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Assessing Arab Contributions to Environmental SDGs: Water, Energy, Urban Sustainability and Climate Action

Arshi Naim

naimarshi123@gmail.com

Ibn Rushd College of Management Sciences

Research Article

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Abstract

This study aims to assess and compare the contributions of Arab countries to environmental Sustainable Development Goals (SDGs 6, 7, 11, and 13), and to identify performance gaps, regional disparities, and key policy priorities. The study adopts quantitative and qualitative methods, using secondary data from Voluntary National Review (VNR) reports. A composite Environmental SDG Index is constructed using a standardised 0–5 scoring framework, supported by descriptive statistics, comparative analysis, and thematic interpretation. The results reveal significant disparities across the region, with Gulf countries leading in performance and conflict-affected states lagging behind. Strong progress is observed in renewable energy and urban development, while water management and climate action remain key challenges. The study provides a focused and standardised comparative assessment of environmental SDGs in the Arab region, offering a novel composite index based on VNR data. The findings support policymakers in identifying priority areas for intervention, strengthening environmental governance, and promoting regional cooperation to accelerate progress towards the SDGs.

INTRODUCTION

This study provides a comparative assessment of Arab countries' performance in key environmental Sustainable Development Goals (SDGs), namely SDG 6 (Clean Water and Sanitation), SDG 7 (Affordable and Clean Energy), SDG 11 (Sustainable Cities and Communities), and SDG 13 (Climate Action) (UN, n.d.). Using data derived from Voluntary National Reviews (VNRs), the research develops a composite Environmental SDG Index to evaluate progress across countries. The analysis highlights variations in performance, identifies regional disparities, and examines underlying policy and institutional factors influencing sustainability outcomes in the Arab region.

SDG 6 aims to ensure universal access to safe water, sanitation, and hygiene, which are essential for health and human well-being (Naim, 2024). By 2024, 2.2 billion people still lacked safely managed drinking water, 3.4 billion lacked sanitations, and 1.7 billion lacked basic hygiene services (Ahmed and Naim, 2026). Global access to safe drinking water improved from 68% in 2015 to 74% in 2024, yet water stress remains high at around 18% globally, particularly in arid regions. At the current pace, sustainable water management may not be achieved until 2049, highlighting the urgency of improved governance and investment (SDG, 2025).

SDG 7 focuses on ensuring access to reliable, affordable, and sustainable energy. Global access to electricity has improved significantly, reaching around 92% of the world's population, yet approximately 685 million people still lack electricity, and 2.1 billion people rely on polluting fuels for cooking. Energy consumption remains a major driver of climate change, accounting for nearly two-thirds of global greenhouse gas emissions (SDG, 2025). Although renewable energy is expanding, progress is not fast enough to achieve universal access by 2030.

SDG 11 aims to make cities inclusive, safe, resilient, and sustainable. Urbanisation is rapidly increasing, with over 50% of the global population living in cities, projected to reach 70% by 2050(SDG, 2025).

However, challenges persist, as around 1.1 billion people live in slums or informal settlements, and only about half of the urban population has convenient access to public transport. Cities account for 60–80% of global energy consumption and 75% of carbon emissions, making sustainable urban planning critical for future development (SDG, 2025).

SDG 13 calls for urgent action to address climate change, one of the greatest global challenges. The Earth has already warmed by approximately 1.2°C above pre-industrial levels, and 2024 was recorded as the hottest year at about 1.55°C above baseline levels. To limit warming to 1.5°C, global emissions must be reduced by nearly 50% by 2030 (SDG, 2025). Climate change is intensifying extreme weather events, including floods, droughts, and heatwaves, threatening ecosystems, economies, and human livelihoods worldwide (Wang et al., 2024).

Table 1 highlights that while progress has been made in areas such as electricity access and water services, significant global challenges remain, particularly in sanitation, clean cooking, sustainable urbanisation, and climate change mitigation. Figure 1 shows the progress of indicators for SDGs (6,7,11 and 13).

Table 1
Global Status of Environmental SDGs (6, 7, 11, 13)

