commission, 2022). Additionally, the repercussions of the Russian-Ukrainian conflict have resulted in unprecedented global energy price spikes leading to an increased inflation rate of 8.2% in the Southern Mediterranean region (Berahab et al., 2024).

Countries in the Southern Mediterranean such as Lebanon, Jordan and Morocco are highly vulnerable to energy security as they mainly rely on energy imports, making them susceptible to energy market volatility. As a result, countries in the region are actively pursuing strategies to enhance their energy security, putting them at the top of their agendas. This includes diversifying energy sources, boosting domestic production capabilities, and investing in renewables and energy efficiency measures (Vardakastanis & De Felipe Lehtonen, 2022). For instance, the EU has initiated the RepowerEU plan to phase out dependence on Russian energy imports and accelerate the green transition. This plan emphasises the role of the Southern Mediterranean in diversifying the EU's gas supply and promoting renewable energy cooperation and trade, positioning the region at the heart of the emerging energy landscape.

This transition towards fostering energy security aligns closely with the region's goals of achieving carbon neutrality in 2050, as all Mediterranean countries, except for Libya, have ratified the Paris Agreement as part of their international commitments to mitigate climate change and uphold the Kyoto Protocol. However, this transition requires substantial financing resources, as it is estimated that the region would require around 7 trillion euros to achieve climate goals and energy security in 2050, with the Southern Mediterranean accounting for 50% of this investment (OME, 2022). Therefore, the deployment of various financing instruments from governments, international agencies and the private sector is paramount, including green bonds.

Green bonds could play a role in offering a sustainable financing solution that aligns with the Mediterranean region's objectives of enhancing energy security and transitioning to a low-carbon economy. By attracting investment into renewable energy and energy efficiency projects, green bonds contribute to reducing reliance on imported fossil fuels and mitigating the risks associated with energy price volatility and supply disruptions. This strategic investment in clean energy infrastructure not only enhances energy security but also fosters economic resilience and environmental sustainability in the region.

A brief overview of green bonds

Green bonds can be thought of as a debt instrument issued by an entity (issuer) to raise funds designated for environmentally-focused projects and initiatives. These bonds are offered to investors in exchange for capital. Essentially, investors lend money to the issuer by purchasing these bonds, and in return the issuer commits to repaying the principal amount along with periodic interest payments.[1] Green bonds are categorised as an appealing option for investors due to their simplicity in terms of their functionality as an investment instrument, providing a seamless integration of environmental outcomes with a fixed-income portfolio (Reichelt & Keenan, 2017).

There are four main types of green bonds: a) Standard Green Use of Proceeds Bond; b) Revenue Bond; c) Green Project Bond;, and d) Green Securitised bonds. The Standard Green Use of Proceeds Bond is the most commonly issued type of green bond, defined as "an unsecured debt obligation with full recourse-to-the-issuer only and aligned with the Green Bond Principles" to finance environmentally-friendly projects, such as renewable energy or sustainable infrastructure (International Capital Market Association, 2021). Moreover, green bonds are categorised based on issuer type: a) Sovereign (national government); b) Corporate (private sector); c) Subnational (local states and municipalities) entities; and d) Supranational (international organisations) (European Environment Agency, 2023).

[1] Definition is based on the Green Bonds Principles (GBP) developed by the International Capital Market Association (ICMA). Green bonds are defined as "any type of bond instrument where the proceeds or an equivalent amount will be exclusively applied to finance or re-finance, in part or in full, new and/or existing eligible Green Projects and which are aligned with the four core components of the GBP."

The European Investment Bank (EIB) issued the first green bond in 2007, named the "Climate Awareness" bond, to support its commitment to the EU's active role in addressing climate change, with investments focused on renewable energy and energy efficiency fields. The following year, the World Bank issued its inaugural green bond in response to a request by a Scandinavian pension fund seeking a fixed-income investment opportunity designed to support the transition to a lower-carbon and more climate-resilient world. Since then, the green bond market has experienced tremendous growth over the years, reaching a cumulative record of 2 trillion euros at the end of 2022, despite a slight decrease due to the Russian-Ukrainian war that caused turmoil in the global markets, as shown in Figure 2 below.

