

Arab experiences of green financing in reducing carbon emissions

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Abstract:

This study aims to know the extent of the impact of sustainable green financing in reducing carbon emissions by presenting several of Arab countries experiences, represented by Algeria, Morocco, Egypt, the United Arab Emirates and Saudi Arabia, by presenting the most important projects completed in green finance. Its problem also revolved around the role it provides. Mechanisms and initiatives in financing green investments to achieve green financing efforts to reduce carbon emissions, using the descriptive analytical approach to address the issues presented. The study reached to a number of results that green and sustainable financing have become one of the basic pillars and issues that preoccupy governmental bodies concerned with protecting the environment due to their extreme importance in Reducing carbon emissions, by highlighting the use of clean energy that reduces carbon in the production of electricity instead of fossil fuels, as the integration of green projects into the industrial sector and the exploitation of bio energies has become the direction and interest of several Arab countries. Sustainable green financing also addresses climate change while creating good jobs and Reducing excessive exploitation of natural resources and reliance on bioenergy

Keywords: green finance; sustainable development; Carbon emissions

JEL Classification: Q01 ,Q42 ,Q2

Introduction

In an effort to address the changes faced by the world, including environmental ones, industrial transformations and the emissions resulting from them have become an inevitable threat to the environment and the atmosphere, It has thus become necessary to adopt strategies and methods to mitigate these changes, The finance sector, unlike other economic sectors, specifically green finance, represents a new financial tool adopted by several governments as well as financial and banking institutions. This is done by developing financial instruments such as bonds classified as green, green loans, investment funds, and green insurance, with the aim of achieving sustainable development.

Green finance, in turn, stimulates and encourages the implementation of environmental projects and investments, supports innovation, and expands the adoption of what are called green solutions in various industrial sectors that are the primary contributors to emissions, in addition to service sectors and projects that preserve the environment. It also contributes to meeting basic needs through technologies that reduce carbon emissions, as well as financing alternative energy-saving equipment to ensure the safety of both humans and the environment. Therefore, green finance and sustainable finance have become the most effective approaches to achieving environmental change and vital necessities.

Its importance has grown, gaining priority over other forms of financing.

Based on this, the following research question arises:

Do the mechanisms and initiatives for financing green investments contribute to achieving the

Goals of green finance, particularly in reducing carbon emissions?

From the research question, the following hypotheses emerge:

-Green and sustainable finance may contribute to reducing carbon emissions by financing projects whose main pillars include preserving the environment from emissions resulting from industrial activities.

-Many Arab countries have increasingly sought to integrate clean energy into various sectors.

Objectives

- To determine the relationship between green finance and sustainable finance.
- To identify the most significant projects funded and established by some Arab countries in the field of green finance.

Methodology

The study of Arab experiences in green and sustainable finance to reduce carbon emissions requires the use of the descriptive-analytical method , This method involves collecting and analyzing information and data through the presentation of leading experiences and projects in green finance across various Arab countries.

2. General introduction to green finance:

2.1. Initial concepts of green finance

Since the emergence of the term green finance, definitions have varied among economists and environmental organizations.