SDGs	Indicators	Value	Year
SDG 6	Population lacking safely managed drinking water [SDG 6 – 1]	2.2 billion	2024
	Population lacking sanitation [SDG 6 – 2]	3.4 billion	2024
	Population lacking basic hygiene services [SDG 6 – 3]	1.7 billion	2024
	Access to safe drinking water [SDG 6 – 4]	68% → 74%	2015–2024
	Global water stress [SDG 6 – 5]	18%	Since 2015
SDG 7	Global access to electricity [SDG 7 – 1]	92%	2023
	Population without electricity [SDG 7 – 2]	685 million	2023
	Population using polluting cooking fuels [SDG 7 – 3]	2.1 billion	2023
	Energy share of global emissions [SDG 7 – 4]	~ 66%	2025
SDG 11	Population living in urban areas [SDG 11 – 1]	> 50%	2022
	Projected urban population [SDG 11 – 2]	70%	2050
	Population in slums/informal settlements[SDG 11 – 3]	1.1 billion	2025
	Access to public transport [SDG 11 – 4]	~ 50%	2025
	Cities' share of energy consumption [SDG 11 – 5]	60–80%	2025
	Cities' share of carbon emissions[SDG 11 – 6]	75%	2025
SDG 13	Global temperature increase [SDG 13 – 1]	1.2°C	2025
	Recorded temperature increase [SDG 13 – 2]	1.55°C	2024
	Required emission reduction [SDG 13 – 3]	~ 50%	By 2030

Source: *SDG (2025)*

Source: *SDG (2025)*

The objective of the study is to assess and compare the performance of Arab countries in selected environmental SDGs (6, 7, 11, and 13) using a composite scoring framework based on VNR data. The second objective is to identify performance gaps, regional disparities, and key policy strengths and weaknesses among Arab countries in achieving environmental sustainability goals.

This study is based on several key concepts, including sustainable development, environmental sustainability, SDGs, composite index measurement, and comparative analysis. Sustainable

development provides the overarching framework, emphasising the balance between economic growth, social inclusion, and environmental protection. Environmental sustainability is particularly relevant, as the study focuses on water, energy, urban systems, and climate action. The SDGs offer a globally recognised structure for measuring progress, while the use of a composite index enables standardised comparison across countries. Comparative analysis further supports the identification of differences in performance, allowing the study to highlight disparities, strengths, and policy gaps within the Arab region.

The United Nations (UN) plays a central role in guiding and monitoring SDG implementation through the 2030 Agenda for Sustainable Development. It provides a global framework, technical support, and platforms such as the High-Level Political Forum (HLPF) for reviewing progress (Naim et al., 2026). VNRs, facilitated by the UN, enable countries to report achievements, share best practices, and identify challenges, thereby promoting accountability and international cooperation.

Theoretical Framework

This study is based on sustainable development theory, which emphasises the integration of economic, social, and environmental dimensions of development. It also draws on institutional theory, highlighting the importance of governance structures, policy frameworks, and organisational capacity in achieving sustainability outcomes. Additionally, comparative development theory is relevant, as it explains differences in performance across countries based on economic resources, political stability, and institutional effectiveness.

Benefits of the Study

The study provides a structured and comparative understanding of environmental SDG performance in the Arab region. It offers policymakers evidence-based insights into priority areas for improvement, supports better resource allocation, and enhances strategic planning. The development of a composite index also facilitates benchmarking and monitoring of progress over time. Furthermore, the study contributes to academic literature by providing a region-specific analysis of sustainability performance using standardised measures.

Limitations of the Study

The study has several limitations. It relies on secondary data from VNRs, which are self-reported and may vary in quality and consistency across countries. Differences in reporting standards and data availability may affect comparability. Additionally, the use of a composite scoring system may oversimplify complex sustainability issues, while the interpretation of qualitative information introduces a degree of subjectivity. Despite these limitations, the study provides a useful and consistent framework for comparative analysis.

LITERATURE REVIEW

The concept of sustainable development emerged prominently with the Brundtland Report submitted in the year 1987 (Hajian and Kashani, 2021), which defined it as development that meets present needs without compromising future generations. This was followed by global initiatives such as the Rio Earth Summit in the year 1992 (Goldman, 1992) which strengthened international commitment to environmental protection and sustainable growth. The introduction of the Millennium Development Goals (MDGs) in 2000 marked a shift towards measurable global development targets, although environmental aspects were relatively limited. In 2015, the UN adopted the 2030 Agenda for Sustainable Development, introducing the 17 SDGs, which expanded the scope to include integrated environmental, social, and economic goals (UN, n.d.). More recently, emphasis has been placed on climate action, renewable energy, and sustainable urbanisation, reflecting growing global concerns about environmental degradation and climate change (Ibrahim et al., 2025). The use of composite indices and comparative frameworks has also evolved as a method to assess and monitor progress across countries.