Figure 2: Total amount of Green Bonds Issued Globally (Climate Bonds initiative 2023)

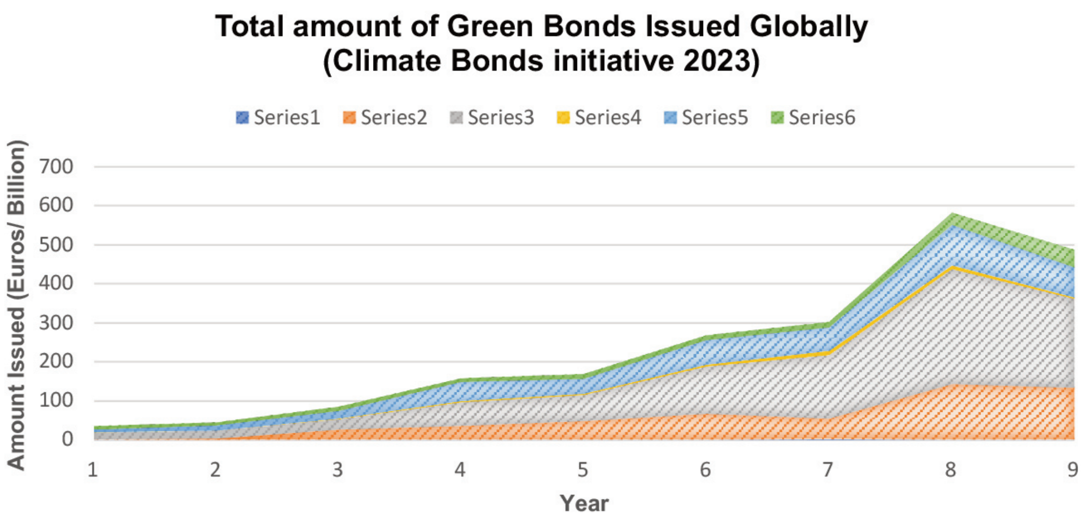
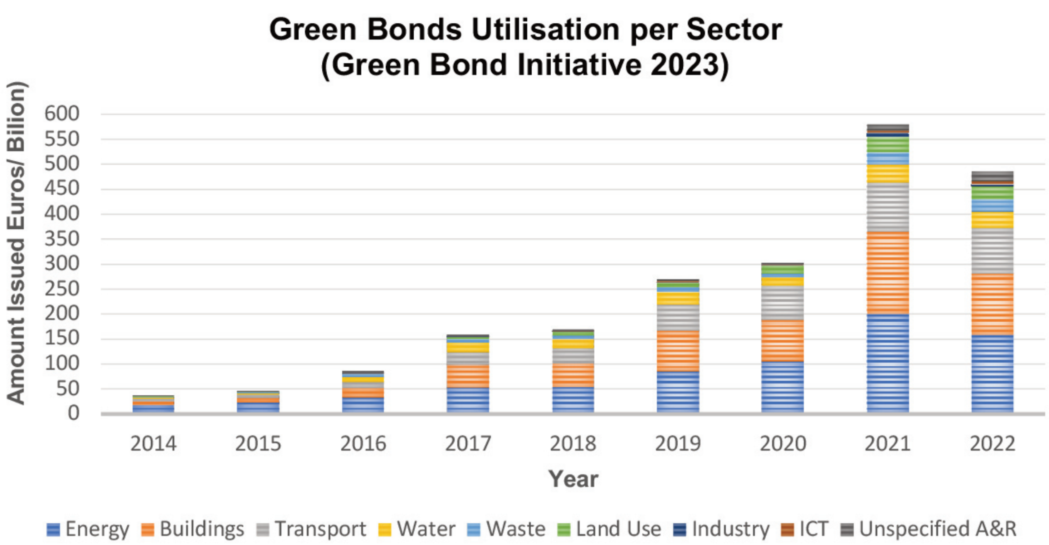


Figure 3: Total amount of Green Bonds Issued Globally (Climate Bonds initiative 2023)



Green bonds are issued in the primary financial market, but the rise of green bond indices enabled the development of green bonds Exchange Trade Funds (ETFs), promoting investment and liquidity in the green bond market. In 2023, the Green Bond Exchange Traded Fund (ETF) market grew by 20% against the previous year, which shows its importance to the green bond market (Climate Bonds Initiatives, 2023).

The market in Europe has experienced a significant surge during the last decade, and in 2022, green bonds accounted for 8.9% of total bonds issued while representing 47% of the total global green bonds (European Environment Agency, 2023; Climate Bonds Initiative, 2022).

Green bonds have been utilised across different sectors, with the energy sector dominating most investments, mainly on renewable energy and energy efficiency (buildings) as illustrated in Figure 3 below. This underscores the pivotal role of green bonds in facilitating the transition away from fossil fuel reliance, thereby enhancing energy security and achieving net zero goals, particularly in regions like the Mediterranean.