2.2. First definition of green finance

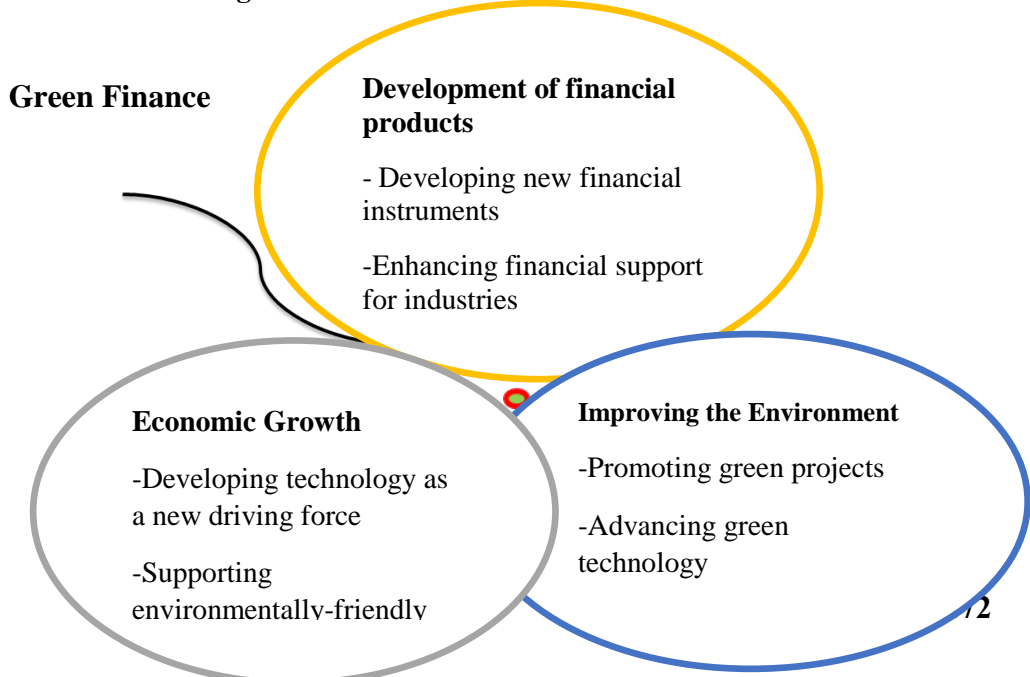
The Organization for Economic Cooperation and Development (OECD) defines green finance as “financing aimed at achieving economic growth while reducing pollution, greenhouse gas emissions, waste, and improving the optimal and sustainable exchange of natural resources” (Rokaya, 2021, p. 56)

2.2.1. Second definition of green finance

Green finance refers to financial services that enhance investment, financing, project operations, and risk management in areas such as environmental protection, clean energy conservation, green transportation, and green buildings (Abdel-Warith, 2023)

Green finance can be summarized as a core pillar that supports projects related to investment and lending while considering environmental impacts, promoting environmental sustainability, and fostering industries aimed at reducing carbon emissions.

Figure number 01: Concept of Green Finance



Source: (sachs, 2019, p. 41)

2.2.2. Characteristics and Areas of Green Finance

A. Characteristics:

Green finance has several characteristics, summarized as follows (Shahoum, 2018, p. 337) :

- It directs funds towards sustainable environmental projects, providing investors with a high degree of certainty that the funds will be used exclusively for green projects and not for other purposes.
- It attracts a large base of investors, being available to both traditional investors and those specifically interested in green investment to establish eco-friendly projects.
- Green finance meets sustainability requirements, enabling the financial market to offer more funding for infrastructure in emerging markets and economies.

B. Areas of Green Finance

Green finance is relatively new in terms of definitions and the areas it covers in environmental investment projects. Some of these areas include (Saleh, 2022, p. 11):

- Green finance focuses on projects aimed at achieving sustainable development and contributes to enhancing the financial stability of countries.
- Investment in green projects is a primary focus of green finance, addressing environmental and societal dimensions that aim for balance.
- To create a green, zero-carbon emission environment, countries worldwide need to invest in projects that preserve clean energy and wastewater management.

Additionally, green finance covers other areas as follows (Dofi Qarmiya, 2022, p. 204) :

- Sustainable transportation provides the essential needs for individuals and communities safely, without harming health, ecosystems, or the interests of future generations, and is the least polluting in terms of air, water, and soil.

Waste Management: Waste management involves recycling waste to produce other products of lower quality than the original product, such as recycling paper and plastic, Green waste management, creates jobs and offers unique investment opportunities in recycling, producing organic fertilizers, and generating energy.