The reviewed studies collectively indicate that progress towards the Sustainable Development Goals (SDGs) in the Arab region remains uneven, with notable advancements in policy frameworks but persistent implementation gaps. Indicator-based assessments reveal that while some countries demonstrate moderate progress, structural challenges such as data limitations, governance inefficiencies, and resource constraints continue to hinder comprehensive achievement of SDGs (Allen et al., 2017; Ahmed and Naim, 2026). Research emphasises the critical role of the water–energy–food nexus and integrated resource management in addressing environmental sustainability, particularly in water-scarce and climate-vulnerable contexts (Ali and Acquaye, 2024; Borgomeo et al., 2020). Studies also highlight the importance of climate resilience, adaptation strategies, and alignment with international frameworks such as the Paris Agreement, especially in hyper-arid regions (Djoundourian, 2021; Alam et al., 2026). Furthermore, sector-specific findings demonstrate that green buildings, smart cities, and sustainable urban policies contribute positively to SDG targets, though their impact remains limited by scalability and socio-cultural factors (Alawneh et al., 2018; Ibrahim et al., 2025; Altouma et al., 2024). Technological advancements, including ICT and artificial intelligence, are increasingly recognised as enablers of resilient infrastructure and sustainable industrialisation (Naim et al., 2026). Despite these developments, water management and SDG 6 continue to be critical concerns, requiring stronger policy evaluation, regional cooperation, and evidence-based interventions (Wang et al., 2024; Zyoud and Zyoud, 2025; Sherif et al., 2023).

Research Gaps

Despite the growing literature on SDGs, there are several gaps in the context of the Arab region. First, most existing studies focus on overall SDG performance rather than providing a focused analysis of environmental SDGs, especially SDGs 6, 7, 11, and 13. Second, there is limited use of standardised composite indices based on VNR data, which restricts the ability to conduct consistent cross-country

comparisons. Third, many studies do not adequately integrate quantitative scoring with qualitative policy insights, resulting in a lack of depth in understanding underlying drivers of performance. This study addresses these gaps by offering a structured, comparative, and region-specific analysis that combines numerical assessment with thematic interpretation of policy and institutional factors.

RESEARCH METHODOLOGY

Research Design

This study adopts a quantitative and qualitative methods based on secondary data derived from official VNR reports submitted by Arab countries to the UN. The approach is descriptive and analytical, enabling cross-country comparison of Arab states' contributions to selected environmental SDGs, specifically SDG 6, 7,11 and 13. A total of Arab countries with available and comparable VNR data are included in the analysis.

The unit of analysis is country-level SDG performance, focusing on Arab states. Each country is assessed based on its reported progress in the four selected environmental SDGs.

Variables and Indicators

The study focuses on four key SDGs, operationalised into measurable indicators (See Table 2).

Table 2
SDGs with Measurable Indicators

SDGs	Indicators			
SDG 6	• Access to safe drinking water services	• Access to improved sanitation facilities	• Efficiency of water resource management	• Policies on water conservation and desalination initiatives
SDG 7	• Share of renewable energy in total energy mix	• Access to electricity and clean energy services	• National policies on clean energy transition	
SDG 11	• Urban infrastructure development	• Access to adequate housing and basic services	• Sustainable transport systems	• Urban environmental management (waste, pollution control)
SDG 13	• National climate policies and commitments	• Climate adaptation and resilience initiatives	• Emissions reduction efforts	• Participation in international climate frameworks

Source: *Articulated by authors referring to SDG (2025)*

These indicators are derived from qualitative and quantitative evidence reported in VNRs. A standardised scoring system (0–5 scale) is used to measure SDG performance across countries (See Table 3).

Table 3
Scoring Description to Measure SDGs

Scores	Description
0	No Progress: no data or no observable action
1	Severely Off-Track: minimal progress with major gaps
2	• Off-Track: limited progress
3	• Moderately Off-Track: some progress but challenges remain
4	• On-Track: substantial progress towards targets
5	• Achieved: target fully met or near completion
Source: *Articulated by authors*	

Each SDG (6, 7, 11, 13) is assigned a score for every country based on evidence from VNR reports. The assessment follows a structured multi-step process as explained below.

Data Extraction

Relevant information on SDGs 6, 7, 11, and 13 is systematically extracted from each country's VNR report.

Indicator Mapping

Extracted data are aligned with predefined indicators for water, energy, urban sustainability, and climate action.

Scoring Assignment

Each SDG is evaluated and assigned a score (0–5) based on the level of progress reported, policy implementation, and outcome evidence.

Composite Environmental SDG Index

For each country, an average score is calculated. The mapped indicators are aggregated into a single measurable index as given below.

Environmental SDG Index= $SDG\,6 + SDG7 + SDG\,11 + SDG13 \div 4$

This study uses a composite Environmental SDG Index to standardise comparison across countries and reflect overall environmental sustainability performance. The index is fully aligned with the dataset

structure and is based on structured proxy indicators rather than directly measured variables. These proxies are derived from both qualitative and quantitative evidence reported in Voluntary National Reviews (VNRs), ensuring consistency in measurement across countries.

For comparative analysis, countries are ranked based on their composite scores to identify their relative performance levels. The results are further analysed through trend and gap analysis to distinguish between high-performing and low-performing countries, identify regional disparities, and highlight key strengths and policy gaps in environmental sustainability.