Green bonds in the Mediterranean

The green bond market in the Mediterranean region exhibits notable disparities. On the one hand, it is already well-established in the Northern Mediterranean (such as France and Italy) with numerous issuances supporting a wide range of environmental projects. On the other hand, the Southeast Mediterranean has only recently participated in the green bond market. Lebanon and Jordan entered this domain with corporate green bond issuances in 2018 and 2023 respectively, while Egypt marked a milestone in 2020 by issuing the first sovereign green bond in the region.

France's role in shaping the green bond market and the EU Green Bond Standard

France's pivotal role as the largest issuer of sovereign green bonds has been instrumental in driving the global advancement of this market. From the first bond issuance in 2017 to the release of its fourth in 2024, France has demonstrated a commitment to fostering green investments. Strong policies and legislative measures have propelled France to become one of the leading issuers, with a cumulative total of 52 billion euros in 2022, a significant increase from 9.7 billion euros in 2017 (Agence France Trésor, 2022). This surge can be attributed to robust policies and legislative measures that incentivise investments in green bonds.

Legislation such as Provision V1 of Article 173 of the French Energy Transition Act mandates climate institutional investors to regularly publish "climate reporting" regarding their investment decisions, making France a pioneer in instituting such a requirement within the financial sector. Additionally, in 2015, France introduced the "Transition Energétique et Ecologique pour le Climat" (TEEC) label for mutual funds, which is capital raised from different sources such as stocks and bonds, including green bonds, aiming to advance energy and environmental transitions. Inspired by the green bond principles (GBP), investments in these labels require more than 83.5% of the net assets to be allocated to green bonds. France's more diversified use of proceeds might also reflect the fact that it is the largest issuer of sovereign sustainable bonds and, thus, can fund more projects with these proceeds (Agence France Trésor, 2017). These legislative measures demonstrate France's robust framework that not only promotes the issuance of green bonds, solidifying its position as a leader in the global green finance landscape.

The European Union's response: the Green Bond Standard

Recognising the growing green bond market, the EU concluded that robust policies were needed to facilitate further expansion. In 2016, the EU conducted a comprehensive study on the potential of green bond finance for resource-efficient investments, highlighting key bottlenecks and challenges hindering market growth, such as the lack of clear framework and taxonomy for green bonds and limited availability of projects eligible for green bond financing while conversely recommending potential public sector measures and good practices to overcome these challenges (European Commission, Directorate-General for Environment, Eisinger, Hogg, & Cochu, 2016). The report also explored the regulatory feasibility and expected impacts of creating a standardisation option on the market liquidity and size, which laid the groundwork for the emergence of the EuGB. In 2018, the EU issued Action Plan: Financing Sustainable Growth tasking the Technical Expert Group with the formulating a report on the EuGB. The report proposed establishing a "Voluntary, non-legislative, EU Green Bond Standard" to improve the efficiency, transparency, comparability, and credibility of the green bond market, aiming to incentivise market participants to utilise and invest in EU green bonds. The EuGB, officially formulated and ratified in 2023, is designed to ensure that projects financed by green bonds deliver real environmental benefits and maintain integrity and trust in the green bond market.

The seven-year process underscores the significance of green bonds to the EU, recognising their potential investment value and the imperative to establish standards commensurate with the expanding global market. By establishing a unified framework for disclosure, supervision and assessment, these standards enhance transparency, reliability, and comparability across all green bond issuances. This harmonisation across member states facilitates cross-border investments, enabling issuers to tap into a wider pool of investors beyond their national borders. For individual state green bond markets, this standardisation fosters competitiveness, ultimately driving increased investment flows towards sustainable projects and initiatives. Moreover, by providing a clear and consistent set of guidelines, member states can ensure the integrity and effectiveness of their green bond markets, supporting their transition to enhance energy security (Official Journal of the European Union, 2023)

Southern Mediterranean bond market

The green bond market in the Southern Mediterranean region is still in its nascent stage. This market faces a dual challenge: some nations struggle with heavy debts, such as Lebanon, Jordan and Morocco, which have a debt to GDP ratio of 283%, 93% and 71% respectively, in addition to the significant reliance on concessional financing from development institutions. However, this reliance is often insufficient to meet the growing demand for green investments. Consequently, countries are increasingly turning towards the private sector to access funds by issuing bonds in both domestic and international markets. However, amidst these challenges, there are significant opportunities for growth and development within the green bond market. Despite the underdevelopment of domestic green bond markets, there is potential for expansion and improvement in the region's green finance sector, presenting avenues for sustainable development and attracting private sector investments to advance environmental goals.

Countries in the Southern Mediterranean region are taking significant steps towards fostering a robust green bond market by initiating the development of domestic guidelines. These efforts have translated into various green bond issuances, encompassing both corporate, as seen in Morocco, and sovereign, exemplified by Egypt.

