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Saudi Green Initiatives and their Role in Achieving Environmental Goals in the Middle East



Dr. Mohamed Abdelraouf
Director of the Environmental
Security and Sustainability
Research Program, GRC

Asuka Nagasawa
Master's Candidate
at Geneva Graduate Institute

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1. Introduction

The Middle East and North Africa (MENA) region is one of the most vulnerable regions to climate change. Its air and ecosystems are subjected to desertification, extreme temperatures, water scarcity, and pollution. Because climate change is a threat multiplier, meaning that one environmental issue exacerbates another and can even bear negative impacts on economies, climate mitigation measures are critical. With current projections that 50% of the population in the MENA region will be exposed to “super-extreme” weather events in the near future, national adaptation plans to address extreme heat, water scarcity, and declining food production are of grave importance and many of these countries have included them to some degree in their respective national agendas.¹

A key challenge that the MENA region faces is the transition to clean energy, as 80% of the world’s power still relies on fossil fuels. Transforming energy systems is costly, and MENA countries heavily depend on fossil fuels for electricity generation (not to mention income generation). With climate change accelerating in the region, the focus is on the fair transition to renewable energy sources, such as solar, wind, and green hydrogen. However, MENA’s diverse circumstances and economic limitations make it challenging for all countries to commit to decarbonization at the same pace.² Currently, 7 (Bahrain, Malta, Morocco, Oman, Saudi Arabia, Tunisia, and the UAE) out of the 20 MENA countries have net zero targets, accounting for nearly 80% of regional emissions.³ Green financing opportunities are unequal across

the region, hindering some nations from investing in renewable energy. Bridging the gap between fossil fuel dependency and clean energy will require addressing country-specific obstacles and leveraging natural gas as a bridging mechanism while developing a firmly-established supply chain for renewables. The MENA region’s energy mix will vary by country, taking into account renewable resources, capital availability, and existing alternatives.⁴ Therefore, to finance the adaptation and mitigation of climate change and climate-related environmental issues, the countries of the region must cooperate together.

The Saudi and Middle East Green Initiatives, spearheaded by Saudi Arabia, aim to combat climate change through cooperation in the region. Since its inauguration in 2021, the Middle East Green Initiative has been endorsed by 25 countries including Algeria, Bahrain, Brazil, Chad, Djibouti, Egypt, Greece, India, Iraq, Italy, Jordan, Kuwait, Libya, Morocco, Oman, Pakistan, Palestine, Qatar, the Russian Federation, Saudi Arabia, Tanzania, Tunisia, the United Arab Emirates, the United Kingdom, and Yemen.⁵ The initiative aligns with the theme “from ambition to action,” signifying Saudi Arabia’s commitment to realizing its climate targets.⁶

¹ Robert Kennedy, “Grave threat to life: UN climate chief issues warning for MENA,” Al Jazeera, March 26, 2022, (accessed August 1, 2023), <https://www.aljazeera.com/news/2022/3/26/climate-change-is-a-grave-threat-to-life-un-climate-chief>

² Sanam Mahoozi, “Can MENA countries fight climate change the same way?” Al Jazeera, June 11, 2022, (accessed August 1, 2023), <https://www.aljazeera.com/news/2022/6/11/can-mena-countries-fight-climate-change-the-same-way>

³ Climate Watch Data, “Net Zero Tracker,” ClimateWatch, n.d., (accessed August 1, 2023), <https://www.climatewatchdata.org/net-zero-tracker?locations=MNA>

⁴ Sanam Mahoozi, “Can MENA countries fight climate change the same way?” Al Jazeera, June 11, 2022, (accessed August 1, 2023), <https://www.aljazeera.com/news/2022/6/11/can-mena-countries-fight-climate-change-the-same-way>

⁵ Saudi & Middle East Green Initiatives, “Championing climate action at home and abroad,” Saudi Green Initiatives, n.d., (accessed August 6, 2023), <https://www.greeninitiatives.gov.sa/>