The study applies several data analysis techniques, including descriptive statistics such as mean scores and rankings, comparative analysis across countries, and thematic interpretation of qualitative insights from VNR reports. This combined approach helps to link numerical results with policy context and institutional factors.

To ensure reliability, a standardised scoring framework is used across all countries. However, the study has some limitations. These include differences in data quality and reporting standards between countries, reliance on self-reported VNR data, and potential subjectivity in interpreting qualitative information on progress.

Ethical Considerations

All data used are publicly available and secondary, ensuring transparency and ethical compliance. Proper attribution is maintained for all data sources and authors declare no conflict of interest.

RESULTS

The first objective of this study is to assess and compare the performance of Arab countries in SDGs 6, 7, 11, and 13 using a composite scoring framework derived from VNR data. The measurement process begins with the extraction of SDG scores for the four selected goals directly from the VNR-based dataset (Table 4), where each score ranges from 0 (no progress) to 5 (achieved). These values are then systematically organised for each country into a structured dataset (See Fig. 2). Subsequently, a composite Environmental SDG Score is calculated for each country by taking the average of the four SDG scores, thereby ensuring equal weighting across all environmental dimensions. This composite index provides a standardised measure of overall environmental sustainability performance. Descriptive statistical techniques are then applied to compute the mean score for each country as well as the regional average, offering a general overview of performance trends across the Arab region.

To facilitate comparison, countries are ranked based on their composite scores, where the highest score represents the strongest performer and the lowest indicates the weakest. The results of this analysis establish a clear comparative hierarchy, distinguishing between high-performing countries characterised by strong governance and sustained investment in sustainability, mid-level performers with moderate yet

uneven progress, and low-performing countries facing structural limitations or conflict-related constraints. Overall, this approach provides a robust and systematic basis for evaluating relative performance across Arab states in key environmental SDGs.

The second objective focuses on identifying performance gaps, regional disparities, and key policy strengths and weaknesses in achieving the selected environmental SDGs. This is achieved by classifying countries into performance categories based on their composite scores: high-performing (≥ 3.5), moderate-performing (2.5–3.49), and low-performing (< 2.5). This classification enables a clearer understanding of relative positioning and development levels across the region.

A gap analysis is then conducted by examining differences between the highest and lowest scores, as well as deviations from the regional average. This helps quantify the magnitude of disparities and highlights uneven development patterns among Arab countries. Further analysis is undertaken by grouping countries into sub-regions, including Gulf Cooperation Council (GCC) countries, middle-income economies, and conflict-affected states, and comparing their mean scores to reveal structural and institutional inequalities.

In addition, SDG-level comparisons are performed by analysing each of the four goals individually to determine which areas demonstrate relatively strong or weak performance. This allows the identification of sector-specific strengths, such as progress in energy or urban development, alongside priority areas requiring improvement, such as water management or climate action.

To complement the quantitative analysis, a thematic interpretation of qualitative VNR insights is conducted. This involves examining reported policy initiatives, institutional frameworks, and investment patterns to contextualise the numerical scores. The analysis identifies recurring themes, including strong governance and infrastructure investment among high-performing countries, as well as resource constraints, weak institutions, and environmental challenges—such as water scarcity and climate vulnerability—among lower-performing states.

Table 4
Environmental SDG Scores (0–5) for 18 Arab Countries (2018 to 2025)

Country/Year	SDG 6	SDG 7	SDG 11	SDG 13
Qatar [2025]	4	4	5	4
KSA [2023]	3	4	4	5
Oman [2024]	4	4	5	3
Iraq [2025]	2	2	3	1
Libya [2024	2	3	2	2
Sudan [2025]	2	2	1	2
UAE [2021]	4	3	4	4
Bahrain [2023]	3	3	4	5
Comoros [2023]	2	3	3	3
Egypt [2021]	3	3	3	3
Djibouti [2022]	2	3	2	2
Jordan [2023]	2	3	2	2
Kuwait [2023]	4	3	3	2
Mauritania [2024]	2	3	2	3
Somalia [2022]	0	1	ND	1
Syria [2024]	1	1	1	1
Tunisia [2021]	3	3	3	3
Yemen [2024]	1	1	1	1
Algeria [2019]	4	3	3	3
Morocco [2020]	3	3	3	3
Lebanon [2018]	2	3	2	2

Source: **Measured by authors from VNR submitted by respective countries on**: https://sustainabledevelopment.un.org/vnrs/

ND = Not Done

The applied methodology produces a composite Environmental SDG Index and a ranked list of Arab countries based on their performance in SDGs 6, 7, 11, and 13. It further enables the identification of

performance gaps, regional inequalities, and key policy priorities, providing a comprehensive and evidence-based assessment of environmental sustainability progress in the Arab region (See Table 5).