The Jordanian green bond market
Introduction of green finance framework in Jordan

Jordan adopted green growth as a national priority in 2016, and three years later it ratified climate change by law, advocating for the promotion of climate action. One of the measures outlined was the identification of innovative financial and climate finance alternatives to expedite climate action across public and private sectors. To fulfil this mandate, the Ministry of Environment in Jordan developed the national green bond guidelines as a way to convene and coordinate with stakeholders to identify new avenues for finance. These guidelines were developed in alignment with the GBP, primarily to foster dialogue with private sector stakeholders interested in the green bonds market. The goal is to propel

Jordan towards issuing its first green bonds and test these guidelines through consultation on markets, regulators and verification towards full operationalisation.

Energy security challenges and the role of green bonds

Energy plays a crucial role in driving Jordan's economic development, supporting activities such as water pumping, industrial operations, transportation and essential services. However, Jordan is considered heavily reliant on fossil fuel imports, accounting for more than 90% of its energy needs, deeming it vulnerable in terms of energy security, especially in the face of rising energy prices and market volatility (The World Bank, 2022). Consequently, there is an increased emphasis on the importance of Jordan diversifying its energy mix and prioritising energy efficiency measures, highlighting the need for investments in green financial instruments such as green bonds.

Jordan's progress in green bond issuance

In 2023, Jordan achieved a significant milestone by issuing its first corporate green bond through the Jordan Kuwait Bank, supporting projects on clean energy, low-carbon transportation, sustainable water management and energy efficiency measures. The International Finance Cooperation led the investment in this green bond amounting to US$50 million in the five-year bond. Following the example of Egypt, Jordan is planning to issue its first sovereign green bond. This action is set to promote the growth of Jordan's corporate green bond market by creating a standard price and yield trend for the market. As a result, it is anticipated that there will be greater involvement from private sector entities and long-term institutional investors in initiatives that support Jordan's energy security (Central Bank of Jordan, 2023).

The potential of Islamic finance: exploring Green Sukuk

Given that Jordan is a majority-Muslim nation, Islamic finance emerges as a prominent avenue to promote Sharia-compliant investment options both domestically and internationally, thereby promoting the potential of "Green Sukuk" for financing. Green Sukuk, akin to green bonds, are interest-free instruments that offer returns to investors without conflicting with the Sharia principles, which prohibit interest payments. This presents an opportunity for Jordan to attract a broader range of investors. However, while both green bonds and sukuk are included in the official green bond guidelines, detailed regulations specifying issuance procedures, qualification criteria, use of proceeds, disclosure, and reporting are lacking. This gap underscores the need for the development of a comprehensive green bond framework, encompassing regulations and laws to formalise the process and attract investors.

Recommendations

Development of a regional Green Bond Standard: Drawing insights from the EU's experience and recognising the importance of standardising green bonds, collaboration could occur to create a unified framework in the Southern Mediterranean region. This standard would not only attract investment but also set clear principles and guidelines, enhancing the quality and impact of investments across the region, ensuring credible investments in environmentally-beneficial projects and promoting sustainable finance for economic growth.

Raising the awareness of stakeholders on green bonds: Given the novelty of green bond issuance in Jordan, it is crucial to enhance the financial and technical capacity among key stakeholders for the effective utilisation of green bonds. Therefore, collaborative efforts between the Ministry of Finance, the Ministry of Environment and the Central Bank of Jordan could provide capacity-building and training on green bonds to foster a deeper understanding of green bond concepts and opportunities, aiming to leverage green bonds as a vital financial tool to enhance Jordan's green finance sector as well as paving the way for the integration of green bonds into future national plans as a prominent financial instrument.

Development of a national green bond framework: This framework serves as a reference point for all green bond transactions encompassing principles, best practices and general guidelines for both investors and issuers. A clear framework would facilitate and attract investments, positing green bonds as an appealing and transparent avenue for investment in Jordan. Drawing insights from the European Green Bond Framework and Islamic Green Bond frameworks from other countries, this framework could be refined to provide a comprehensive and adaptable framework for Jordan's green bond market.

Accelerate efforts to create a National Green Taxonomy: The Green Finance Strategy of Jordan 2023-2028 emphasised and prioritised the development of a National Green Taxonomy as a critical component in the framework for greening the financial sector to improve market transparency and discipline. Therefore, expediting efforts to develop the National Green Taxonomy would facilitate increased investments in green bonds, as investors will have clear guidelines and comprehension of the green finance sector in Jordan.

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