⁶ Ismael Naar, “Saudi Arabia commits \$2.5bn to Middle East Green Initiative over next 10 years,” The National, November 8, 2022, (accessed August 6, 2023), <https://www.thenationalnews.com/gulf-news/saudi-arabia/2022/11/07/saudi-arabia-commits-25bn-to-middle-east-green-initiative-over-next-10-years/>



2. Goals and Objectives of the Saudi and Middle East Green Initiatives

The Saudi Green Initiative sets forth a comprehensive agenda with ambitious goals and objectives to be achieved by 2030. These objectives encompass generating 50% of the nation's energy from renewable sources, planting an impressive 10 billion trees, rehabilitating 40 million hectares of land, and safeguarding 30% of both terrestrial and marine areas. With a robust portfolio of 77 initiatives actively advancing, there is an unwavering commitment to translating these goals into tangible results. Also, the Middle East Green Initiative was launched as a means of pursuing the SDG agenda.⁷

The Saudi Green Initiative operates upon four guiding principles to effectively address climate challenges and foster sustainable development. These principles prominently feature the Circular Carbon Economy (CCE) framework, which has yielded over 30 initiatives integrating climate action and economic progress across the energy system. The initiative is dedicated to achieving net-zero emissions through a balanced approach that harmonizes economic growth with environmental preservation, employing inclusive strategies to cultivate investment, jobs, and opportunities.

A vital aspect of the initiative is its commitment to global cooperation, emphasizing knowledge exchange and collaborative efforts across borders to combat climate change collectively. Additionally, the Saudi Green Initiative showcases a whole-of-society aspiration, uniting public and private sectors as well as citizens to actively contribute toward realizing ambitious national targets.

⁷ "Accelerating to Achieve a Sustainable Future," Saudi Arabia's Voluntary National Review 1444-2023, 2023, p.171, <https://hlpf.un.org/sites/default/files/vnrs/2023/VNR%202023%20Saudi%20Arabia%20Report.pdf>

Youth are also included, with a Youth Greenwv Initiative Summit designed particularly to enhance the skills and knowledge of young Saudi leaders in driving successful sustainability outcomes.⁸

The Middle East Green Initiative, also led by Saudi Arabia, represents a comprehensive strategy aimed at advancing sustainable development and addressing climate change in the region. The initiative's objective to reduce emissions by approximately 670 million tonnes of carbon dioxide, roughly equivalent to 10% of global carbon emissions when the initiative was launched, underscores a commitment to significant environmental impact. Outlined by the Kingdom's Crown Prince Mohammed bin Salman, the initiative sets forth ambitious targets including planting 50 billion trees, restoring 200 million hectares of degraded land, increasing the share of renewable energy in electricity generation to 50% by 2030, and removing 44 million tons of carbon emissions by 2035. By fostering innovation, promoting international collaboration, and striving for ecological balance, the Middle East Green Initiative presents a proactive approach to addressing climate change and fostering a more sustainable future for the region and beyond.⁹



Source: Asharq Al-Awsat News Letter, 2023.

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Saudi & Middle East Green Initiatives, "Championing climate action at home and abroad," Saudi Green Initiatives, n.d., (accessed August 6, 2023), <https://www.greeninitiatives.gov.sa/>; "Accelerating to Achieve a Sustainable Future," Saudi Arabia's Voluntary National Review 1444-2023, 2023, p.153 and p 171, <https://hlpf.un.org/sites/default/files/vnrs/2023/VNR%202023%20Saudi%20Arabia%20Report.pdf>

⁹Ismaeel Naar, "Saudi Arabia commits \$2.5bn to Middle East Green Initiative over next 10 years," The National, November 8, 2022, (accessed August 6, 2023), <https://www.thenationalnews.com/gulf-news/saudi-arabia/2022/11/07/saudi-arabia-commits-25bn-to-middle-east-green-initiative-over-next-10-years/>; "Accelerating to Achieve a Sustainable Future," Saudi Arabia's Voluntary National Review 1444-2023, 2023, p.189, <https://hlpf.un.org/sites/default/files/vnrs/2023/VNR%202023%20Saudi%20Arabia%20Report.pdf>