Table 5
Environmental SDG Index for SDGs

Rank	Country	SDG 6	SDG 7	SDG 11	SDG 13	Composite Score
1	Qatar	4	4	5	4	4.25
2	Oman	4	4	5	3	4.00
3	UAE	4	3	4	4	3.75
4	Saudi Arabia	3	4	4	3	3.50
5	Algeria	4	3	3	3	3.25
6	Bahrain	3	3	4	3	3.25
7	Kuwait	4	3	3	2	3.00
8	Egypt	3	3	3	3	3.00
9	Morocco	3	3	3	3	3.00
10	Tunisia	3	3	3	3	3.00
11	Jordan	2	3	2	2	2.25
12	Comoros	2	3	3	3	2.75
13	Mauritania	2	3	2	3	2.50
14	Iraq	2	2	3	1	2.00
15	Djibouti	2	3	2	2	2.25
16	Lebanon	2	3	2	2	2.25
17	Libya	2	3	2	2	2.25
18	Sudan	2	2	1	2	1.75
19	Yemen	1	1	1	1	1.00
20	Syria	1	1	1	1	1.00
21	Somalia*	0	1	ND	1	0.67 approx.)

Source: **Measured by authors from VNR submitted by respective countries on**: https://sustainabledevelopment.un.org/vnrs/

ND (Not Done) for Somalia (SDG 11) is treated as very low and average is adjusted accordingly. Figure 3 shows rank analysis for SDGs (6,7,11,13) for Arab Countries and Table 6 presents the results for Arab

countries for their performance in these SDGs under three categories.

Table 6
Performance of Arabs Countries for SDGs (6,7,11,13)

Results	Countries	SDG Composite Score
High Performers (≥ 3.5)	Qatar	(4.25)
	Oman	(4.00)
	UAE	(3.75)
	Saudi Arabia	(3.50)
Moderate Performers (2.5–3.49)	Kuwait, Egypt, Morocco and Tunisia	(3.00)
	Comoros	(2.75)
	Mauritania	(2.50)
Low Performers (< 2.5)	Jordan, Djibouti, Lebanon and Libya	(~ 2.25)
	Iraq	(2.00)
	Sudan	(1.75)
Very Low Performers (≥ 1)	Yemen and Syria	(1.00)
	Somalia	(~ 0.67)

Source: **Measured by authors from VNR submitted by respective countries on**: https://sustainabledevelopment.un.org/vnrs/

The results highlight a clear distinction between high- and low-performing countries. High performers typically demonstrate strong institutional capacity and sustained investment in renewable energy and infrastructure, whereas low performers are characterised by limited policy implementation and disruptions linked to conflict or economic instability. A pronounced regional divide is evident, particularly between GCC countries and conflict-affected states, indicating unequal capacity for SDG implementation.

In the Arab region, SDG 6 is particularly critical due to severe water scarcity and high dependence on desalination. VNR findings show moderate progress in countries such as Saudi Arabia, the UAE, and Oman, which have invested in water infrastructure and efficiency. However, several countries remain off-track, and regional water stress exceeds global averages, with many areas facing extreme scarcity. Challenges persist in sustainable water management, especially in conflict-affected states where access to safe water and sanitation services is limited.

Arab countries have made notable progress in SDG 7, particularly in expanding renewable energy. VNR reports highlight strong performance in Qatar, the UAE, and Saudi Arabia, driven by large-scale solar

energy projects and energy diversification strategies. While access to electricity is nearly universal in high-income countries, disparities remain in lower-income and conflict-affected states. The transition away from fossil fuels remains a key challenge despite increasing investment in clean energy.

Rapid urbanisation is a defining feature of the Arab region, making SDG 11 highly relevant. VNR findings indicate strong performance in countries such as the UAE, Qatar, and Saudi Arabia, where smart city initiatives and infrastructure development are well advanced. However, other countries face challenges related to informal settlements, inadequate housing, and limited public services. Urban sustainability is uneven, reflecting differences in economic capacity and governance.

SDG 13 remains a major challenge across the Arab region, which is highly vulnerable to climate change impacts such as rising temperatures, droughts, and desertification. VNR data show moderate progress in Gulf countries through climate policies and renewable energy investments. However, overall performance remains limited, particularly in conflict-affected and low-income countries where climate adaptation measures are weak. Strengthening climate resilience and mitigation efforts is essential for long-term sustainability in the region.