2.2.3. Objectives of Green Finance:

Green finance, as one of the prominent new approaches to funding environmental projects, encompasses a range of objectives across multiple levels, summarized as follows (Dofi Qarmiya, 2022, p. 209):

A. Economic Level

Green finance aims to:

- Increase economic growth rates for countries
- Improve income levels and create job opportunities for individuals
- Attract investments and environmental projects.

B. Environmental Level

At this level, green finance focuses on:

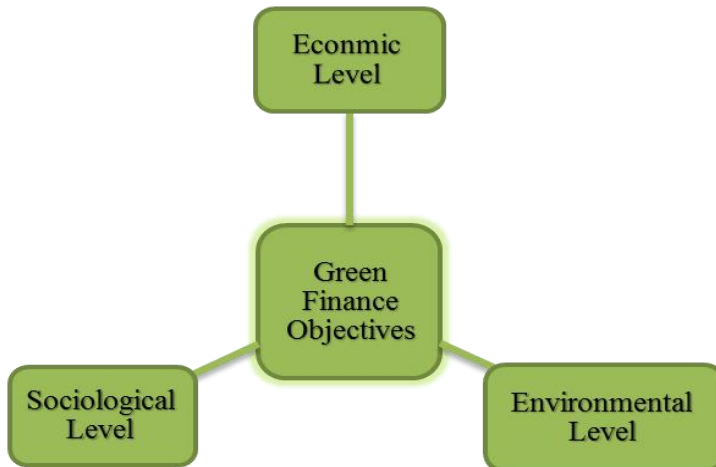
- Reducing carbon emissions
- Shifting towards the use of clean energy resources
- Establishing economic entities to take on environmental responsibility.

C. Social Level.

Green finance contributes to:

- Promoting welfare and equality
- Improving and adjusting lifestyles and fostering social development.

Figure number 02: Objectives of Green Finance.



Source: Prepared by the researcher based on the above.

2.3. Sustainable Finance

2.3.1. Definition of Sustainable Finance

Sustainable finance is a powerful tool that can be employed to foster balanced growth by transforming current threats of all forms into future opportunities. It encompasses managing environmental and social risks in banks' credit-granting or investment decisions. Furthermore, it includes

financing environmental projects such as renewable energy, energy efficiency, and social initiatives. (Egypt, 2023)

2.3.2. The Relationship Between Green and Sustainable Finance

As indicated earlier, sustainable finance represents the stock and flow of financial resources and assets provided by banking and investment services, aiming to achieve environmental objectives. In other words, one of its pillars is realizing the Sustainable Development Goals (SDGs). Similarly, there is no universally agreed definition of green finance. It is considered as returns derived from green bonds, green loans, or support for environmental projects by investors authorized to undertake such investments (dahmani ismail, 2022, pp. 552-553)

2.3.3. Challenges Facing Green Finance

While most countries worldwide are working to address climate change and its repercussions on development, access to funding for environmental projects remains one of the most significant challenges facing several Arab countries. These challenges include: (Salam, 2023)

- The low performance of actors in green finance in Arab countries, evident among financial intermediaries in both the banking and non-banking sectors, including investment institutions and financial markets.
- The underdevelopment of the green bond market, which remains ambiguous and demands substantial technical expertise. There is a general lack of Arab capabilities, particularly within regulatory bodies and stock exchanges.
- Weak awareness of the various sources of climate finance and limited stakeholder participation from investors, including the private sector. Additionally, some investors misuse green finance by falsely claiming their projects are environmentally friendly to secure funding. These claims are misleading and unrelated to actual environmental preservation.

3. Presentation of Experiences from Green Finance Projects in Arab Countries

3.1. The Experience of Algeria

Algeria has implemented several initiatives through the establishment of various funds, including the following:

A. National Fund for the Environment and Pollution Control

This fund was established to assist institutions in investing in projects aimed at reducing pollution and mitigating damage in high-risk areas of the country, while also improving their environmental and economic performance. The National Fund for the Environment and Pollution Control was created under the Supplementary Finance Law of 2001 and is financed through several sources, including:

- A tax on polluting or hazardous activities, contributing 75%.
- An additional tax on air pollution emitted from industrial sources exceeding the maximum permissible levels, also set at 75%.

