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Adapting to a New Climate in the MENA Region

An assessment of physical risk management and
climate adaptation finance in the MENA region

January 2023

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Executive summary

About this report

This report addresses the risks of climate change in the Middle East and North Africa (MENA) region, the resulting economic impacts, and how banks are responding to climate risks. With a focus on Egypt and Morocco, the report aims to analyze the current state of adaptation finance; the context for banks to identify, assess, and respond to physical climate impacts; and discusses the barriers and recommendations to accelerate and scale up finance for adaptation and resilience in the region. The results of this study are based on three components a) desk-based research; b) a survey of regional banks; and c) interviews with a sample of commercial and development finance institutions.

The context

The MENA region is one of the most vulnerable regions to physical climate change impacts putting human activities and natural systems at risk. Vulnerable populations and ecosystems are exposed to a range of acute hazards, such as drought, heatwaves and extreme weather. Further, the region is highly dependent on climate-sensitive agriculture and has a large percentage of its population and economic activity in coastal zones that are potentially exposed to floods. Temperature rise, precipitation variability, and sea level rise will put increased pressure on the region, its infrastructure, economy and people in the years and decades to come. Therefore, immediate action towards scaling up and accelerating adaptation finance is critical to address the climate adaptation gap and lessen or prevent potential climate change risks. The future of development plans, economic and social resilience in the MENA region hinges on scaling up finance for adaptation. Many MENA countries have adopted green growth and sustainable finance strategies including Egypt and Morocco. Some of these practices relate to climate change, particularly mitigation such as ESG reporting guidelines, green bonds, and sustainable finance frameworks. Others may specifically address physical climate risk assessment such as Egypt's National Strategy for Climate Change and the Central Bank of Egypt's guiding principles for sustainable finance. Climate finance from the multilateral climate funds in the MENA region has largely gone towards climate mitigation efforts despite pressing adaptation needs in the region, especially for water conservation and food security measures. Few projects in the region have benefited from adaptation grants and concessional loans. Development Finance Institutions (DFIs) have played a central role in financing adaptation and enabling private sector adaptation finance in the MENA region by helping banks identify and manage climate-related risks and opportunities; develop climate strategies; and promote

climate investment. Some DFIs also work with regulators to eliminate barriers and create an enabling environment for climate finance. Nevertheless, the private sector's climate finance maturity, especially adaptation finance, is still poor and remains largely unaffected by these policies and support programs.

The survey

A global survey of banks, their response to a changing climate and financing of climate adaptation was launched by UNEP FI in July 2022. Overall, 18 MENA banks from the UAE, Egypt, Morocco, and Bahrain responded to the survey. The survey results show that the drivers and context for identifying climate related risks vary between MENA countries, but the sectors of interest such as agriculture and water are consistent with literature on climate risks and resilience needs in the region. The current low identification, exposure measurement, and assessment rates (12% of respondents) could be attributed to a lack of awareness and understanding of how physical climate risks affect bank operations, a lack of tools to measure climate-related transition and physical risks, missing regulations and incentives, lack of a clear business case to manage risks, and missing or unreliable data. In general, banks are largely focused on addressing short term risks and impacts on their business, while climate risks are usually more significant in the medium-to-long term. However, a significant number of banks are currently working on processes to identify and report on climate risks (72%), which shows progress and change in MENA market dynamics. Managing climate risks in banks' portfolios and operations is currently very low at 11%. Over a third of surveyed banks are relying on the amount of assets or business activities at risk as their key metric for assessing and managing material climate risks which shows a rising maturity in the understanding of climate-related financial impacts on their investments and portfolios. However, the low number of banks considering Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs) or other regulatory requirements when designing their business strategy shows the level of disconnection between governments and banks on the subject of adaptation finance.

Despite the lower levels of identification, assessment, and management of physical climate risks, a higher percentage of respondents said they are offering adaptation-related products and services. This is an important finding and is consistent with the fact that some financial products and services that are normally offered by banks due to their bankability, indirectly address adaptation. Furthermore, the fact that almost 30% of respondents claim not to know whether they are financing adaptation or not, is strong evidence of a huge gap in awareness and knowledge. Water supply and treatment as well as other infrastructure-related products are at the focus of adaptation financing, which is consistent with regional climate risks and resilience needs. In addition, as noted by some banks in the interviews, the ongoing economic crisis driven by COVID-19 and other global economic impacts has made it extremely difficult for banks to focus on long term risks and opportunities, such as those related to adaptation and resilience.

Barriers, recommendations, and the way forward

Despite the pressing need for financing adaptation and resilience in the MENA region, most banks in the region are currently disconnected from national climate plans, policies, and adaptation needs. Most banks have neither solid climate change strategies, nor do they identify, assess, manage, and consider physical climate risks and opportunities in their decision-making processes. In addition, banks are not appropriately pricing climate risks in their investments and operations. This limits the scope for managing and mitigating these risks as well as for realizing material opportunities. There are many barriers challenging private sector adaptation finance in the MENA region including the absence of standards and definitions; a perceived lack of profitable opportunities in climate related projects; a shortage of data, training, knowledge, and capacity; and absence of adequate policy and regulatory support. The business case for adaptation and resilient finance should be interpreted in the context of collective loss and damage prevention versus the return on investment to individual investors. Understanding and quantifying the loss and damage that can be avoided under likely climate scenarios is crucially important to scale up adaptation finance in the MENA region. The physical impacts of climate change affect all sectors to varying degrees, so individual investments in adaptation cannot build resilience on their own. Adaptation therefore requires collaboration between a range of stakeholders, including financial institutions, national and local government, businesses, development banks, and civil society organizations. Therefore, the recommendations in this report consider the roles which all stakeholders can play across three main categories:

- Awareness, training, and capacity building
- Tools & data availability and reliability
- Policies, regulations and enabling environment

It is recommended that UNEP FI utilizes the proposed Sharm El-Sheikh Banking Declaration (SSBD)—a proposed commitment and call to action on climate change by MENA region banks—for mobilizing resources and driving engagement between MENA banks, as well as other key stakeholders. UNEP FI is well positioned to assume this central role between all stakeholders and to address the recommendations in this report.

1. Introduction

1.1 Physical Climate Risks in the MENA Region

The MENA region is one of the most vulnerable regions in the world to physical climate change impacts, putting human activities and natural systems at risk. It is one of the world's most water-scarce and dry regions, with a high dependency on climate-sensitive agriculture, while a large share of its population and economic activity is located in flood-prone urban coastal zones. Vulnerable populations and ecosystems will be exposed to a range of acute hazards, such as drought, heatwaves and extreme weather. The region, which is highly dependent on climate-sensitive agriculture, has a large percentage of its population and economic activity in coastal zones that are potentially exposed to floods (World Bank 2013). Three climate change trends, enumerated below, will put increased pressure on the region, its infrastructure, economy and people in the years and decades to come.

- 1. Temperature rise:** In a scenario of 2°C average global warming above pre-industrial levels, unusual heat extremes have been projected to occur in about thirty percent of summer months across most of the MENA region (Waha et al. 2017). In a +4°C world, a new norm of extreme temperatures, up to 56°C, could be established throughout the region. In parts of the region, summer temperatures may reach 8°C warmer by the end of the century (World Bank 2020). Temperature rise also leaves the region at acute danger of wildfire, which is already prevalent. In Lebanon and the coastal highland regions of neighboring Syria, summer heat waves have led to hundreds of fires which have reached residential areas, forcing evacuations.

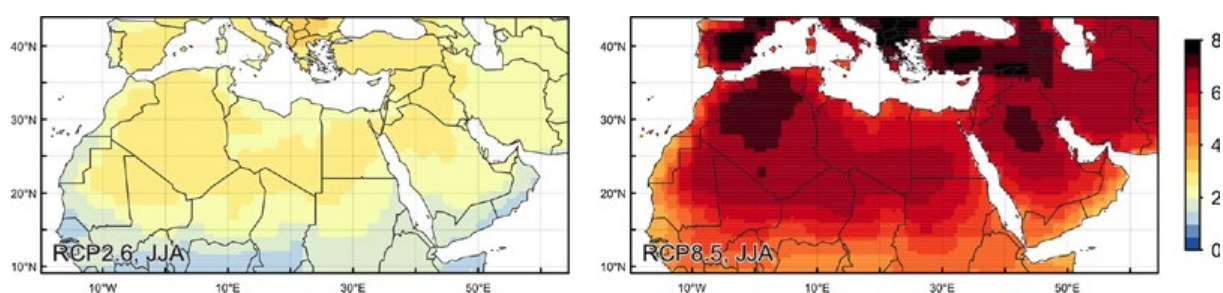


Fig. 1: Temperature projections in the MENA region for climate scenarios RCP2.6 (left) and RCP 8.5 (right) by 2071–2099 (Waha et al. 2017).

2. **Precipitation variability:** The arid MENA region has always experienced both cyclical and discrete periods of drought. However, due to climate change, these drought periods are projected to significantly increase in intensity, particularly in countries along the Mediterranean coast which may receive about 10-20% less rain in a 2°C world and up to 50% less rain in a 4°C world (World Bank 2020). This most obviously impacts availability of water supply with implications for agricultural crops and livestock. Combined with temperature rises, reduced rainfall is expected to shift the 'aridity line', or the point at which arable lands meet the desert, where annual rainfall falls below 200mm/year and rain dependent agriculture becomes impossible. Increased droughts may also have impacts on other forms of infrastructure, such as through sandstorms caused by drying soil and the accumulation of desert dust in the atmosphere. These may accelerate land degradation and desertification, limit solar generation potential, and cause erosion and sedimentation that hinder water- and land-based transport (Stefanski et al. 2009).