Regional Disparities

Regional disparities refer to the uneven performance of Arab countries in achieving environmental SDGs. The analysis shows a clear divide between high-performing Gulf countries and lower-performing conflict-affected or resource-constrained states. For example, countries such as Qatar, Oman, the UAE, and Saudi Arabia demonstrate strong performance due to advanced infrastructure, investment in renewable energy, and effective governance systems. In contrast, countries like Yemen, Sudan, and Somalia record very low scores, largely due to conflict, weak institutions, and limited financial and technical capacity. This disparity highlights unequal access to resources and differing levels of institutional readiness across the region.

Strengths and Policy Gaps

Strengths refer to areas where Arab countries show relatively strong progress. For instance, many Gulf countries have made significant advancements in renewable energy (SDG 7) through large-scale solar projects and energy diversification strategies. Similarly, progress in urban development (SDG 11) is evident in countries like the UAE and Saudi Arabia, where smart city initiatives and infrastructure investments are prominent.

However, important policy gaps remain in GCC. Water resource management (SDG 6) is a major challenge across the region due to water scarcity and over-reliance on desalination. Additionally, climate action (SDG 13) remains relatively weak, particularly in lower-performing countries, where climate adaptation and mitigation policies are either limited or insufficiently implemented. These gaps indicate the need for stronger policy frameworks, better resource management, and enhanced regional cooperation.

CONCLUSION

This study provides a comprehensive assessment of Arab countries' performance in key environmental SDGs, specifically SDGs 6, 7, 11, and 13, using a standardised composite scoring framework based on VNR data. The findings reveal that while notable progress has been achieved in certain areas, particularly in clean energy and urban development, overall performance remains uneven across the region. The use of a composite Environmental SDG Index has enabled a clear and consistent comparison of countries, highlighting differences in capacity, policy implementation, and sustainability outcomes.

Gulf countries such as Qatar, Oman, the UAE, and Saudi Arabia demonstrate relatively high performance due to strong governance, substantial investment in infrastructure, and proactive sustainability policies. In contrast, conflict-affected and economically fragile countries, including Yemen, Sudan, and Somalia, show considerably lower progress, largely due to institutional weaknesses, limited resources, and ongoing instability. This divide underscores the importance of political stability and institutional capacity in achieving environmental sustainability goals.

The study also identifies key strengths and persistent challenges within the region. Progress in renewable energy adoption and sustainable urban development reflects increasing commitment to environmental transformation. However, critical gaps remain in water resource management and climate action, both of which are essential for long-term sustainability in the Arab context. These findings suggest that while policy efforts are advancing in some sections, a more balanced and integrated approach is required.

DECLARATIONS

COMPETING INTEREST

Author declare no competing interest for this research work.

FUNDING INFORMATION

Author declare that no funding is received for this research work.

Author Contribution

A.N. is the only author and she has completed all tasks in the paper.