The support provided by the fund includes the following:

- Supporting and encouraging activities focused on detecting pollution at its source.
- Promoting investments that incorporate clean technologies into projects.

B. National Fund for Land Management and Sustainable Regional Development

This fund was established under the Finance Law of 1995 to provide incentives for regional planning and environmental projects, including:

- Establishing public institutions employing at least ten permanent workers in regions associated with productive activities.
- Investing in economic projects that apply clean technology methods.
- Developing and restructuring urban areas through dedicated projects

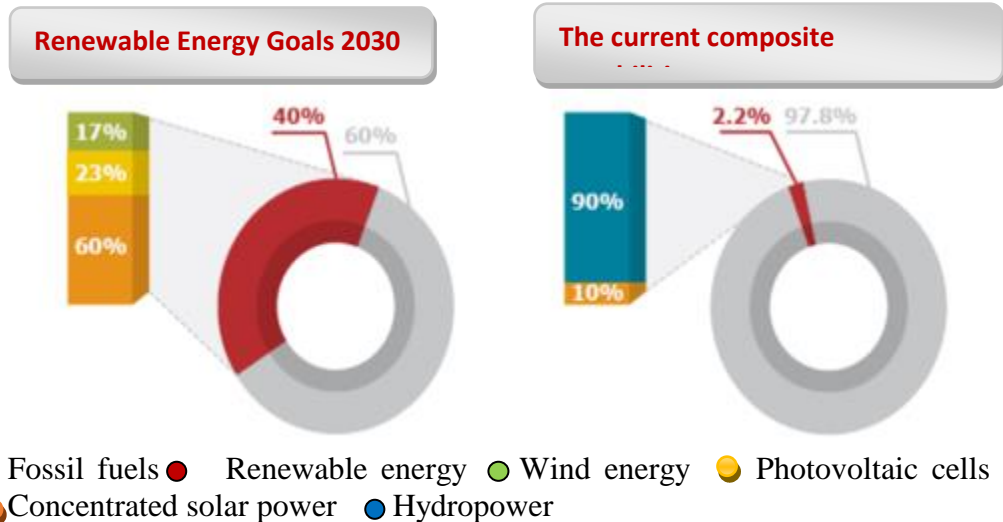
Table number01: Major Funds Supporting Green Finance Projects in Algeria.

| Funds | Area of Operation |
|---|---|
| National Fund for the Environment and Pollution Removal | <ul style="list-style-type: none"> • Supporting and encouraging activities that focus on pollution monitoring at the source. • Promoting investments that can integrate clean technology into projects. |
| National Fund for Regional Planning and Sustainable Development | <ul style="list-style-type: none"> • Investment in economic projects that apply clean technology techniques. • Establishing projects and working on the restructuring of urban fabric. |
| Anti-Desertification Fund for Rangeland and Steppe Areas | <ul style="list-style-type: none"> • Working on increasing livestock production in steppe areas and improving poultry production. • Contributing to combating desertification and land reclamation. |
| Fund for Equipment and Regional Development. | <ul style="list-style-type: none"> • Supporting programs and activities linked to national |

| | |
|---|---|
| | <p>policies for regional and environmental planning.</p> <ul style="list-style-type: none"> • Financing local associations and providing necessary subsidies for balanced regional development activities. |
| <p>National Fund for Beach and Coastal Areas Protection</p> | <ul style="list-style-type: none"> • Supporting and assisting pollution reduction projects to protect beaches and coastal areas. • Encouraging studies, research, and the acquisition of initial expertise in improving natural landscapes. |

Source: Prepared by the researcher based on the above. (Al-Ayashi, 2020, pp. 300-301)

Figure number 03: The Combined Capacities and Desired Goals for Renewable Energy by 2030



Source: (Efficiency, 2012)

From the above figure, it is evident that Algeria's renewable energy investment goals are progressing over time. There is a noticeable increase in concentrated solar power, with the current installed capacity at 10%, compared to the renewable energy goals for 2030, which are set at 60%.