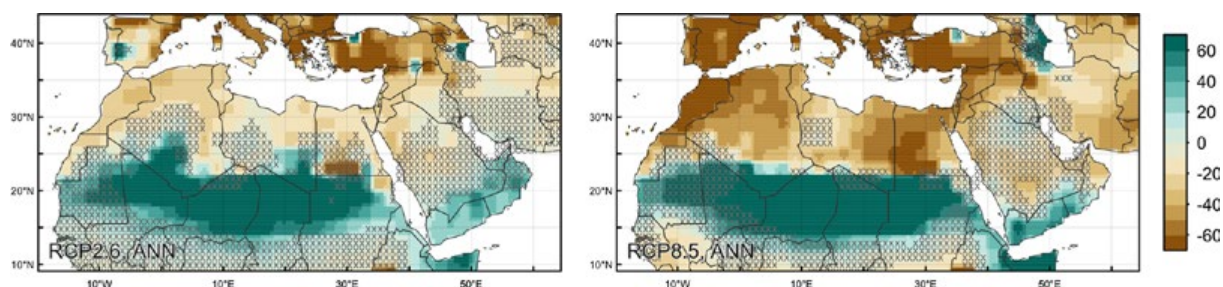


Fig. 2: Percentage change in the aridity index for scenarios RCP2.6 (left) and RCP8.5 (right) by 2071–99 relative to 1951–80. Note that a negative change corresponds to a shift to more arid conditions (Waha et al. 2017).

3. **Sea level rise:** Sea level may rise by an average of 0.36m in a 1.5°C average warming scenario, and 0.6m in a 4°C scenario by 2100, accelerated by coastal erosion in parts of the region (World Bank 2020). This is notable as a large share of the region's population and economic activity are in flood-prone urban coastal zones: seven percent of the MENA's total population lives in areas less than five meters above sea level, which includes major metropolitan areas (Borghesi & Ticci 2021), with an estimated 100 million people potentially exposed to coastal flooding by 2030 (Waha et al. 2017). Seawater can also intrude into coastal aquifers and wells, salinizing the water and devastating littoral agricultural communities as well as reducing municipal water supplies.

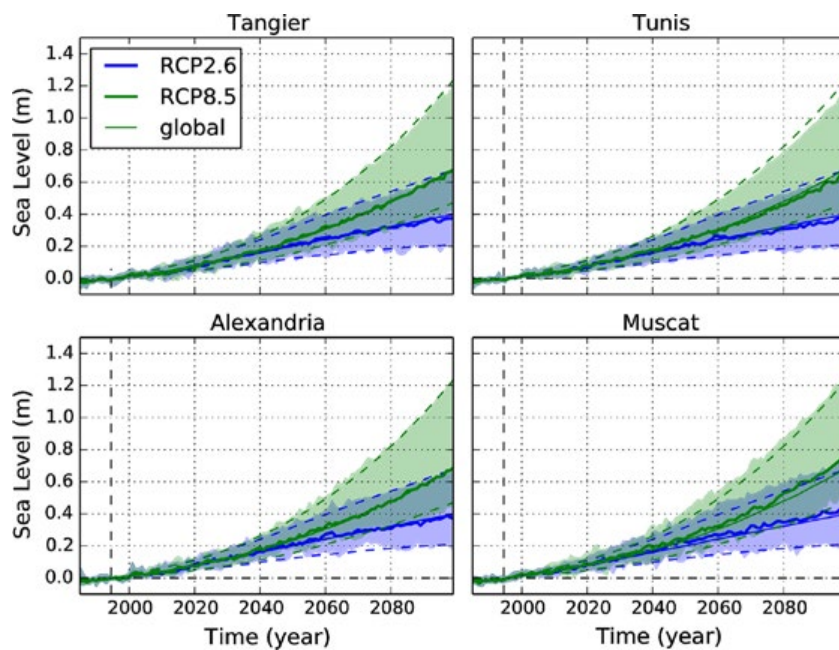


Fig. 3: Sea-level projections for Tangier, Tunis, Alexandria and Muscat for the scenarios RCP2.6 (blue) and RCP8.5 (green). Median estimates are given as full thick lines and the lower and upper bound given as shading. Full thin lines are global median sea-level rise with dashed lines as lower and upper bounds (Waha et al. 2017).

Overall, an estimated 75% of buildings and infrastructure in the MENA region are considered at direct risk of climate change impacts such as sea level rise, storm surges, and increased temperatures (Göll 2017).

1.2 Economic impacts associated with physical climate risks

Bio-physical impacts of climate change may be exacerbated by other socio-economic pressures and a general lack of resilience, posing a threat to economic development in the region. Some estimates predict a loss of 0.4 to 1.3% of GDP in MENA countries due to climate change effects, rising to 14% in the absence of appropriate mitigation and adaptation measures (Peridy et al. 2012). Many of these economic impacts are linked to projected climate change impacts on the highly interlinked factors of water security, agricultural productivity, and migration, displacement and urbanization. The MENA region being the world’s most water-scarce region, is at risk from compromised food security and productive and arable land sustainability due to climate change, given the high dependency on climate-sensitive agriculture. For example, in a 2°C average global warming scenario, freshwater availability in the region could drop between 15 and 45%, with a resulting reduction in GDP between 6 and 14% by 2050. This link between climate variability and agricultural production across MENA countries has been demonstrated to be significant across studies, with a one percent increase in winter temperature resulting in a 1.12 percent decrease in agricultural production across 20 MENA countries (Salah et al, 2016).

The reduction of domestic agricultural productivity—which is 70% rainfed—places importing countries at risk of international food price shocks. The potential impacts are exaggerated by other global supply chain challenges due to COVID-19 and the war in Ukraine. For example, there is existing reliance on wheat imports from countries such as Ukraine and Russia (85% of Egypt’s wheat imports, 43% Libya, 22% Yemen), and price volatility or disruptions may lead to economic impoverishment or uprisings. This could lead to devastating socioeconomic impacts in several MENA countries considering the agriculture sector is the largest employer in the region.

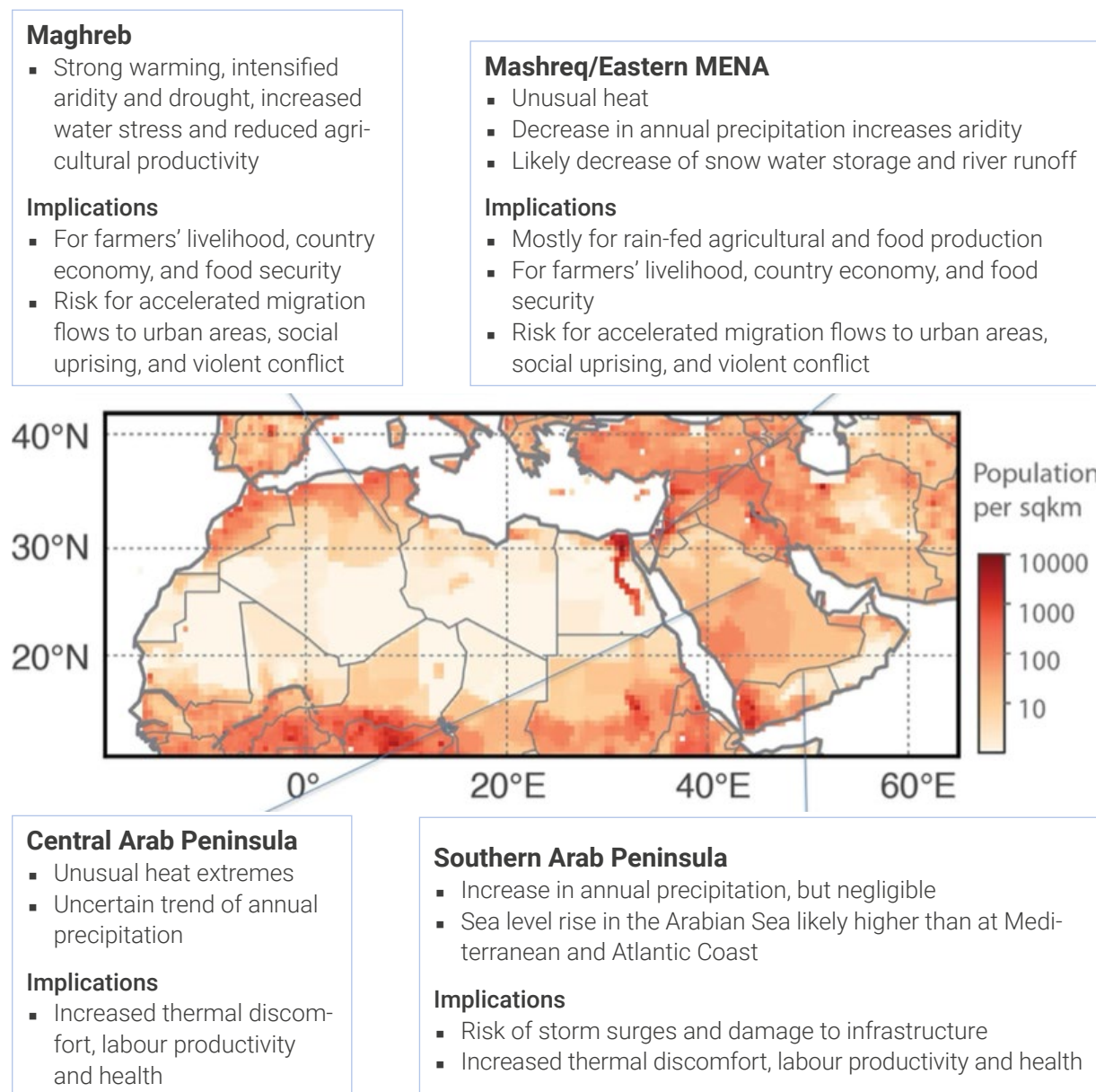


Fig. 4: MENA population experiencing unusual monthly boreal summer temperatures and expected subregional impacts under 4°C warming by the end of the twenty-first century (RCP 8.5, 2071–2090) compared to preindustrial temperatures (Waha et al. 2017).