3. Specific Initiatives of the Saudi and Middle East Green Initiatives

The Saudi Green Initiative encompasses international collaboration, a regional circular carbon economy investment fund, and the Clean Fuel Solutions Initiative for Food Savings.¹⁰

Saudi Arabia has been a leader in increasing investments and facilitating change from conventional petroleum energy. According to its envoy for climate affairs, Saudi Arabia recognizes its responsibility as the world's largest exporter of petroleum and aims to take a leading role in climate affairs.¹¹ Crown Prince Mohammed bin Salman and Energy Minister Prince Abdulaziz bin Salman announced at the COP27 UN climate summit in Egypt that the country will contribute \$2.5 billion to the Saudi and Middle East Green Initiatives in the Middle East over the next decade. The Public Investment Fund, Saudi Arabia's sovereign wealth fund, will aim for net-zero emissions by 2050 through sustainable development.¹² Additionally, for decarbonized energy systems, Prince Abdulaziz bin Salman expressed plans to establish the Knowledge Centre for the Carbon Economy. He further announced three new projects and a greenhouse gas credit scheme set to launch by the end of 2023. Saudi Arabia aims to develop renewable energy projects, add 840 megawatts of solar PV power, and implement a GHG crediting and offsetting scheme to encourage emission reduction projects.¹³

The initiative's accomplishments as of 2023 highlight its significant contribution to environmental sustainability. Noteworthy achievements include powering 150,000 households with clean energy, establishing 11.4 GW of renewable energy capacity, and incorporating 10 million smart electricity meters, resulting in a reduction of 1.8 million tons of CO₂ emissions annually. The initiative's facilitation of the Circular Carbon Economy approach, endorsed by the G20 nations, and its leadership in the Middle East Green Initiative for regional collaboration underscore its global influence. Additionally, substantial advancements have been made in conservation efforts, such as decreasing agricultural water consumption by an impressive 9.6 billion cubic meters. This dedication extends to addressing desertification through the planting of 18 million trees, restoring 60,000 hectares of degraded land, and nurturing 250,000 shrubs in AIUla nurseries within a single year. These comprehensive actions not only prioritize environmental preservation but also include the successful reintroduction of over 1,200 animals to their natural habitats, showcasing tangible progress toward fulfilling the initiative's holistic vision.¹⁴

Operating within the framework of the Saudi Green Initiative, the Kingdom is actively engaged in the development and implementation of comprehensive and coordinated programs, policies, initiatives, and collaborative platforms aimed at addressing climate challenges at various scales, from national to global. These encompass significant initiatives such as the Circular Carbon Economy National Program, the National Renewable Energy Program, and the Saudi Energy Efficiency Program. On the international stage, Saudi Arabia plays an active role in key initiatives like the Global Methane Initiative, Mission Innovation, Clean Energy Ministerial,

¹⁰ Ibid.

¹¹ Mariam Nihal, "Saudi Arabia to host Mena Climate Week in 2023," *The National*, November 14, 2022, (accessed August 8, 2023), <https://www.thenationalnews.com/gulf-news/2022/11/14/saudi-arabia-to-host-mena-climate-week-in-2023/>

¹² Ismaeel Naar, "Saudi Arabia commits \$2.5bn to Middle East Green Initiative over next 10 years," *The National*, November 8, 2022, (accessed August 6, 2023), <https://www.thenationalnews.com/gulf-news/saudi-arabia/2022/11/07/saudi-arabia-commits-25bn-to-middle-east-green-initiative-over-next-10-years/>

¹³ Mariam Nihal, "Saudi Arabia to host Mena Climate Week in 2023," *The National*, November 14, 2022, (accessed August 8, 2023), <https://www.thenationalnews.com/gulf-news/2022/11/14/saudi-arabia-to-host-mena-climate-week-in-2023/>

¹⁴ "Accelerating to Achieve a Sustainable Future," Saudi Arabia's Voluntary National Review 1444-2023, 2023, p.13, <https://hlpf.un.org/sites/default/files/vnrs/2023/VNR%202023%20Saudi%20Arabia%20Report.pdf>



and Net-Zero Producers Forum. The country is an active participant in international climate negotiations, having ratified the Paris Agreement and committing to align its domestic climate actions with the agreement's objectives.

