

THE WORLD BANK GROUP MIDDLE EAST & NORTH AFRICA CLIMATE ROADMAP 2021-2025

TRANSFORMATION 1

FOOD SYSTEMS, WATER SECURITY AND RESILIENT NATURAL CAPITAL

The World Bank Group (WBG) Middle East & North Africa (MENA) Climate Roadmap aims to enable a shift towards sustainable food systems and a climate-smart approach to agriculture and natural resource management. This will be delivered by scaling-up investments, providing technical assistance and supporting policy reforms.

CHALLENGES

55M

people are already food insecure (as of 2019)

\$60B

of food lost and wasted annually

60%

of people living in high or extremely high water-stressed areas

12 out of 17

most water-stressed countries in the world are in MENA

46.8%

of land area in Mashreq endangered by desertification

1,084

Threatened wildlife species in MENA

COUNTRY ACTION THROUGH WBG SUPPORT



Morocco is mainstreaming climate-smart agriculture by lifting regulatory and financing barriers to stimulate job growth, target youth and women and attract private investment, resulting in more profitable, inclusive and resilient farming.



Jordan improved efficiency in the electricity and water sectors, meeting energy demands of a growing population and increasing financial viability.



In Yemen, conservation and use of agrobiodiversity by national and local agencies enhanced their capacity and awareness to respond to climate variability and increase resilience of local communities.



THREE PATHWAYS TO PROMOTE FOOD SECURITY AND PROTECT NATURAL RESOURCES IN MENA

CLIMATE-SMART AGRI-FOOD SYSTEMS



Building climate-resilient food systems is critical to achieving food security in a region with 70% rain-fed agriculture and a high dependence on food imports, both of which are vulnerable to climate impacts.

- Climate smart agriculture action plans
- Reforms to reduce food loss and waste along agricultural value chains
- Analysis of impact of EU Green Deal and carbon border taxes on agri-trade
- Technologies to strengthen farmers' adaptive capacity to climate hazards
- Sustainable fisheries and aquaculture management

WATER RESOURCE MANAGEMENT



Climate-smart water resource management will increase adaptive capacity to cope with increasing climate-driven water scarcity, in the most arid and semi-arid region in the world.

- Integrated water resource management strategies, including water demand allocation
- Effective treatment of wastewater for discharge and reuse
- Clean technologies for water treatment systems
- Regional cooperation on water resource management and conflict prevention

RESILIENT NATURAL CAPITAL



Incorporating climate into natural capital management will yield vast mitigation and adaptation benefits, whilst preserving biodiversity and vital ecosystems.

- Analysis of prevention of biodiversity loss linked to adaptation and carbon sinks
- Deeper understanding of Nature-Based Solutions (NBS) potential and natural capital accounting
- Expanded NBS (regeneration of vegetation, integrated landscape management approaches and nature-based tourism etc.)

EXAMPLES OF COUNTRY-LEVEL INTERVENTIONS

Djibouti
Climate-smart agriculture
and land use reforms



Mashreq
Transboundary water
resource management



Tunisia
Climate-smart water
resource management



Lebanon
Institutional strengthening
and capacity building in
water-energy-food nexus

Iraq
Multi-stakeholder dialogue
on climate-smart food
systems, water scarcity and
green trade



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TRANSFORMATION 2 ENERGY TRANSITION AND LOW-CARBON TRANSPORT

The World Bank Group (WBG) Middle East & North Africa (MENA) Climate Roadmap aims to facilitate a clean energy transition and decarbonize the transport sector in the region by scaling-up investments, providing technical assistance, and supporting policy reforms. The approach will involve system-wide changes to mitigate significant environmental, social, and economic risks.

CHALLENGES

98%

of the electricity generation mix is fossil fuels

52%

of the world's global crude oil and 42% of natural gas reserves

29 of the 100

Most polluted cities in the world based on PM10 concentrations

7%

share of RE in total energy consumption (vs 23% globally)

70%

of energy consumed in Saudi Arabia is by air conditioning

COUNTRY ACTION THROUGH WBG SUPPORT



Iraq is committed to energy subsidy reforms to improve fiscal sustainability and deliver reliable energy to the population.



Egypt's Benban Solar Park is expected to grow in capacity by 1,650MW and serve more than 350,000 residents.