A decline in global demand for oil, which historically forms a significant part of many MENA economies, compounds these economic and social impacts. Vulnerable groups, such as smallholder farmers and women, are likely to be hardest hit by losses in agricultural productivity due to climate change.

The COVID-19 pandemic and corresponding societal responses may be compounding climate risks. For instance, COVID-19 travel and import restrictions during the 2020 Pacific cyclones slowed down disaster response efforts by quarantining supplies and aid workers. Additionally, the indirect consequences of the pandemic may significantly lower climate adaptive capacity. For instance, negative economic consequences including slowdowns in certain economic sectors, job losses, and rising poverty (an additional 97 million people fell into poverty in 2020), often adversely affect vulnerable groups and further impair their ability to adapt to extreme climate events. Governments and companies, especially small and medium-sized businesses in emerging countries, have also used cash reserves, and many have issued new debt to deal with the pandemic, making them vulnerable to future economic shocks. (UNEP, 2021). Banks and potentially their climate finance plans have also been hit by the pandemic, compounded by other economic shocks. This was also evident from the interviews conducted with some banks in the MENA region.

Climate change acts as a threat multiplier in the MENA region. Given high socio-political instability in some parts of the region, climate change may act as a push factor in migration, driving forced displacement and increasing the risk of violent conflict, economic deprivation and food crises (World Bank 2020). Climate change impacts are likely to magnify over time beyond these scenarios. Therefore, immediate action towards scaling up and accelerating adaptation finance is critical to address the climate adaptation gap and to lessen or prevent potential climate change risks. In short, the future of development plans, economic and social resilience in the MENA region hinges on scaling up finance for adaptation.



2. The state of adaptation finance in the MENA Region

2.1 Sustainable finance and ESG management

Many MENA countries have adopted green growth strategies. However, their progress in aligning national financial systems with sustainable development needs and goals is varied. For example, the UAE leads sustainable finance practices in the region; while Morocco is at an advanced stage (UNEP FI, 2021). Egypt has addressed climate finance in some of its sustainable development and green finance policies, strategies, and public spending plans. Jordan and Bahrain have committed to aligning their financial systems to support their sustainable development agenda. Saudi Arabia's national policy framework has been driven mainly by economic diversification reforms to reduce their dependence on oil exports and increase the contribution of non-oil sectors to GDP, while also increasing private sector participation (UNEP FI, 2021). All six countries have developed ESG guidelines, engaged in sustainability reporting, and, except for Saudi Arabia, worked on promoting sustainable finance through awareness campaigns and education initiatives. As for financial market innovations, only three countries—the UAE, Morocco and Egypt— have issued green bonds, while all six countries have issued conventional Islamic bonds, or sukuks, which may also be used to promote sustainable finance in the region. On the regulatory front, the UAE, Egypt, Jordan, Saudi Arabia and Morocco have all enacted public-private partnership (PPP) legislation, which will enable the private sector to play a bigger role in supporting the transition to a more climate resilient economy by increasing its investment in green and low carbon ventures (UNEP FI, 2021).

Table 1: Sustainable finance policies and practices in the MENA region (UNEP FI, 2021)¹

	UAE	Egypt	Morocco	Jordan	Bahrain	KSA
Sustainable development agenda	✓	✓	✓	✓	✓	✓
Sustainable finance framework	✓	✓	✓	✓	✓	
ESG/ESG Reporting	✓	✓	✓	✓	✓	✓
Sustainable finance products & services	✓	✓	✓			
Awareness & education initiatives	✓	✓	✓	✓	✓	
Supportive regulations or enabling environment i.e., PPP	✓	✓	✓	✓		✓
Climate focused policies & strategies	✓	✓	✓	✓	✓	✓

Some of these practices are intended to scale climate change mitigation, such as ESG reporting guidelines, sustainable finance frameworks, and innovative financial products. Others may specifically address climate adaptation finance and climate risk assessment such as Egypt’s National Strategy for Climate Change 2050 and the Central Bank of Egypt’s guiding principles for sustainable finance. Although the referenced MENA countries are mostly advanced in terms of sustainable finance policies at the level of implementation, climate finance maturity, especially adaptation finance, is poor and remains largely unaffected by these, policies. Policies and practices can be classified into different categories that vary in their influence on advancing sustainable finance and consequently on climate finance or adaptation finance as presented in the Table 2 below.

Table 2: Categories of sustainable & climate finance policies and practices

Category	Policy/Practice Examples
Promotion and awareness	Awareness campaigns; and educational, training programs.
Guidelines for voluntary action	Offering guidance, access to case studies, and best practice manuals such as ESG reporting guidelines or taxonomies without mandatory requirements.
Indirect policies and regulatory support	Policies, strategies, and practices that can indirectly impact sustainable finance or create the enabling environment such as PPP, public spending, and national sustainable development agendas/frameworks.
Direct policies and regulations	Policies and strategies that directly affect or promote sustainable finance practices such as mandatory products allocation or national sustainable/climate finance frameworks.

The maturity levels of governments, private sectors, and markets clearly reflect which policy categories are dominant in each country. In many cases, progress on direct policies and regulations reflects the level of awareness, and availability of guidelines and regulatory support. However, this is not always the case. Following a phased approach is useful in the sense that it promotes awareness, provides access to tools, develops

¹ The data presented in this table has been updated. Therefore, some inputs are different from those presented in the UNEP FI, 2021 reference.

markets, builds capacities, and creates the enabling environment and business case before enforcing change. Nevertheless, this approach takes a much longer time and sometimes doesn't achieve the desired change. In mature markets, progress can sometimes go into reverse. Government policy may be directly driven by lobbying as well as by the success stories of leading private sector organizations which manage to disrupt the status quo and showcase the benefits of sustainable/climate finance for all stakeholders.

2.2 Physical Climate Risks and National Plans

In Egypt, the IPCC (AR6, 2022) considers the Nile Delta to be one of the world's three vulnerability hotspots. Climate change in Egypt will result in sea level rise, water scarcity, and extreme weather events with negative consequences on land in the northern part of Nile delta, namely for infrastructure, the agriculture sector, and fisheries. This may have consequences for food security, human health, housing, telecommunications, tourism, and general economic performance. Sea level rise and heatwaves are also a concern alongside water availability while biodiversity and aquaculture are heavily impacted (UNEP FI, 2022).

To address its climate risks, Egypt submitted its first Nationally Determined Contributions (NDCs) to the UNFCCC in November 2015 prior to signing the Paris Agreement and has submitted the first update of its NDCs in June 2022 covering the period 2015–2030. Egypt also launched its National Strategy for Climate Change and is currently updating its National Adaptation Plan. The government has integrated climate metrics in its national sustainable development strategy, launched a dedicated National Climate Change Strategy, and has been actively engaging in multilateral and bilateral cooperation with other countries to address the climate adaptation finance gap while preparing to host the 27th United Nations Climate Change conference (COP27). Furthermore, the Central Bank of Egypt (CBE) has issued guiding principles for sustainable finance which integrate climate risk management among its six principals, laying the foundation for identifying and managing climate change risks, in addition to encouraging project financing that contributes to addressing climate change. Similarly, the Egyptian Financial Regulatory Authority—the regulatory authority of non-banking financial institutions (NBFIs)—recently mandated ESG reporting for publicly listed organizations and required climate-related risk reporting in line with the recommendations of the Task Force on Climate Related Financial Disclosure (TCFD) for large NBFIs.

Egypt aims to increase the proportion of green projects in the government's investment budget from 14% in 2020 to 30% in 2022 while leveraging public-private partnerships (PPPs). In preparation for COP27, Egypt announced 85 projects in its portfolio with a total cost of US\$ 11.9 billion including both mitigation and adaptation projects. The government is further pitching for investments for two adaptation projects with budgets of US\$ 800m and US\$ 600m respectively. The first project is aimed at increasing the resilience of crop production in the Nile valley and delta. The second project will finance the construction of six solar-powered desalination plants to reduce dependence on freshwater supplies from the Nile. According to a recent announcement by the CEO of the Egyptian Environmental Affairs Agency, Egypt is currently seeking a total of US\$ 415

billion for climate related projects, US\$ 300 billion for mitigation projects and US\$ 115 billion for adaptation projects ahead of COP27 in November 2022.