Additionally, there is a significant presence of wind energy and photovoltaic cells, indicating that Algeria is striving to invest in renewable energy and develop a sustainable green economy to reduce carbon emissions caused by oil refining processes.

3.2. Experience of Morocco

Morocco has made strides in reducing its reliance on fossil fuel imports. The authorities set an ambitious goal to source 42% of the country's energy from renewable sources by 2020, alongside a 15% reduction in energy demand through the adoption of energy-saving measures. To further enhance efforts in energy conservation, pollution control, and carbon emissions reduction, the government recently began cutting subsidies for diesel, gasoline, and heavy fuel oil products.

Morocco has also established several funds to support these efforts, summarized in the following table:

| Funds | Areas of Focus |
|---|--|
| Agricultural Development Fund | Supporting and encouraging agricultural projects |
| National Environmental Fund | Participating and financing environmental rehabilitation programs |
| National Forestry Fund | Focusing on the conservation of forests and valuing their resources to reduce carbon emissions |
| Joint Financing Fund with Banks “Hotel Reform 3” | Supporting investments (material and immaterial) aimed at improving |

| | |
|---|--|
| | service quality for environmental protection |
| Wastewater Treatment and Sewage Purification Fund | Supporting wastewater treatment projects |
| Transport Reform Support Fund | Providing support for transportation and road-related projects |

Source: Prepared by the researcher based on the (Rabee, 2019, p. 189)

3.3. The Experience of Egypt

Egypt has developed a strategy to achieve several objectives reflected in various points and projects, summarized as follows (Saber, 2022, pp. 24-25):

A. Achieving Sustainable Economic Growth

This refers to low-emission development in several sectors. It includes increasing the share of renewable and alternative energy sources in the energy mix and expanding them by establishing wind farms, solar power plants, and investing in clean and bio-energy. Efforts also involve exploring alternative energies such as green hydrogen, phasing out coal, and transitioning to low-carbon fuel types.

B. Building Resilience and Adaptation to Climate Change by Mitigating Its Negative Impacts

This supports sustainable consumption and production to reduce greenhouse gas emissions from non-energy-related activities. Examples include reducing emissions from agricultural activities such as rice cultivation and livestock production by utilizing modern technologies and various feeding systems.

C. Improving Governance and Management in the Field of Climate Change

This focuses on consolidating efforts and responsibilities among investors in environmental projects and climate change initiatives. It also involves opportunities for sustainable climate financing, improving Egypt's international ranking in this field, and aligning with policies that support the mitigation of climate change impacts caused by emissions.

D. Enhancing Infrastructure for Climate-Related Financing

Efforts are directed towards promoting local green banking practices and innovative financing mechanisms, such as green bonds. The private sector is encouraged to integrate and support climate-related projects and adapt infrastructure projects to climate conditions. These efforts also aim to take advantage of available support opportunities from the United Nations Framework Convention on Climate Change and the Paris Agreement (Saber, 2022, p. 25)

Second: Reducing Carbon Emissions Across Various Sectors

Egypt has undertaken numerous measures across different sectors to reduce carbon emissions as part of its Vision 2030. The state has encouraged large-scale investments funded by the government and implemented by the private sector. These sectors include the following (Saber, 2022, p. 24)

1. Energy Sector:

The energy sector ranks first in greenhouse gas emissions, accounting for 64.5% of total emissions. These emissions result from burning natural gas, used in power plants, and petroleum

products for energy production. Egypt has set an ambitious target to reduce emissions by relying on CO₂ equivalents by 2030, aiming for a 33%) (Farag, 2022, p. 14)