In Casablanca, Morocco, progress is underway in building two new tramway lines, adding 39 stations and 26 km of track to the existing tramway network, reducing travel times up to 40%

THREE PATHWAYS TO SUPPORT RESILIENT AND CLEAN ENERGY AND TRANSPORT SYSTEMS

LONG-TERM EMISSIONS REDUCTION AND ECONOMIC DIVERSIFICATION STRATEGIES



A clean and resilient energy system needs readiness and capacity building underpinned by policies and investments for long term, deep decarbonization.

- Upstream engagement for policy reforms and analytics (e.g. Low emission power sector strategies, energy subsidies)
- Distribution sector reforms, including energy subsidy reforms, reduction/ utilization of gas flaring
- Policies for industrial decarbonization
- Support to country or sector-specific demand-side energy efficiency

SCALING UP ENERGY EFFICIENCY AND RENEWABLE ENERGY



Low carbon transportation will significantly improve air quality and livability of densely populated areas while reducing GHG emissions.

- Enhanced grid integration (including through regional trade) and enabling infrastructure for renewable energy (RE)
- Informed RE and storage policy and/or take nascent RE and storage technologies to scale
- Resilient and affordable critical power grids (accessible to the most vulnerable)

SHIFT TO LOW-CARBON AND RESILIENT TRANSPORT SYSTEMS



Low carbon transportation will significantly improve air quality and livability of densely populated areas while reducing GHG emissions.

- Low-carbon transport policies, integrated planning and capacity building
- Enhanced resilience in public transport infrastructure and services
- Enabling environment for e-mobility solutions
- Resilience in infrastructure investments throughout asset life cycle (transport, energy, digital)

EXAMPLES OF COUNTRY-LEVEL INTERVENTIONS

Maghreb
Enhancing knowledge of
trade-related risks in a
decarbonizing world



Iraq
Long-term strategies for
decarbonization and
climate-smart development



Tunisia
Increased energy efficiency
and renewables



Algeria
Energy subsidy reforms



Egypt
E-Mobility and public
transportation

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TRANSFORMATION 3

CLIMATE SMART CITIES & RESILIENT COASTAL ECONOMIES

The World Bank Group (WBG) Middle East & North Africa (MENA) Climate Roadmap aims to make cities and coastal areas resilient to climate shocks, by scaling-up investments, providing technical assistance, and supporting policy reforms. This approach will involve system-wide changes to reduce Greenhouse Gas (GHG) emissions, improve disaster risk management and ensure prosperous and sustainable coastal economies.

CHALLENGES

65%

of MENA's population lives in urban areas, exceeding the global average of 55%

64%

of MENA's GDP is produced in cities

60%

of greenhouse gas emissions is generated in cities

5.7M

People in Egypt will live in flood zones in 2050

43 PORTS

At risk of sea level rise

COUNTRY ACTION THROUGH WBG SUPPORT



Jordan developed the 'Amman Climate Plan 2050' with the goal of reducing GHG emissions by 2030, whilst adopting a climate-smart approach to transport, urban planning and water and solid waste management.



Solid waste management services in the Gaza Strip were improved through improved systems that increased efficiency whilst maintaining environmental and social standards.



The Maghreb is committed to combatting coastal erosion by developing sustainable coastal and blue economy practices with stakeholders.



THREE PATHWAYS TO BUILD LOW-CARBON AND RESILIENT CITIES IN MENA

CLIMATE SMART URBAN DEVELOPMENT AND PLANNING



Climate-smart urban development, with a focus on coastal cities, is critical to improve livability of cities and promote economic growth.

- Urban planning reforms including guidelines for Disaster Risk Management, green growth and low-carbon transit
- Green buildings, including green retrofitting, reforms for planning and building codes, green technologies and innovation
- Spatial planning for urban interventions with a focus on livability, green space, use of data and digital technology

CLIMATE-SMART PROVISION OF ESSENTIAL SERVICES



MENA's cities can build readiness to ensure the continuity of critical public services, especially in water, sanitation and waste management with the appropriate institutional frameworks and master plans.

- Clean energy and energy efficient systems for water treatment and wastewater reuse
- Solid waste management plans for waste recovery, landfills and recycling centers
- Private finance and build-operate-transfer to expand non-conventional water resources and develop technologies for providing clean water
- Measures to reduce air pollution via technologies and indicators

RESILIENT COASTAL ECONOMIES



Integrated coastal management and climate-adaptive coastal economies will mitigate significant risks in the face of increasing climate hazards and protect livelihoods.