In Morocco, 80% of infrastructure and industry are in coastal zones exposed to sea level rise. Morocco has suffered from drought in 20 of the last 70 years, with dire consequences on agriculture, as 87% of water resources are allocated to the sector. Water is a major concern in Morocco; it is estimated that the 2020 ratio of 600m³/year/person will be reduced to 500m³/year/person by 2030. Current policy favours adaptation, specifically efficient irrigation, targeted insurance products to tackle social impacts and the creation of food stocks to increase food security. The preservation and optimization of water resources are also central to climate adaptation, through irrigation and the construction of large dams. Since the 1980s, 140 large dams have been built and this is accelerating. Desalination programs are also being explored to provide sufficient water. Other initiatives such as Climate Risk Impact Screening (CRIS) and the Central Bank of Morocco's physical and transition risk analysis aim to assess or measure climate-related physical risks (UNEP FI, 2022). It is worth noting that if climate change decreases precipitation levels, investments in large dams may be exposed to losses.

In 2019, Morocco adopted its National 2030 Climate Plan, which aims to ensure the adaptability of the most vulnerable sectors including water, agriculture and fisheries, and mitigate the effects of greenhouse gas emissions caused by sectors such as power generation and transport. Implementing the plan will require considerable investment, estimated at about US\$ 50 billion for mitigation programs and another US\$ 35 billion for adaptation projects by 2030 (UNEP FI, 2021). Morocco also adopted the National Charter for Environment as part of its National Sustainable Development Strategy including:

- the transition towards a green economy,
- promoting sustainable development culture,
- consolidating sustainable development governance,
- improving natural resource management,
- promoting human development and reduce social inequalities,
- giving particular attention to sensitive areas, and
- accelerating the implementation of climate change policy.

In 2016, Morocco launched its national Roadmap for Aligning the Financial Sector with Sustainable Development and its climate change commitments. The roadmap aims to promote higher investment flows into sustainable and climate-change-related projects to address Morocco's mounting social and environmental challenges. By enabling the financial sector to play an instrumental role in closing the green investment gap (estimated at US\$ 24 billion), it seeks to smooth the transition to a green economy (UNEP FI, 2021).

2.3 Funding adaptation in MENA

Climate finance refers to financial resources mobilized to fund actions directed towards mitigating and adapting the impacts of climate change. Adaptation finance can be accessed through international public finance, national public finance, international private finance, national private finance, and blended finance, which combines both climate grants and bankable loans. Public funding, both national and international, has been the main source of financing for adaptation activities in most developing economies, including the MENA region, and directs domestic and international budgets into a wide range of projects aimed at increasing resilience to climate change on various levels. This funding is mostly in the form of climate adaptation grants and funds, as well as both direct and indirect finance from development banks such as the European Bank for Reconstruction and Development (EBRD), the World Bank Group, the KfW Development Bank, and the French Development Agency (AFD). While data on international public funding is available, data on national budgets is extremely limited (UNEP, 2016).

Climate finance from the multilateral climate funds in the MENA region is largely concentrated in a small number of large projects in the form of loans or concessional loans. The total amount of finance approved between 2003 and 2020 is US\$ 1.5 billion for 139 projects. This money has largely gone towards climate mitigation efforts despite pressing adaptation needs in the region, especially for water conservation and food security measures. Of the total funding approved for the region, US\$ 560 million has taken the form of grants. Adaptation projects have all been supported by grants. US\$ 964 million has been provided in the form of loans or concessional loans for just a few large-scale energy infrastructure projects approved by the Clean Technology Fund (CTF) and Green Climate Fund (GCF). The top two recipients—Egypt and Morocco—respectively have received 29% and 19% of total approved climate finance in the region. Approved finance grew by US\$ 88 million in 2020 (Watson C. and Schalatek L., 2021).

Roughly three-quarters of Arab states have been able to secure Green Climate Fund (GCF) readiness support, but there have only been 13 approved GCF projects to Arab states since the first one in 2015 through to 2019. A mere five of those focus solely on adaptation, while five others are cross-cutting projects pursuing both mitigation and adaptation objectives. Egypt has received a total of US\$ 300 million from the Green Climate Fund (GCF) (GCA, 2020).

In 2017-2018, global adaptation finance reached US\$ 30 billion. The MENA region's share was only 6 percent of global climate finance flows despite the significant climate risks confronting the region. According to the OECD and ESCWA, over 92 percent of the flows between 2013 and 2018 have gone to Egypt, Iraq, Jordan, Lebanon, Morocco, and Tunisia, with roughly 60 percent to Egypt and Morocco alone. Meanwhile, the least-developed Arab countries, including Djibouti, Mauritania, Somalia, Sudan and Yemen, received only 4.3 percent of the climate finance support provided to the region (GCA, 2020).

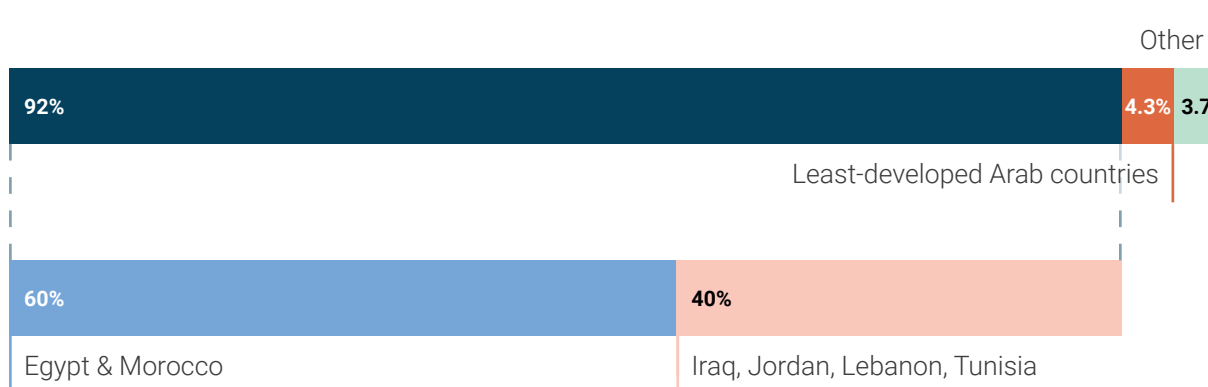


Fig. 5: MENA Climate Finance Distribution 2013–2018 (GCA, 2020)

2.4 The role of Development Finance Institutions in the MENA region

Development Finance Institutions (DFIs) play a central role in financing adaptation and enabling private sector adaptation finance in the MENA region by providing technical assistance to banks for embedding environmental and social considerations including climate in banks’ governance and risk management systems; identifying, assessing, and managing climate related risks and opportunities; developing climate strategies; and promoting climate investment in the most vulnerable sectors and communities. DFIs also work with governments, regulators, and policy makers to eliminate barriers and create an enabling environment for sustainable finance. The following examples shed some light on a selection of DFIs and their climate related activities in the MENA region.

European Bank for Reconstruction and Development—EBRD²

In an interview with EBRD’s key Climate Adaptation and Strategy practice, it was noted that EBRD is strongly aware of the important role private finance can play in climate adaptation. Recent actions taken by EBRD to address barriers to private financing for adaptation include:

- Green Economy transition: Climate Adaptation and Resilience is a core part of EBRD’s [Green Economy Transition \(GET\)](#) approach involving three project categories: climate mitigation, climate adaptation, and other environmental projects. When it comes to allocating financing for climate adaptation, EBRD assesses additional resilience impacts by focusing on 6 categories of Climate Resilience Outcomes which financed projects may deliver. [EBRD’s Green Economy Financing Facility \(GEFF\)](#) Programme operates through a network of more than 140 local financial institutions across 26 countries supported by more than EUR 4 billion to finance several green economy transition categories including energy efficiency, renewable energy, resource efficiency (including water, material, and waste minimization), climate resilience, pollution reduction, and protecting natural assets such as rivers, lakes and forests. Under the GEFF programme, the EBRD has provided climate financing to several banks, Small- and

2 (EBRD Personal Interview, July 2022)

Medium-sized Enterprises (SMEs), and projects across the MENA region including in Egypt and Morocco.

Box 1: EBRD Promotes Corporate Climate Governance Integration at MENA Banks

In June 2021, the National Bank of Egypt signed a US\$100 million Green Economy Financing Facility (GEFF) loan with the EBRD. By signing its third GEFF, the largest commercial bank in the country not only commits to providing additional resources for much-needed green investments in small businesses, but also to strengthening its climate corporate governance at an institutional level, including by addressing climate risk management and climate-related risk disclosure.

- Preparing a [Guide for Issuers on Green Bonds for Climate Resilience](#), together with the Global Center on Adaptation (GCA) and the Climate Bonds Initiative (CBI), which provides practical guidance to sovereigns, sub-sovereigns, financial institutions and corporates on how to raise capital in the green bond market to invest in climate adaptation and resilience.
- [EBRD Green Finance Academy](#)—The platform was specifically developed for financial institutions and professionals, to enhance industry knowledge on green finance and advise on best practices to ensure the most profitable outcomes. This e-learning programme includes dedicated modules on climate adaptation and resilience to support EBRD Partner Financial Institutions provide financing for adaptation.
- [Corporate Climate Governance Programme](#)—Supporting corporate, FI and municipal clients to assess, manage and disclose climate risks (including physical climate risks) in their operations and therefore improve their access to capital markets.