2. Transportation Sector

This sector faces various inefficiencies requiring intervention to curb carbon emissions. Measures include adopting sustainable transportation to reduce private car usage and promoting bicycles in cities. Public buses are being transitioned to low-carbon fuels, and the aviation sector is introducing 2% biofuel usage (Farag, 2022, p. 15)

3. Industrial Sector

Significant emissions from this sector have prompted Egypt to take steps to reduce its carbon footprint. These measures include reducing energy

intensity, using renewable and alternative fuels, and implementing low-carbon processes, such as the Low-Carbon Roadmap for the Egyptian Cement Industry. Additionally, the industrial sector aims to enhance energy efficiency in electricity and thermal systems, particularly in resource-intensive industries.

4. Construction and Tourism Sector

The state has adopted projects in the construction sector to meet low-carbon standards and programs. These initiatives include promoting renewable energy, such as installing solar panels on rooftops, and building urban cities to enhance sustainability. Efforts also involve raising awareness

about using bicycles within cities and creating green spaces and parks. In the tourism sector, Egypt is working on greening hotels by installing solar panels to improve energy efficiency for lighting.

5. Waste Management Sector

The state is striving to attract investments in developing infrastructure for waste recycling across different regions. Efforts focus on improving waste collection efficiency and increasing recycling rates to recover energy. By 2023, Egypt aims to generate 20% of its energy from biofuel, particularly in cement manufacturing (Farag, 2022, p. 16)

3.4. The Experience of the UAE

The UAE has implemented transformative projects toward green finance and a green economy, showcasing remarkable efforts, giant strides, and strict adherence to project-specific environmental initiatives. The UAE has become a model for other Arab nations, inspiring them to learn from its experience and contributions to environmental advancements. Below are some of these initiatives (Zahia, 2020, pp. 240-241)

3.4.1. Incentives for Green Initiatives

In September 2015, green car loans were introduced to encourage individuals to purchase and use eco-friendly vehicles that consume minimal fuel. This initiative aimed to promote the adoption of environmentally friendly cars (Zahia, 2020, p. 240)

3.4.2. Banking Platforms for Fundraising

Banks and certain funds launched ATMs to raise awareness about donations aimed at supporting environmental preservation and reducing carbon

emissions. For example, the National Bank of Fujairah partnered with the Emirates Wildlife Society in collaboration with the World Wildlife Fund to carry out such initiatives.

3.4.3. Digital and Paperless Transition to Engage the New Generation

A green/paperless initiative was launched to reduce paper usage, as its production contributes to carbon emissions. This initiative is built on the following pillars: simplifying processes, digitization, collective participation, and raising awareness to significantly cut paper usage in a short timeframe (Zahia, 2020, p. 241)

3.4.4. Integrating Sustainability into Core Operations

The paragraph highlights the efforts made by institutions and companies to achieve sustainability and transition to a green economy.

National Bank of Abu Dhabi: The bank adopted Ecuadorian standards for assessing environmental and social risks in its investment projects, reflecting its commitment to sustainable business practices.

HSBC: HSBC launched an ambitious strategy to reduce its carbon emissions through a range of initiatives such as supporting innovative projects, adopting renewable energy sources, and improving energy efficiency.

United Arab Emirates: The United Arab Emirates has launched a comprehensive national plan to transition to a green economy capable of facing the challenges of climate change. This plan focuses on vital sectors such as energy, infrastructure, and the environment.

The fundamental pillars of these efforts:

Sustainable financing: directing investments towards projects that achieve sustainable development goals.

Clean technologies: Adopting technologies and innovations that contribute to reducing emissions and conserving energy.

Institutional collaboration: Cooperation between financial institutions, governments, and companies to promote sustainability.

Social responsibility: Companies' awareness of their social and environmental responsibilities..(Sharjah, 2023) .