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Figures

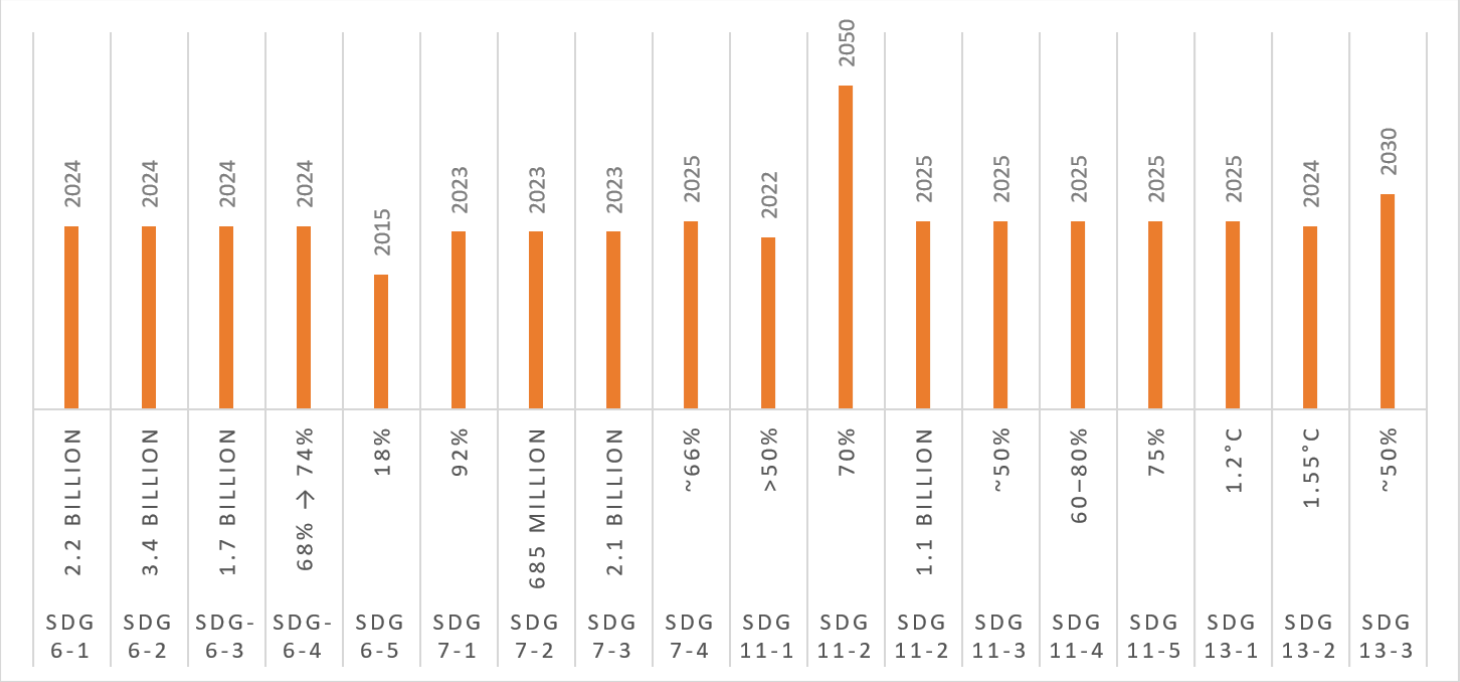


Figure 1

Global Progress Indicators for DGs (6, 7, 11, 13)

Source: *SDG (2025)*

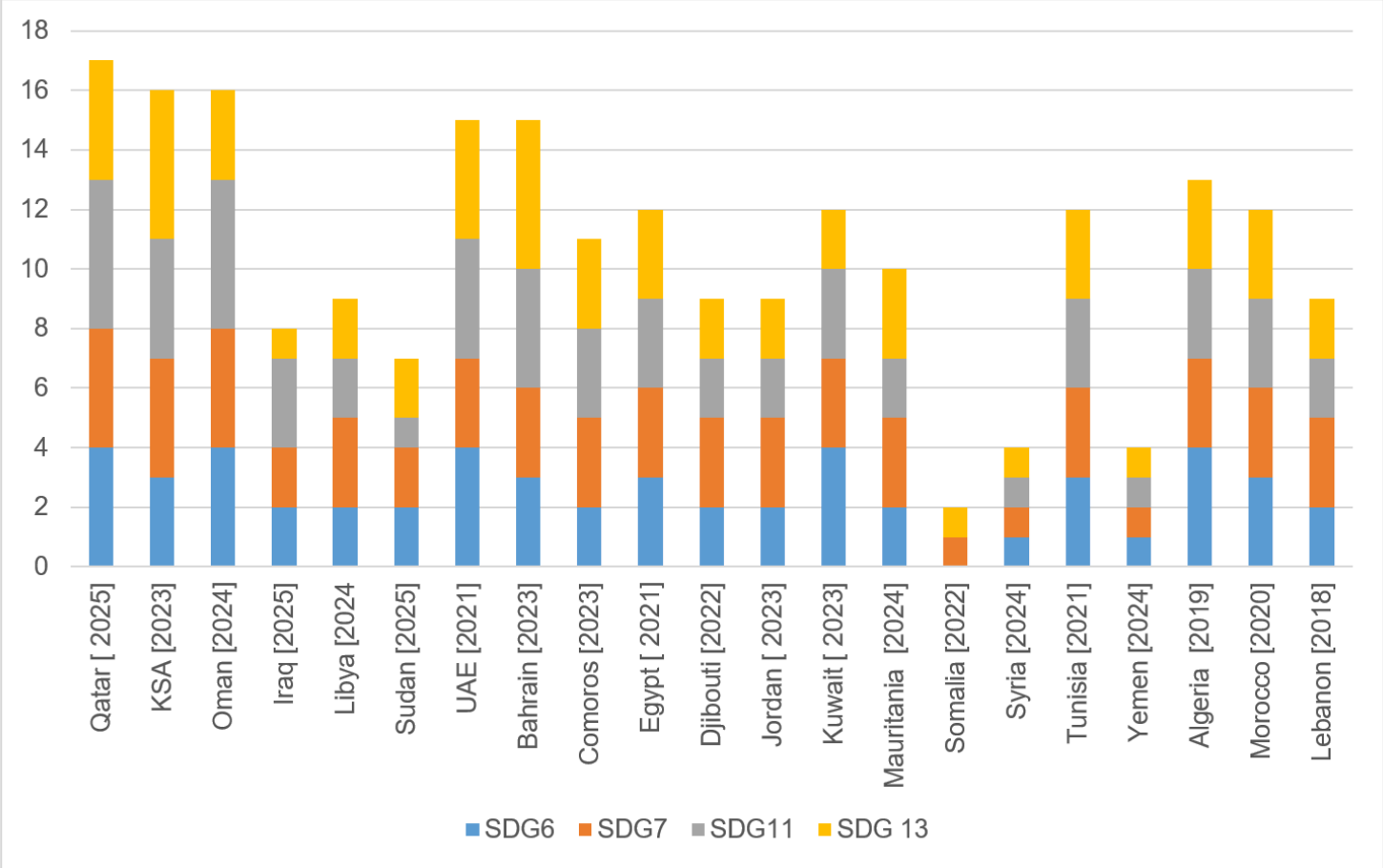


Figure 2

Environmental SDG trend for Arab countries (2018 to 2025)