World Bank

The World Bank's Roadmap for Climate Action in the Middle East and North Africa (MENA), which runs from 2021-2025, aims to drive climate action and a green recovery in the region. By 2025, US\$ 10 billion of World Bank and IFC financing are allocated for climate smart projects and policy reforms in the MENA, in addition to leveraging another US\$ 2 billion in private sector financing towards climate smart investments. The bank is planning to invest 50% of this amount in building resilience, reflecting regional heterogeneity and country-specific demand. The roadmap outlines four key transformation areas to build low-carbon, resilient societies:

- **Food systems, water security and resilient natural capital:** A climate-smart approach to agriculture and natural resource management in MENA is instrumental to achieve food security and preserve biodiversity, while ensuring peace and stability.
- **Energy transition and low-carbon mobility:** Decarbonizing energy and transport sectors through renewable energy sources and clean mobility solutions can create jobs and drive economic growth while preventing health and environmental risks.

- **Climate-smart cities and resilient coastal economies:** Climate-informed urban planning, strengthening municipal plans to ensure the continuity of public services, and integrated coastal management will help improve the livability of cities and mitigate risks in the face of increased climate hazards.
- **Sustainable finance for climate action:** Unlocking private capital, supporting national budgets and expenditures and strengthening financial institutions for green investments (World Bank, 2021).

International Finance Corporation—IFC³

In an interview with the IFC's Financial Institutions and Climate team, it was noted that the IFC is working with Private Financial Institutions and regulators on several climate related targets in the context of the [30by30 Zero program](#) which helps the banking sector increase climate-related lending by 30 per cent with zero, or near zero, coal exposure by 2030. IFC realizes the importance of physical climate risk assessment as one of the barriers to accelerating adaptation finance in the private sector. Building private banks' capacity for properly identifying and assessing physical climate risks can provide a better understanding of banks' needs for financing resilience and the different private sector risk exposures, potential financial instruments, technical assistance and priority sectors in need of support.

French Development Agency (AFD)

As part of the Transforming Financial Systems for Climate (TFSC) program and with financial support from the Green Climate Fund (GCF), the National Bank of Egypt (NBE) and the French Development Agency (AFD) signed a EUR 100 million loan agreement to finance projects to support the low-carbon and climate-resilient transition of Egyptian SMEs. This credit line to NBE aims to finance investments that are 100% climate-compatible in terms of both greenhouse gas mitigation issues and aspects related to adaptation to the impacts of climate change. Under this program, AFD has also allocated a EUR 1.5 million grant to implement technical assistance to support NBE's Climate strategy as well as E&S management. This agreement will help disseminate innovative financing mechanisms for sustainable development, especially for the development of climate finance.

2.5 Green Bonds

Green bonds are financing debt instruments that can be issued by national, regional, multinational public entities as well as private corporations. Their proceeds are specifically tied to financing green investment and socially centered activities, in accordance with a clear set of rules that is an integral part of the bond issuance. A share of 16.4% (1,265) of deals in the global labelled green bond market (7,725 deals) up to September 2020 have included activities related to adaptation and resilience, mostly in the water and water-related sectors. Of these, 79% have come from developed markets, 15% from multinational institutions, and only 6% from emerging markets. With respect to issuers,

3 (IFC Personal Interview, July 2022)

12% of the green bonds that included A&R activities were issued by sovereigns and local governments, 65% by government-backed entities, 16% by development banks, 4% by financial corporates, and 3% by non-financial corporate organizations. The first green bond fully dedicated to support climate-resilient infrastructure, climate-resilient businesses, and climate-resilient agriculture and ecological systems—labelled as a ‘Climate Resilience Bond’—was issued by the EBRD in January 2020 (GCA, 2021). In the MENA region, the first green corporate bond was issued in the United Arab Emirates (UAE) in 2017 by the National Bank of Abu Dhabi (ESCWA 2019). Egypt then became the first MENA country to issue sovereign green bonds to finance sustainable public projects with a focus on mitigation, through renewable energy, energy efficiency, pollution reduction and control, sustainable water, and waste management. More recently, the Commercial International Bank (CIB) issued a green bond with a value of US\$ 100 million that is fully subscribed by the International Finance Corporation (IFC). The bank is intending to use the proceeds to support projects that promote sustainable solutions focusing on climate mitigation, such as renewable energy, industrial energy efficiency, green buildings, sustainable transport, and resource efficiency. Green bonds’ proceeds in the MENA region usually overlook adaptation.

2.6 Coalition for Climate Resilient Investment

[The Coalition for Climate Resilient Investment \(CCRI\)](#) was launched in September 2019 to mobilize the global private financial industry, in partnership with key public institutions and collaboratively develop and pilot practical solutions for an effective integration of physical climate risks in investment decision-making and cash flow modelling. With over 129 members representing US\$ 27 trillion of financial assets, the coalition spans governments, private banks, insurance companies, development finance institutions, technical institutions, ratings agencies, climate specialists, and academia. CCRI and its partners have developed the Physical Climate Risk Assessment Methodology (PCRAM) and national investment prioritization tools for resilient infrastructure investments. These solutions allow for a visual identification of key priorities in selected infrastructure networks based on their effectiveness in protecting economic, social and ecosystem value from physical climate risks. Additionally, the coalition mobilizes capital to finance climate resilient infrastructure assets and networks. The approach provides a comprehensive assessment of physical risks and resilience options for large scale project investments where assets are expected to last for decades well into a radically altered climate. CCRI aims to expand their methodology to other sectors and asset classes, potentially starting with real estate investments. CCRI is currently pursuing cooperation with the Government of Egypt to pilot these solutions. The proposed approach involves assessing infrastructure exposure to climate risks at the national level, identifying solutions for managing such risks through integrating the necessary capabilities and analytics within the national planning processes and mobilizing capital.

3. How MENA banks are addressing adaptation

A global survey of banks, their response to a changing climate and financing of climate adaptation was carried out by UNEP FI in July 2022. Overall, 18 MENA banks from the UAE, Egypt, Morocco, and Bahrain responded to the survey. The survey was divided into three main sections:

- a. identification and assessment of climate risks,
- b. managing climate risks, and
- c. financing of climate adaptation and resilience.

Some limitations were encountered during data analysis and interpretation. For example, countries were not equally represented. While the report is focused on Egypt and Morocco, the majority of responses were from the UAE. Further, some of the responses indicate a lack of understanding of climate adaptation or a possible confusion between mitigation and adaptation, as defined by the IPCC.



Fig. 6: Respondents' geographic distribution

3.1 Identification and assessment of climate risks

Only 12% of the respondents have identified climate related risks, 72% are currently working on it, and 17% have neither identified nor worked on a process to identify climate related risks. 78% of the respondents are also working on a process to assess the potential size and scope of identified climate related risks.⁴

- 33% of respondents are reporting on climate risk using the TCFD and CDP reporting frameworks, while 39% said they are using other reporting frameworks such as the Global Reporting Initiative (GRI) and the Equator Principles. 22% are not using any reporting frameworks.

⁴ The survey was designed in a way that allows respondents to select more than one answer; hence, the percentages do not necessarily add up to 100%. Therefore, the respondents' choices are interpreted relative to each other rather than in split between respondents.

- 67% say that assessing climate risks is driven by risk management and market opportunities, while 50% say regulatory requirements are driving their assessment.
- 50% determine the relative significance of climate-related risks in relation to credit risk. Around 40% consider operational and reputational risks, and 33% consider market risk.
- 89% say that transition risks such as climate policy, technology, and consumer preference are the key risk drivers affecting their business portfolio, while 50% consider gradual changes in climate and 33% consider extreme weather events.
- Only 6% of respondents are measuring their physical risk exposure, while 67% are working on it.
- Agriculture is considered the most affected sector by physical climate risks by 72% of respondents, followed closely by water and transport infrastructure at 67%. Oil & gas, manufacturing, real estate, and land use are considered at risk from physical climate impacts by 56%, while power generation comes last at 50%.

The drivers and context for identifying climate related risks vary between MENA countries, but the sectors of interest such as agriculture and water are consistent with literature on climate risks and resilience needs in the region. The current low identification, exposure measurement, and assessment rates (12% of respondents) could be mainly due to a lack of awareness and understanding of how physical climate risks affect bank operations, a lack of tools to measure climate-related transition and physical risks, missing regulations and incentives, lack of a clear business case to manage risks, and missing or unreliable data. In general, banks are largely focused on addressing short term risks and impacts on their business, while climate risks are usually more significant in the medium-to-long term.



Fig. 7: Has your bank identified climate-related risks over the short, medium, and long term?

However, it is worth noting that a significant number of banks are currently working on processes to identify and report on climate risks (72%), which shows progress and change in regional market dynamics. The UAE’s significant participation in the survey (55%) may have affected these results, being the most advanced country in the region in terms of sustainable finance policies and awareness. This could also be linked to global banks enforcing certain climate requirements on their regional subsidiaries as part of their management and reporting strategies. Other market factors such as rising innovation in sustainable products and services, as well as climate investment opportunities and blended finance facilities—normally associated with climate and other environmental or social impact conditions set by DFIs—may have also affected banks’ positions on climate risks and opportunities. It is also evident from the choice of transition risks—such as policy and technology (89%)—over physical climate risks (6%) as the key driver of climate finance by the majority of respondents that banks are focused on climate-related opportunities rather than long term risk profiling. This finding, however, is not consistent with the majority of banks starting to work on measuring physical

risk compared to transition risk. Many factors could affect this trend, including a lack of knowledge and tools for measuring transition risks as compared to physical risks. It is also possible that banks may be incorporating transition risks in their overall market risk assessments.



Fig. 8: Does your bank have a process to assess the potential size and scope of identified climate-related physical risks?