Guided by the principles of the Circular Carbon Economy, the program sets forth a vision that combines global and national climate protection, socioeconomic influence, and leadership. The approach revolves around the "4 Rs," involving the reduction of CO₂ and greenhouse gas production, the reuse of CO₂ and GHG without altering their chemical nature, their recycling through chemical alteration, and the removal of already emitted CO₂ and GHG through technologies like direct air capture and nature-based solutions such as afforestation.

With firm commitments, Saudi Arabia aspires to lower, prevent, and eliminate emissions, targeting a reduction of 278 million tonnes of CO₂ per year by 2030 and ultimately aiming for net-zero emissions by 2060 through the circular carbon economy strategy. The government is heavily investing in emission reduction technologies like carbon capture and storage, as well as promoting energy efficiency and renewable energy initiatives. As a testament to its dedication, Saudi Arabia has also joined the Global Methane Pledge, contributing to the global effort to reduce methane emissions by 30% by 2030.¹⁵

With enhanced regional cooperation and increased investment, the Saudi Association of Energy Economics Chairman Majeed Al-Moneef envisions a dynamic landscape marked by seamlessly interconnected power grids, shared resources, and a harmonized energy market. Collaborative efforts would enable countries to optimize their diverse energy sources, accelerating the transition to cleaner alternatives

like renewables and hydrogen. This synergy would bolster energy security, economic growth, and sustainability while fostering stability through shared economic interests. Robust infrastructure, efficient energy utilization, and joint innovation would drive a more resilient and integrated energy ecosystem, positively impacting the region's development trajectory and contributing to global efforts in combating climate change.¹⁶

4. Comparison of the Green Initiatives and the EU Green Deal

The Middle East Green Initiative and the EU Green Deal share similarities in that they are both regional initiatives aimed at decarbonizing their respective regions. The Saudi and Middle East Initiatives and the EU Green Deal thus offer comprehensive strategies that address sustainability from various dimensions including climate, energy, and biodiversity. Additionally, these regions have related initiatives that are relevant to each region such as the carbon capture technology for the Gulf and reducing consumption in Europe.



Source: Maaal News Letter, 2023.

¹⁵ "Accelerating to Achieve a Sustainable Future," Saudi Arabia's Voluntary National Review 1444-2023, 2023, p.155, <https://hlpf.un.org/sites/default/files/vnrs/2023/VNR%202023%20Saudi%20Arabia%20Report.pdf>

¹⁶ Reina Takla & Nirmal Narayanan, "Mideast's share of renewables in energy mix to double by 2030: SAAE chairman," Arab News, February 5, 2023, (accessed August 6, 2023), <https://www.arabnews.com/node/2244951/business-economy>

Table 1: Comparison of Saudi & Middle East Green Initiatives and EU Green Deal (Saudi Green Initiatives, n.d.)¹⁷