Source: Measured by authors from VNR submitted by respective countries on: https://sustainabledevelopment.un.org/vnrs/

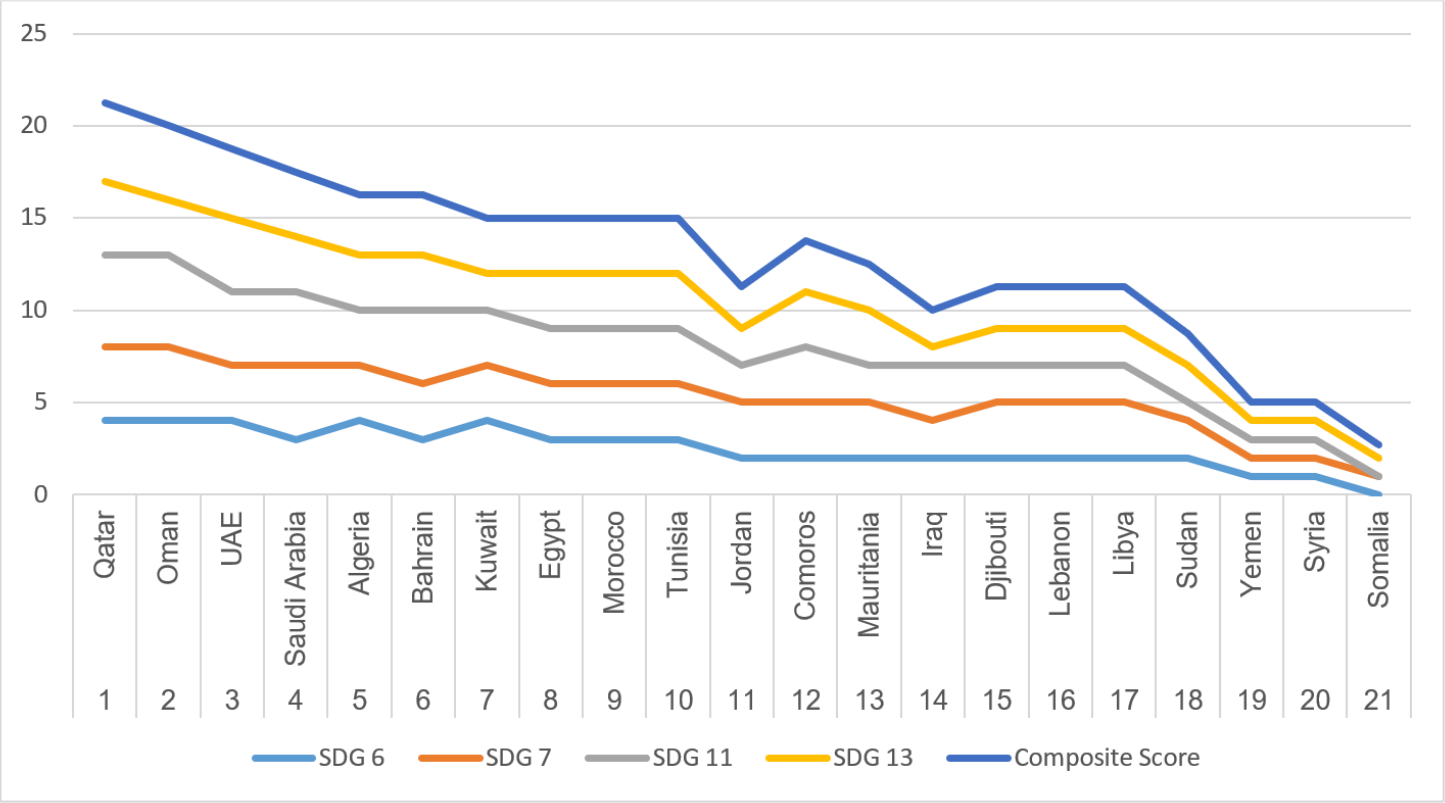


Figure 3

Rank Analysis for SDGs (6,7,11,13) for Arab Countries

Source: Constructed by authors from VNR submitted by respective countries on: https://sustainabledevelopment.un.org/vnrs/