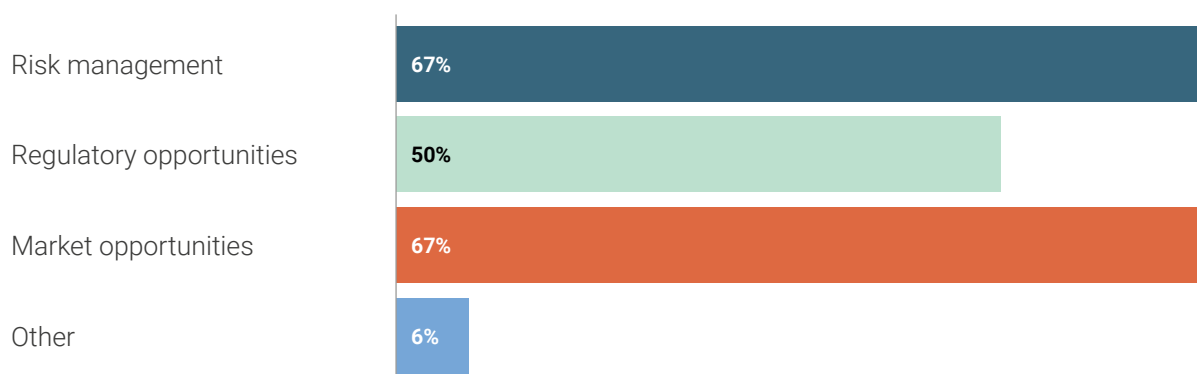


Fig. 9: What are the reasons for assessing climate-related risks?

3.2 Managing climate risks

- Only 11% of respondents have management strategies for climate risks in place. Another 11% are not planning to manage climate risks while 78% are working on it.
- 22% of respondents partially consider relevant Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs) or other regulatory requirements when designing their business strategy. 28% said they don't know, and 39% said they are planning to.
- 6% answered yes to having policies that help to align with NAPs and relevant regulatory requirements. 39% don't have such policies, and 56% are currently working on it.
- 33% of respondents are relying on the amount of assets or business activities at risk as the key metric for assessing and managing financially material climate risks and opportunities. 22% are relying on the amount of capital expenditure, financing, or investment deployed toward climate-related risks, and 44% are relying on other metrics such as turnover.
- 72% of respondents are working on setting targets to manage climate-related risks and opportunities while 28% are not planning to set targets, and none has targets in place.

Climate risk management in banks' portfolios and operations is currently very low at 11%. Over a third of surveyed banks are relying on the amount of assets or business activities at risk as their key metric for assessing and managing material climate risks. This shows a rising maturity in understanding of climate-related financial impacts on their investments and portfolios. The low number of banks considering Nationally Determined

Contributions (NDCs) and National Adaptation Plans (NAPs) or other regulatory requirements, when designing their business strategies highlights the disconnection between governments and banks on the subject of climate finance. This is also consistent with the literature as presented earlier in this report. Furthermore, interpreting national plans and transforming the targets in these plans into bankable projects is a huge challenge that banks cannot address on their own. This is exacerbated by the absence of regulations, incentives, and climate reporting requirements.



Fig. 10: Has your bank put in place a climate-related risk management strategy

Similar to the results on identification and assessment of climate risks, a significant number of banks are working on establishing systems to manage such risks. However, the rate and extent to which this work in progress will be translated into solid financial products and services that can address the MENA region’s adaptation and resilience needs are largely affected by several factors. These include institutional awareness, internal capacity, data reliability, lack of coordination between government and banks to finance national adaptation and resilience needs, low public-private cooperation, and the uncertainty of relevant market risks and drivers.

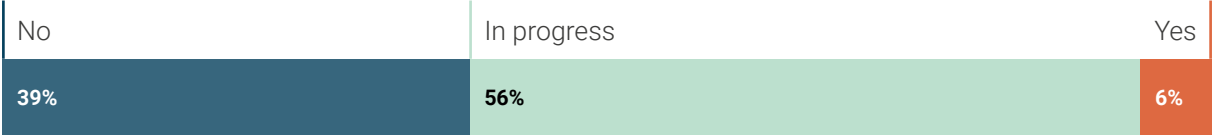


Fig. 11: Has your bank put in place policies that help you align with the relevant National Adaptation Plan(s) and/or relevant regulatory requirements?



Fig. 12: Has your bank set targets used by the organization to manage climate-related risks and opportunities and performance against targets?

3.3 Financing of climate adaptation and resilience

- 33% of respondents answered yes to financing adaptation and resilience while 39% said they don't, and 28% said they don't know.
- Of sectors considered for financing adaptation, water supply and treatment came first at 33%, followed by power generation and transport infrastructure at 28%, agriculture, oil & gas and real estate at 22%, while land use and metals & mining came last at 6%.
- Adaptation-focused products and services target the following climate-related hazards: water stress at 39%, followed by temperature rise at 33%, drought at 28%, and extreme winds at 11%.
- 44% of respondents are offering credit focused products. 39% are offering client engagement advice, and 33% are offering infrastructure finance.
- Only 11% said they are assessing physical climate impacts in their financing decisions. 50% said they partially do so and 39% said they do not.
- 67% of the respondents are working on considering physical climate impacts when identifying green products, for example by applying the "Do No Significant Harm approach of the EU taxonomy". 11% said they already consider physical climate impacts when identifying green products, and 11% said they do not or only partially do.
- 67% said they rely on national level frameworks in identifying adaptation focused products against 6% relying on EU Taxonomy and 6% relying on investment level risk assessment.
- The following barriers are considered the most significant to scaling adaptation finance:
 - Awareness in the bank (67%)
 - Lack of data and lack of training (56%)
 - Lack of resources (44%)
 - Lack of regulations (33%)
 - Lack of public policy (28%)
 - Lack of market signals and business case (22%)
 - Lack of public funding (17%)



Fig. 13: Is your bank investing in or financing adaptation/climate resilience?

Despite the lower levels of identification, assessment, and management of physical climate risks, a higher percentage of respondents said they are offering adaptation-related products and services. This is an important finding and is consistent with the fact that some financial products and services that are normally offered by banks due to their bankability, indirectly address adaptation. Furthermore, the fact that almost 30% of respondents said they don't know whether they are financing adaptation or not, is strong evidence that there is a huge gap in awareness and knowledge.

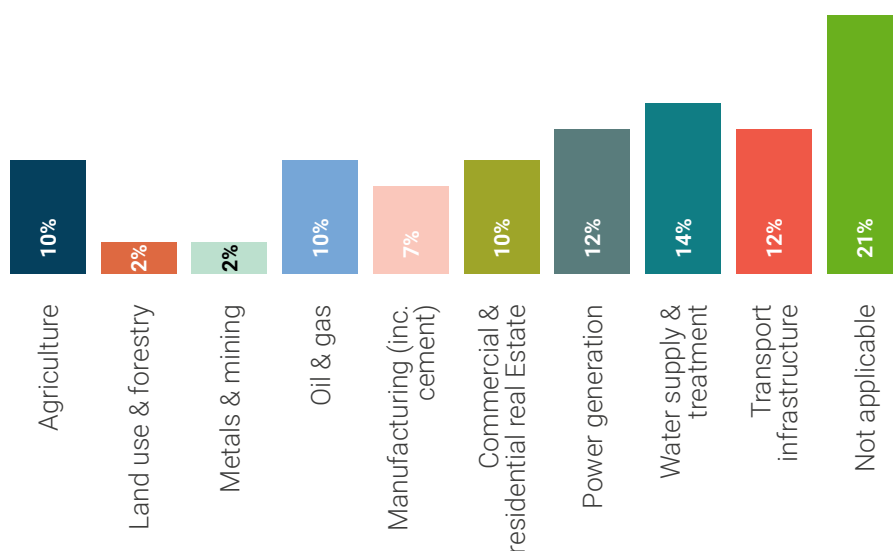


Fig. 14: In which sectors are you offering financing for adaptation?

Once more, water supply and treatment as well as other infrastructure-related products are at the focus of adaptation financing, which is consistent with regional climate risks and resilience needs. Agriculture, however, is of lower interest, probably due to the low number of banks that are heavily invested in the sector rather than its vulnerability to climate impacts which, once more, shows that the business case drives banks' strategies and is expected to continue doing so in the foreseeable future. In addition, as noted by some banks in the interviews, the ongoing economic crisis driven by COVID-19 and other global economic impacts has made it extremely difficult for banks to focus on long term risks and opportunities, such as those related to adaptation and resilience.

4. Barriers and recommendations to scaling adaptation finance in the region

4.1 Barriers

According to the World Meteorological Organization (WMO), disasters attributed to weather, climate and water hazards in the last 50 years caused more than 2 million deaths and US\$ 3.6 trillion in losses globally (BCG, 2022). Yet, the social, ecosystem, and economic costs of inaction are largely not integrated in investment decisions. Despite the pressing need for financing adaptation and resilience in the MENA region, most banks in the region are currently disconnected from national climate plans, policies, and adaptation needs. Most banks have neither solid climate change strategies, nor do they identify, assess, manage, and consider physical climate risks and opportunities in their decision-making processes. In addition, banks are not appropriately pricing climate risks in their investments and operations. This limits the scope for managing and mitigating these risks. Banks need better understanding and more reliable data to identify risks and opportunities before deciding whether to integrate climate adaptation in their products and services. This is why most banks are focusing on climate mitigation, while very few are focusing on adaptation.