3.4.5. The Experience of Saudi Arabia

A. Saudi Arabia's Efforts in Supporting Green Finance

The Saudi National Development Fund, the Saudi Industrial Development Fund, and the National Infrastructure Fund have played significant roles in advancing green and sustainable projects and solutions within the Kingdom. This was achieved through funding of 10.3 billion Saudi Riyals, in partnership with local and international banks, to finance the world's largest green hydrogen production plant. This project is part of the Kingdom's efforts to transition to clean energy and to encourage and develop new and alternative energy sources. Green hydrogen is among the key investments that Saudi Arabia is working to develop to realize its Vision 2030 for a greener and more sustainable future. This aligns with the Kingdom's goal of achieving carbon neutrality by 2060 (CNBC, 2023)

B. Sustainable Financing in Saudi Arabia

Recognizing the crucial importance of sustainable financing, Saudi Arabia has recently launched a series of new investment initiatives aimed at promoting all forms of green investment to reduce emissions. Among the most significant decisions is the Kingdom's plan to issue "green bonds" to support sustainable projects, which constitutes a key part of Saudi Vision 2030.

The National Commercial Bank (NCB) is one of the pioneering financial institutions supporting sustainable financing mechanisms within Saudi Arabia's banking sector. The NCB focuses on four key pillars:

1. Promoting sustainable financing,
2. Preserving the environment,
3. Empowering individuals, and
4. Strengthening ethical governance principles.

Additionally, the Saudi British Bank (SABB) received the "Best Bank for Sustainable Financing in Saudi Arabia" award for 2022 from Global Finance, an international banking magazine. This recognition highlights the Saudi banking sector's commitment to sustainable financing and its determination to establish a solid foundation for sustainability within the Kingdom's banking industry (oceanx, 2022)

4. Conclusion

Based on the study, it can be concluded that transitioning to green and sustainable financing has become a necessity for countries. Encouraging investment in environmental projects through private sectors, improving,

and supporting financing processes for such projects by financial and banking institutions—via loans and bond issuance—represents an ideal and effective solution to avoid economic and environmental crises.

Accordingly, green financing is the optimal choice and the most efficient path to integrating environmental considerations and achieving sustainable development goals. This is achieved through state support for environmental projects and investments, leading to a reduction in carbon emissions.

Findings

Based on the above and the discussions within our study, the following results were reached:

- Green financing is a practical tool for reducing carbon emissions
- Transitioning from reliance on fossil fuels for electricity generation to clean energy usage reduces carbon emissions in electricity production
- Green and sustainable financing addresses climate change while creating decent jobs and reducing the excessive exploitation of natural resources by relying on bioenergy
- Green and sustainable financing helps integrate a green growth foundation and promotes the idea of an environmentally sustainable economy
- Increasing the supply of clean energy could lead to a large-scale shift in electricity production, enhancing access to clean energy and replacing polluting fuels
- Several mechanisms of green financing are used by institutions to raise funds while ensuring investors' rights and profits
- Green and sustainable financing has become one of the key pillars and critical issues for governmental bodies concerned with environmental protection
- Protecting the integrity of natural carbon sinks by improving the sustainable management of forests and lands helps balance residual emissions through carbon absorption and storage
- Many Arab countries are increasingly interested in incorporating green projects into the industrial sector and utilizing bioenergy instead of other energy sources.

Recommendation

- The necessity of transitioning to clean energy instead of fossil fuels and other carbon-based energies
- Providing energy resources for environmentally friendly projects and incorporating waste recycling processes
- Advocating for the establishment of an Arab fund to finance and support investments that preserve the environment
- Emphasizing the importance of green financing as one of the key mechanisms to achieve sustainable development and reduce carbon emissions
- Benefiting from the expertise of foreign countries in applying renewable energy exploitation and integrating it into industrial sectors
- Activating green financing services and products in banks and financial institutions
- Developing laws and strategies, integrating them with environmental considerations, and implementing green projects.