	Middle East Green Initiative	EU Green Deal
Decarbonization Target	Achieving all of the NDCs of all countries in the region (reduce emissions by 670 million tons of CO ₂ e)	Net Zero by 2050
Finance and Investments	Establishment of the Green Initiative Foundation	Aims to mobilize at least €1 trillion in the next decade
Energy	Increasing renewable energy projects (13 in 2022, with an 11.4 GW generation capacity, and aim to finalize 10 more plans in 2023)	<ul style="list-style-type: none"> • Ensure secure and affordable EU energy supply • Develop an integrated, digitalized EU energy market • Prioritize energy efficiency, renewables, and building performance
Afforestation	50 billion trees (equivalent to 5% of the global afforestation target)	3 billion trees to be planted by 2030
Protected Areas	NA	20% of land and sea areas by 2030
Buildings	NA	<ul style="list-style-type: none"> • Improving building energy performance standards • Long-term renovation strategies
Transportation	NA	<ul style="list-style-type: none"> • Reducing emissions by transportation by 90% • Creating a smart and sustainable railroad system, and improving urban mobility
Agriculture	NA	Minimize carbon footprint and biodiversity loss
Other	Cloud seeding, early storm warnings, decreasing the emissions intensity of cooking, marine biodiversity, Youth Green Initiative Summit	<ul style="list-style-type: none"> • Fresh air, clean water, healthy soil, and biodiversity • Renovated, energy-efficient buildings • Healthy and affordable food • More public transport • Cleaner energy, and cutting-edge clean technological innovation • Longer lasting products that can be repaired, recycled and re-used • Future-proof jobs and skills training for the transition • Globally competitive and resilient industry

¹⁷ Saudi & Middle East Green Initiatives, "Championing climate action at home and abroad," Saudi Green Initiatives, n.d., (accessed August 6, 2023), <https://www.greeninitiatives.gov.sa/>; European Commission, "A European Green Deal," European Commission, n.d., (accessed August 7, 2023), https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en; "Accelerating to Achieve a Sustainable Future," Saudi Arabia's Voluntary National Review 1444-2023, 2023p.13, <https://hlpf.un.org/sites/default/files/vnrs/2023/VNR%202023%20Saudi%20Arabia%20Report.pdf>



In a concerted effort to combat climate change and drive sustainable development, multiple ambitious initiatives have been launched across different regions. The Saudi Green Initiative and Middle East Green Initiative prioritize carbon reduction, with Saudi Arabia having a net zero by 2060 target. These initiatives have invested over SAR 700 billion to accelerating the transition to renewable energy, implementing carbon capture initiatives and establishing the Green Initiative Foundation. In parallel, the EU Green Deal seeks to become the first net zero continent by 2050 and revolutionize Europe's energy landscape through an integrated energy market, energy efficiency, and substantial investments totaling €1 trillion within a decade.

A key strategy shared by these initiatives is afforestation. Saudi Arabia plans to plant 10 billion trees and rehabilitate 40 million hectares of land, while the broader regional effort aims for 50 billion trees planted by 2030. Protected areas are also in focus, with targets set to preserve 30% of terrestrial and marine areas by 2030 and 20% by the same year. These initiatives extend their influence by addressing various aspects of sustainability, from climate resilience strategies like cloud seeding and early storm warnings to promoting cleaner energy, efficient transport, and sustainable products. They underscore the need for collective action to ensure a future characterized by clean air, water, biodiversity, resilient industries, and opportunities for youth in a rapidly evolving green economy.

Overall, it can be argued that the Middle East Green Initiative is in synergy with the EU Green Deal. The EU aims to be a top consumer of renewable energy, while the Middle East aims to be a top producer of renewable energy. This is an especially pertinent issue because the European Commission has proposed emergency measures to reduce the bloc's dependence on Russian gas by two-thirds this year and entirely by the end of the decade. The plan involves seeking new gas suppliers, boosting and investing in renewable energy, and implementing energy-saving measures.¹⁸ These regions can collaborate on technology exchange, joint research projects, and innovation partnerships to accelerate the development of clean energy and sustainable solutions.