It is worth mentioning in this context that some financial products and services that are normally offered by banks due to their bankability, indirectly address adaptation. For example, investments are expanding in microfinance; agriculture and food; infrastructure (in particular energy expansions, water (i.e., desalination plants), sustainable transport systems); waste management; sustainability innovation. All of these have varying indirect impacts on adaptation and resilience, which begs the question of how these can be better measured as adaptation financing. Although the barriers presented below are broadly global, climate impacts and adaptation needs are location- and sector- specific. Therefore, each financial institution would need to adopt a unique understanding and assessment of their level of exposure based on the sectors and locations they are highly exposed to. The lack of private sector participation and interest in financing adaptation may be attributed to the following factors:

- **Absence of standards, definitions, and disconnection between financial institutions and governments.** There is currently no unified, clear, and industry agreed definition for climate adaptation. Individual banks adopt different interpretations in the absence of clear standards, metrics, and methodologies such as taxonomies. Banks need reli-

able and structured information to reach viable business decisions. Failing to properly integrate adaptation in the PPP market hinders the financing of adaptation and the transition to climate-resilient economies.

- **A perceived lack of profitable opportunities in climate related projects.** Responding to climate change needs has long been perceived as a public good that lacks profitability and must be funded by national budgets or international grants. This perception coupled with the absence of a solid bankable pipeline of projects has severely delayed the advancement of adaptation finance in the region. There is also little awareness of profitable PPP structures when it comes to climate change associated projects (UNEP FI, 2021).
- **Lack of awareness of adaptation finance business case and benefits.** Aside from risk management, there are several benefits from investing in climate resilience. For example, investees including governments would appreciate technical and financial support from financiers. However, banks still perceive that corporations and governments are not aware of this value and do not appreciate that integrating sustainability practices makes good business sense, seeing it primarily as a means to acquiring green certifications and enhancing their brand positioning (UNEP FI, 2021).
- **Market barriers driven by shortages of data, training, knowledge and capacity.** Physical climate risks are difficult to quantify and assess. They are location and sector specific. This leads to systemic inadequate pricing of climate risks in financial modeling and feasibility analysis, which is necessary for rendering adaptation projects bankable. High-granularity impact modelling and asset-level data are crucial to better understand risk exposure and design adaptation-focused management approaches, as well as products and services for identified opportunities. Obtaining such information can be difficult and costly. In addition, banks in the MENA region are not fully equipped with knowledge, clear understanding, and tools for identifying and assessing material climate risks, such as scenario analysis. These knowledge and capacity gaps continue to be one of the greatest barriers facing adaptation finance.
- **The absence of adequate policy and regulatory support,** incentives, reporting requirements, and enforcement mechanisms for sustainable finance policies including adaptation finance, is among the top barriers to scaling adaptation finance in the MENA region. Climate mitigation has benefited from various regulations and policy incentives while adaptation has not seen similar support.

4.2 Recommendations

The business case for adaptation and resilience finance should be interpreted in the context of collective loss and damage prevention versus the return on investment to individual investors. The Global Center on Adaptation estimated that an investment of US\$ 1.8 trillion globally in five areas of adaptation from 2020 to 2030 could generate as much as US\$ 7.1 trillion in total net benefits. For example, investing US\$ 800 million in early warning systems in developing countries could decrease the resulting damage by 30% and prevent losses of US\$ 3 billion to 16 billion per year on top of saving millions of lives. Understanding and quantifying the loss and damage that can be avoided under likely climate scenarios

is crucially important to scale up adaptation finance in the MENA region (BCG, 2022).

The physical impacts of climate change affect all sectors to varying degrees, so individual investments in adaptation cannot build resilience on their own. Adaptation therefore requires collaboration between a range of stakeholders, including financial institutions, national and local government, businesses, development banks, and civil society organizations. The recommendations are classified under three main categories as follows.

Table 3: Recommendations and barriers

Intervention Categories	Recommendations	Barriers addressed	Stakeholders
Awareness, training, and capacity building	<ul style="list-style-type: none"> ▪ Conduct awareness campaigns to redefine adaptation and adaptation finance in the overall economic and social context i.e., building socioeconomic resilience, highlighting the importance and potential benefits of adaptation finance to all stakeholders. ▪ Showcase success stories and successful financial products and services addressing adaptation in developing markets to replicate and scale up. ▪ Design and deliver training and capacity building programmes addressing physical climate risks and adaptation finance in coordination with Central banks and banking associations. 	<ul style="list-style-type: none"> ▪ Lack of awareness of the meaning and potential benefits of adaptation finance. ▪ Perceived lack of profitable opportunities in climate adaptation projects. ▪ Market barriers driven by shortage of data, training, knowledge and capacity. 	<ul style="list-style-type: none"> ▪ UNEP FI ▪ Banks ▪ Banking Associations ▪ Central Banks' Training Centers ▪ DFIs ▪ Consultants ▪ Private Companies (Clients)

Intervention Categories	Recommendations	Barriers addressed	Stakeholders
Tools & data availability and reliability	<ul style="list-style-type: none"> ▪ Launch and promote climate data platforms to encourage the utilization of this information including guidance on where and how this information can be used in the context of financial modeling and asset and portfolio-level risk identification, assessment, and management. ▪ Coordinate with local government and academics to identify and assess risk hotspots, including vulnerable sectors, communities, economic activities, hot spots, and locations that can benefit from adaptation finance in line with national plans. ▪ Improve national climate data availability and reliability in partnership with governments, regulators, DFIs, academics, consultants, and civil organizations through the provision of open source/low-cost accessible tools. ▪ Develop national taxonomies to allow bankable adaptation opportunities to be identified. These should also be measured against the Sustainable Development Goals (SDGs), national climate strategies, NDCs and NAPs as a prerequisite for generating a pipeline of adaptation projects that are aligned with national plans and serve national adaptation targets. ▪ Develop tailored metrics, tools, and methodologies to assess and manage physical climate risks and opportunities in vulnerable sectors in partnership with the international community, DFIs, financial regulators, academics, and consultants. ▪ Integrate adaptation finance knowledge databases and tools with existing systems that banks rely on in their sector risk and market analysis. 	<ul style="list-style-type: none"> ▪ Absence of adequate standards and definitions. ▪ Disconnection between banks and governments. ▪ Lack of awareness of adaptation finance meaning, business case and benefits. ▪ Market barriers driven by shortage of data, training, knowledge, and capacity. 	<ul style="list-style-type: none"> ▪ UNEP FI ▪ Banks ▪ Banking Associations ▪ DFIs ▪ Consultants ▪ Academia ▪ Climate Experts ▪ NGOs

Intervention Categories	Recommendations	Barriers addressed	Stakeholders
Policies, regulations and enabling environment	<ul style="list-style-type: none"> ▪ Promote policy and legislative frameworks to promote identification and management of physical climate risks. ▪ Focus on general market policies to create the enabling environment for adaptation as has been done for the financing of low-carbon projects. ▪ Develop national level incentives and support mechanisms for banks financing adaptation in the current market environment. ▪ Integrate adaptation finance in PPP vehicles and create linkages with national green investment and SDGs targets. ▪ Develop innovative financial products and services targeting adaptation and resilience e.g., resilience bonds with focus on vulnerable sectors such as agriculture, water & wastewater, resilience businesses, and resilient infrastructure. ▪ Promote and enforce climate reporting frameworks such as TCFD while adding more focus on adaptation in existing ESG reporting mandates. ▪ Promote assurance on ESG and climate reporting to improve the reliability of reported information as well as looking into possible means of improving the relevance and materiality of reported information. ▪ Develop partnerships and coordinate between key players including private banks, DFIs, private companies, regulators, and other government agencies to address adaptation finance barriers, create enabling frameworks, identify bankable project pipelines, and attract investments. 	<ul style="list-style-type: none"> ▪ Absence of adequate regulatory support and incentives. ▪ Absence of adequate standards and definitions. ▪ Disconnection between banks and governments. 	<ul style="list-style-type: none"> ▪ UNEP FI ▪ Central Banks ▪ Banks ▪ Banking Associations ▪ DFIs ▪ Consultants ▪ Academia ▪ Private Companies (Clients)

Box 2: Egypt Case Study

Several Egyptian banks have focused on SMEs as part of their sustainable finance objectives in line with a holistic government approach to support SMEs and enhance their role in the post-COVID recovery. The Central Bank of Egypt (CBE) has directed banks to increase the share of SMEs in their credit facilities to 25% and injected EGP 117 billion into SMEs until the end of December 2022. The aim is to generate more job opportunities among the youth and tackle the informal economy. As indicated earlier in this report, climate change and particularly adaptation is not fully integrated in these efforts, except as required by some concessional loans between DFIs and intermediary banks with the purpose of boosting investments in climate change mitigation and adaptation. However, in many cases, short of targeting adaptation, the financial and technical support received by SMEs indirectly contributes to their resilience which in turn enables the green economy transition and enhances climate resilience across sectors.

Many of these SME investments were subject to conventional credit risk and financial modeling practices and therefore can be considered a vibrant example of the availability of bankable adaptation projects and the possibility of financing resilience while improving profitability especially in vulnerable sectors such as agriculture and water or in high-risk regions such as upper Egypt and the Nile Delta. This case also indicates that addressing adaptation finance barriers needs collective action from different players such as private banks, DFIs, private companies, regulators, and other government agencies.