References

- 1-Abdel-Warith, F. (2023, 03 28). *Petro News*. Retrieved 14 06, 2023, from <https://petro-news.com/%d8%d%a9/%dd9%d8%b6%d8%b1/>
- 2-Al-Ayashi, A. (2020, 03 26). Mechanisms for Rationalizing Environmental Tax Policy to Improve Environmental Behavior and Ensure Quality of Life: The Case of Algeria. *Al-Bashair Economic Magazine*(1), pp. 300-301. Retrieved 06 30, 2023
- 3-CNBC, A. (2023, 05 23). *CNBC, Arabiya*. Retrieved 07 15, 2023
- 4-dahmani ismail, d. a. (2022, 03 21). The impact of green financing on the level of carbon dioxide emissions in the world: A panel study during the period 2007-2019. *Finance and Markets journal*, pp. 552-553. Retrieved 07 19, 2023
- 4-Dofi Qarmiya, R. M. (2022, 04). The role of green finance in promoting economic growth - China as a model. *Journal of Economics, Finance, and Busines*, p. 204. Retrieved 04 30, 2023
- 5-Efficiency, T. R. (2012). Retrieved 06 20, 2023, from www.rcreee.org

- 6-Egypt, T. C. (2023, 03 23). *Sustainable finance*. Retrieved 06 13, 2023, from <https://www.cbe.org.eg/ar/sustainability/sustainable-finance>
- 7-Farag, W. (2022). Egypt's efforts to reduce carbon emissions. *Sharm El Sheikh Climate Conference and the Responsibility of Climate Justice COP27* (p. 15). egypt: A monthly electronic journal published by the Al-Ahram Center for Political and Strategic Studies. Retrieved 07 12, 2023
- 8-oceanx. (2022). Retrieved 07 15, 2023, from oceanx: <https://insight.oceanx.sa/>
- 9-Rabee, D. Q. (2019, 09 17). The option of a green economy between opportunities for success and indicators of failure in the Arab region. *Journal of Humanities*, p. 189. Retrieved 07 02, 2023
- 10- Rokaya, H. (2021, 12 31). Green finance as one of the tools of the green economy to achieve sustainable development in Algeria. *Al-Maqrizi Journal of Literary Studies*, p. 56. Retrieved 04 25, 2023
- 11-Saber, O. (2022). The Impact of Climate Change on Egypt and Mechanisms of Response. *Sharm El Sheikh Climate Conference and the Responsibility of Climate Justice COP27* (pp. 24-25). Egypt: A monthly electronic journal published by the Al-Ahram Center for Political and Strategic Studies. Retrieved 07 11, 2023
- 12-sachs, j. (2019). enregy security and sutainable developmen. In f. taghizadeh. koscom ; seou: republic of korea. Retrieved 04 12, 2023
- 13-Salam, D. A. (2023, 04). The role of green finance in achieving sustainable development goals in Africa. (D. A. Salam, Ed.) *Journal of the Faculty of Economics and Political Science*. Retrieved 08 30, 2023
- 14- Saleh, A. (2022). Green finance. In A. Saleh, *Green finance* (36 ed., p. 11). Abu Dhabi, Abu Dhabi, United Arab Emirates. Retrieved 04 29, 2023, from <http://www.amf.org.ae>
- 15- Shahoum. (2018, 12 12). Green Islamic finance and its role in serving sustainable development (Malaysian green sukuk as a model). *Economic Notebooks Journal*, p. 337. Retrieved 04 27, 2023
- 16- Sharjah, S. C. (2023, July 03). (A. a. Emirates, Producer) Retrieved 07 10, 2023, from Sustainability: <https://www.sharjahsustainablecity.ae/ar/blog/>
- 17- The impact of green financing on the level of carbon dioxide emissions in the world: A panel study during the period 2007-2019. (n.d.).

- 18- Zahia, T. (2020, 03 15). Incentive initiatives and projects towards the transition to a green economy in Arab countries - The experience of the United Arab Emirates and Algeria. *Shuaa Journal for Economic Studies*, pp. 240-241.
Retrieved 07 02, 2023