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Zia Weise and Karl Mathiesen, "How Putin made the Green Deal great again," Politico, March 8, 2022, (accessed August 17, 2023), <https://www.politico.eu/article/putin-made-europe-green-deal-great-again/>

At the same time, the Middle East Green Initiative can gain valuable insights from the European Green Deal, which presents a series of effective initiatives aimed at fostering seamless cooperation. Based on the European Green Deal's initiatives, such as allocating 30% of the multiannual budget and NextGenerationEU funds for green investments, designating at least 37% of the Recovery and Resilience Facility funds for climate-focused projects, and issuing green bonds to raise 30% of NextGenerationEU funds, the Middle East Green Initiative can develop similar strategies.¹⁹ By learning from these approaches and tailoring them to their regional context, the Middle East Green Initiative can promote cohesive collaboration among countries and stakeholders within the Middle East and North Africa. These initiatives offer a structured framework to ensure unified efforts in addressing environmental challenges, while also promoting sustainable economic growth and resilience in the face of global challenges.

Another lesson that can be drawn is from the criticism the European Union's green agenda is encountering. For example, the agenda is facing backlash from trading partners, especially developing nations, who view it as a means to impose trade barriers. Accusations of "regulatory imperialism" are on the rise, as the EU's push for climate neutrality and sustainable food production is interpreted as export obstacles that hinder other countries' economic growth. Points of contention encompass the carbon border levy, the Farm to Fork strategy's impact on agriculture, and regulations against deforestation. Developing nations argue that the EU's unilateral actions overlook international consensus, even with shared climate objectives. While the EU asserts its role in leading by example, it concedes the preference for multilateral collaboration,

¹⁹ European Commission, "Finance and the Green Deal," A European Green Deal, n.d., (accessed August 17, 2023), https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/finance-and-green-deal_en

underscoring the lack of a functional World Trade Organization as a driver for autonomous steps.²⁰

Given the Middle East Green Initiative's partnership with numerous developing nations, it is vital for the initiative to be inclusive in addressing diverse financial and technical obstacles faced by member and partner states. Thus, a mutually beneficial trade relationship such as the partnership between Sungrow and Larsen & Toubro to supply innovative inverter solutions for Saudi Arabia's NEOM Green Hydrogen Project is a positive step forward. China's advanced energy expertise aids Saudi Arabia's green energy aspirations, fostering a more sustainable future. In turn, this collaboration provides Sungrow with valuable business prospects while contributing to global environmental goals.²¹

5. Challenges

The success of the Saudi and Middle East Green Initiatives faces several challenges that span political, financial, technological, and societal dimensions. Firstly, the level of political will and commitment varies among countries in the region. While some governments prioritize environmental and sustainability agendas, others may have competing priorities, potentially hindering the full realization of the initiatives' goals.

Secondly, funding inequalities within the Middle East can impact the equitable distribution of resources for green projects. It's imperative that countries with greater environmental needs receive sufficient funding to address their unique challenges. Moreover, ensuring access to advanced technology and technical expertise is crucial for

²⁰ Barbara Moens and Karl Mathiesen, "Trade partners see red over Europe's green agenda," January 16, 2023, (accessed August 17, 2023), <https://www.politico.eu/article/eu-green-agenda-has-its-trading-partners-seeing-red-climate-neutrality/>

²¹ Angitha Pradeep, "China, Saudi Arabia collaborate for NEOM green hydrogen project," Construction Week, August 13, 2023, (accessed August 18, 2023), <https://www.constructionweekonline.com/business/china-saudi-arabia-collaborate-for-neom-green-hydrogen-project>



effective implementation. Collaborative efforts and knowledge-sharing among countries are necessary to bridge these gaps. Innovation and research, particularly in areas like carbon capture and storage, are paramount to make the goals of the initiatives viable. Developing cutting-edge technologies and refining existing methods will be essential for achieving the ambitious targets set forth.

Thirdly, the level of public awareness and engagement surrounding sustainability varies across the region. While some populations may place a high value on environmental conservation, others might not yet recognize its importance. Fostering a sense of ownership and commitment to sustainable practices among citizens is vital for the initiatives' long-term success.

Fourthly, robust monitoring and evaluation mechanisms are needed to track progress, identify challenges, and adjust strategies as necessary. Increased transparency in reporting and data sharing is crucial to build trust among stakeholders and demonstrate accountability in achieving the initiatives' objectives.