Box 3: Morocco Case Study

Bank of Africa (BoA) has a history of promoting positive impact finance but most recently identified the need to properly incorporate climate change and its impact on economic development. The bank realized the need to adopt a more holistic approach, considering the reality of economic, social and environmental needs, both at national and local levels. As a result, a decision was taken to use the Portfolio Impact Analysis Tool developed by UNEP FI. During this exercise, the bank focused on priority impact goals for Morocco with the intention to share and enhance output with contributions from the government and civil society. This 'Country Needs' approach is to be developed both domestically and regionally with the aim of producing an operational tool which promotes public private engagement on impact financing.

Adopting a pragmatic approach, the plan is to initially focus on the agricultural, agri-food and distribution subsectors as well as the textile industry (upstream and downstream). These sectors are particularly sensitive to climate change and increasing water stress. Aside from climate change, these sectors are also vulnerable to economic and social impacts, as they are considerable sources of employment for rural communities. As part of its focus on climate and gender, the bank has pledged to conduct specific research into adaptation.

(Bank of Africa, 2021)

4.3 The proposed Sharm El-Sheikh Banking Declaration and the way forward

The proposed Sharm El-Sheikh Banking Declaration (SSBD), a UNEP FI COP27-initiated initiative, aims to serve as a coalition and cooperation platform that engages the MENA banking institutions to collectively act towards a common sustainability agenda. The declaration will also provide a platform to access UNEP FI support for banks on their transition journey. The SSBD's main focus will be on climate action, with a focus on climate adaptation as the topic where banking institutions in the MENA, and the wider emerging market can have a strong impact. The declaration is therefore a unique opportunity for MENA banks to join forces to tackle the challenges and barriers holding banks back from integrating climate risks and opportunities and scaling adaptation finance. It is also recommended that UNEP FI utilizes this platform for mobilizing resources and driving engagement between MENA banks, as well as other key stakeholders. UNEP FI is well positioned to assume this central role between all stakeholders and to address the recommendations in this report.

The draft declaration in its articles 2 and 4 covers several areas of the recommendations:

- Article 2: enhancing regional and national adaptive capacity and private sector involvement in climate adaptation measures. This is to be implemented through a high-level adaptation project prioritization (taxonomy) and contribute to the development of the UNEP FI's PRB climate adaptation target setting guidance.
- Article 4: engaging with clients, stakeholders, and peers to effectively manage climate change risks, and establish knowledge exchange, and relevant product development to accelerate the transition and support financing for climate action in the real economy.

Acronyms & abbreviations

AFD	Agence Française de Development
BOA	Bank of Africa (BMCE Group)
CCRI	Coalition for Climate Resilient Investment
CIB	Commercial International Bank
CTF	Clean Technology Fund
DFI	Development Financing Institution
EBRD	European Bank for Reconstruction and Development
ESG	Environmental, Social and Governance
GCF	Green Climate Fund
GEF	Global Environment Facility
GEFF	Green Economy Financing Facility (EBRD)
GET	Green Economy Transition (EBRD)
GRI	Global Reporting Initiative
IFC	International Finance Corporation
IPCC	Intergovernmental Panel on Climate Change
MENA	Middle East and North Africa
NAPs	National Adaptation Plans
NBE	National Bank of Egypt
NBFI	Non-Banking Financial Institutions
NDCs	Nationally Determined Contributions
NGFS	Network for Greening the Financial System
NZBA	Net-Zero Banking Alliance
OECD	Organization for Economic Cooperation and Development
PCRAM	Physical Climate Risk Assessment Methodology (CCRI)
PPP	Public-Private Partnerships
PRB	Principles for Responsible Banking (UNEP FI)
SDGs	Sustainable Development Goals
SMEs	Small- and Medium-sized Enterprises
SSBD	Sharm el-Sheikh Banking Declaration
TCFD	Taskforce for Climate-related Financial Disclosures
TFSC	Transforming Financial Systems for Climate (AFD)
UAE	United Arab Emirates

References

Bank of Africa (2021). *BOA 2021 Annual Sustainability Report*. BMCE Group, Casablanca, Morocco. Available at: ir-bankofafrica.ma/sites/default/files/2022-10/Rapport%20DD%202021%20ANG_0.pdf

BCG and UN Climate Change High-Level Champions (2022). *Sharm El-Sheikh Adaptation Agenda Technical Report*. UNFCCC, Bonn, Germany. Available at: climatechampions.unfccc.int/wp-content/uploads/2022/11/Finance.pdf

Borghesi, S and Ticci, E. (2021). *Climate Change in the MENA Region: Environmental Risks, Socioeconomic Effects and Policy Challenges for the Future*. Mediterranean Yearbook 2019. European Institute of the Mediterranean, Barcelona, Spain. Available at: iemed.org/wp-content/uploads/2021/01/Climate-Change-in-the-MENA-Region.pdf

EBRD Personal Interview (July 2022). *Personal interview with EBRD's Climate Adaptation and Strategy Team*

EBRD (October 2022). *EBRD, EU and GCF strengthen green investments in Morocco in partnership with Bank of Africa*. European Bank of Reconstruction and Development, London, UK. Available at: ebrd.com/news/2022/ebrd-eu-and-gcf-strengthen-green-investments-in-morocco-in-partnership-with-bank-of-africa.html

ESCWA (2019). *Climate Finance in the Arab Region Technical Report*, 27 December 2019. Economic and Social Commission for Western Asia, Beirut, Lebanon

GCA (2021). *Green Bonds for Climate Resilience—State of Play and Roadmap to Scale*. Global Center on Adaptation, Rotterdam, the Netherlands. Available at: gca.org/reports/green-bonds-for-climate-resilience-state-of-play-and-roadmap-to-scale

GCA (2020). *State and Trends in Adaptation Report*. Global Center on Adaptation, Rotterdam, the Netherlands. Available at: gca.org/wp-content/uploads/2021/03/GCA-State-and-Trends-Report-2020-Online-3.pdf

Göll, E. (2017). Future Challenges of Climate Change in the MENA region. *Future Notes 7, Middle East and North Africa Regional Architecture*. Istituto Affari Internazionali, Rome, Italy. Available at: iai.it/sites/default/files/menara_fn_7.pdf

IFC personal interview (July 2022). *Personal interview with IFC's Financial Institutions and Climate Team*

Ministry of Environment (2022). *Egypt National Climate Change Strategy*. Ministry of Environment of the Arab Republic of Egypt, Cairo. Available at: beta.sis.gov.eg/media/289263/egyptnsc-2050-summary-en.pdf

Mohamed Alboghdady Salah E. El-Hendawy (2016). Economic impacts of climate change and variability on agricultural production in the Middle East and North Africa region *International Journal of Climate Change Strategies and Management*, Vol. 8 Iss 3 pp. 463–472

Peridy et al. (2012). *The Economic Costs of Climate Change in MENA countries: A Micro-Spatial Quantitative Assessment and a Survey of Policies*.

R Stefanski and M V K Sivakumar (2009). *IOP Conf. Ser.: Earth Environ. Sci.* 7 012016.

UNEP (2016). *The Adaptation Finance Gap Report*. United Nations Environment Programme, Nairobi, Kenya. Available at: unepccc.org/wp-content/uploads/2018/10/unep-gap-report-2016-web-6-6-2016.pdf

UNEP (2021). *Adaptation Gap Report*. United Nations Environment Programme, Nairobi, Kenya. Available at: wedocs.unep.org/bitstream/handle/20.500.11822/37284/AGR21.pdf

UNEP FI (2022). *A New Approach to Unlocking Private Finance for Climate and The SDGs In Egypt & Morocco*. United Nations Environment Programme Finance Initiative, Geneva, Switzerland. Available at: unepfi.org/publications/a-new-approach-to-unlocking-private-finance-for-climate-and-the-sdgs-in-egypt-morocco/

UNEP FI (2021). *Promoting Sustainable Finance and Climate Finance in the Arab Region*. United Nations Environment Programme Finance Initiative, Geneva, Switzerland. Available at: unepfi.org/wordpress/wp-content/uploads/2021/01/Sustainable-Arab-Finance-Report-Jan-2021.pdf

Waha, K., Krummenauer, L. Adams, S., Aich, V., Baarsch, F., Coumou, D., Fader, M., Hoff, H., Jobbins, G., Marcus, R., Mengel, M., Otto, I. M., Perrette, M., Rocha, M., Robinson, A., Schleussner, C.-F. (2017). Climate change impacts in the Middle East and Northern Africa (MENA) region and their implications for vulnerable population groups. *Regional Environmental Change*, 17, 6, 1623-1638 DOI: 10.1007/s10113-017-1144-2

Watson C. and Schalatek L., (2021). *Climate Finance Regional Briefing: Middle East and North Africa*. Heinrich Böll Stiftung, Washington DC, USA & Overseas Development Institute, London, UK. Available at: climatefundsupdate.org/wp-content/uploads/2021/03/CFF9-ENG-2020-Digital.pdf

World Bank (2022). *Middle East & North Africa Climate Roadmap 2021-2025*. World Bank Group, Washington, DC, USA. Available at: worldbank.org/en/region/mena/publication/middle-east-north-africa-climate-roadmap

World Bank (2013). *Adaptation to Climate Change in the Middle East and North Africa Region*. World Bank Group, Washington, DC, USA. Available at: web.worldbank.org/archive/website01418/WEB/0__C-152.HTM

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