In conclusion, the challenges to a successful Saudi and Middle East Green Initiative are multifaceted. They encompass political will, funding disparities, technology access, public awareness, and monitoring. Addressing these challenges requires a collaborative, region-wide effort that spans governments, industries, academia, and civil society. By overcoming these hurdles, the initiatives can pave the way for a greener, more sustainable future for the Middle East and beyond.



Source: Arab News Letter, 2023.

6. Recommendations

To ensure the success of the Saudi and Middle East Green Initiatives, a collaborative international cooperation approach is paramount. Establishing robust platforms for knowledge exchange, technology transfer, and joint research initiatives can leverage the experiences of countries that have excelled in sustainability practices. Strengthening partnerships with such nations will enable the sharing of best practices, lessons learned, and innovative solutions to common challenges, fostering a region-wide commitment to environmental conservation.

The formulation of effective and comprehensive policy frameworks stands as a critical foundation for success. Participating countries should prioritize the development and implementation of policies that align with sustainability goals. Initiatives such as carbon pricing, emissions reduction targets, and renewable energy mandates can drive tangible change. By creating a regulatory environment that incentivizes green practices, countries can encourage the adoption of environmentally friendly technologies and practices across industries and sectors.

To drive progress, substantial investment in research and innovation is indispensable. Establishing dedicated centers for research and innovation in fields like carbon capture, renewable energy, waste management, and sustainable agriculture can yield breakthrough solutions. Collaborating with universities and research institutions will ensure a constant stream of innovative ideas and technologies, contributing to the initiatives' efficacy and long-term success.

The successful transition to a more sustainable future requires a rapid shift toward renewable energy and clean transport systems. To achieve this, governments should expedite the deployment of renewable energy projects by offering financial incentives, streamlining permitting processes,

and creating an attractive investment climate. Concurrently, investment in clean transport infrastructure, including electric vehicle charging networks and sustainable public transportation systems, can significantly reduce carbon emissions, promoting a cleaner environment and healthier communities.

Implementing the Saudi and Middle East Green Initiatives will necessitate substantial financial resources. This can be achieved through strategic public-private partnerships (PPPs) for green investment. By offering incentives like tax breaks, subsidies, and risk-sharing mechanisms, countries can attract private sector investment in green projects. Clear regulations and long-term viability plans will instill confidence in investors, enabling them to contribute significantly to the realization of the initiatives' objectives.

As the impacts of climate change become increasingly evident, a robust strategy for climate adaptation and resilience building must be integrated into the initiatives. By incorporating resilience measures into infrastructure planning, enhancing water management systems, and focusing on disaster preparedness, participating countries can mitigate the adverse effects of climate change. These strategies will enhance the initiatives' overall effectiveness, ensuring their ability to navigate future environmental challenges.



Source: VOA News Letter, 2023.

7. Conclusions

The Saudi and Middle East Green Initiatives represent ambitious efforts to address the pressing challenges of climate change and environmental degradation in the MENA region. These initiatives aim to not only reduce carbon emissions and transition to cleaner energy sources but also foster sustainable development and resilience in the face of climate-related threats. However, the path to success is laden with challenges, including varying levels of political commitment, funding disparities, technology access, and the need for public engagement and transparency. Overcoming these hurdles requires a collaborative, region-wide approach that brings together governments, industries, academia, and civil society.

To ensure the success of these initiatives, it is essential to prioritize international cooperation, comprehensive policy frameworks, research and innovation, renewable energy deployment, and public-private partnerships. Additionally, integrating climate adaptation and resilience measures into the initiatives will enhance their overall effectiveness. The Saudi and Middle East Green Initiatives serve as important models for tackling climate change on a regional scale, and with concerted efforts and collective commitment, they have the potential to pave the way for a greener, more sustainable future not only for the MENA region but also for the global community.



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