- Blue economy, blue carbon sequestration and climate adaptation of coastal city infrastructure
- Access to climate data to measure sea level rise and coastal erosion
- Marine and coastal ecosystem restoration and conservation
- Strategies for increased resilience of the tourism sector

EXAMPLES OF COUNTRY-LEVEL INTERVENTIONS

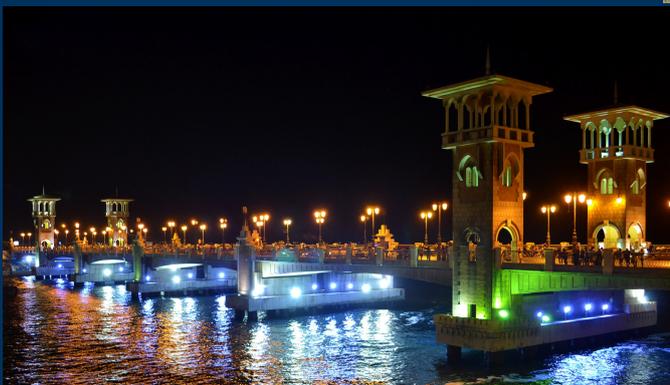
Lebanon
Climate-smart urban
planning for enhance
resilience in Beirut



Morocco
Urban disaster risk
management and Nature-
Based Solutions for coastal
resilience



Djibouti
Early Warning Systems for
managing
hydrometeorological and
climate risks



Egypt
Compact, transit oriented
development, flood risk
management in Cairo and
Alexandria

Jordan
Greening built environment,
waste-to energy conversion



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TRANSFORMATION 4 SUSTAINABLE FINANCE FOR CLIMATE ACTION

The World Bank Group (WBG) Middle East & North Africa (MENA) Climate Roadmap aims to green financial systems in MENA by scaling-up technical assistance and supporting policy reforms. This approach will involve system-wide changes in the financial sector to enable countries to identify transition risks, green financial investments and build resilience to the impacts of climate change.

CHALLENGES

\$197B

total climate finance needs

\$16B

domestic and international climate finance flows

90%

of adaptation funds go to Egypt, Qatar, Morocco, Tunisia and Jordan

2%

of adaptation funding goes to Least Developed Countries

10%

share of climate finance flowing to cities

COUNTRY ACTION THROUGH WBG SUPPORT



Egypt has successfully issued a sovereign green bond valued at \$750 million, where proceeds are tied to sustainable impact, signaling a strong appetite from investors for green assets and demonstrating the opportunity for sustainable financing.



IIFC is supporting increased financial sector financing aligned with the NDCs, including by increasing capacity to identify, manage, and reduce climate risk in banks' portfolios.



In Tunisia, the private sector is facilitating access to climate finance for micro, small and medium-sized companies for climate-smart agriculture, waste recycling and solar PV.



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THREE PATHWAYS TO PROMOTE RESILIENT AND SUSTAINABLE FINANCIAL SYSTEMS IN MENA

GREENING FINANCIAL SYSTEMS



Greening financial institutions, systems and instruments will be the cornerstone of climate-smart transitions. The World Bank, IFC and MIGA will jointly support this transition working closely with national and private sector institutions.

- Climate stress tests identifying climate-related risks in the financial system and supervisory response
- Green financial tools and instruments (such as green bonds, green sukuk)
- Climate risk management guidelines, standards and regulation for financial institutions such as supervisory guidance in climate risk monitoring
- Support to regulators on climate risk financing

IDENTIFYING AND ADDRESSING MACRO-FINANCIAL RISKS



Identifying climate-related physical and transition risks to the economy will be essential to formulate policies for resilient financial institutions and governance in MENA.

- Assessments of financial exposure of assets, and investments to climate risks
- Estimation and management of disaster-related contingent liabilities to manage the fiscal burden from climate hazards
- Strategies for sectoral transitions to cope with contingent liabilities, avoid stranded assets and economic losses
- Development of national risk financing and support to domestic and international insurance products and instruments

UNLOCKING GREEN FINANCING FOR CLIMATE SMART INVESTMENTS



Greening national budgets and expenditures and unlocking private capital flows for green investments will be essential for the region to meet its climate financing needs.

- Green taxonomies, and national expenditure reviews in alignment with climate goals
- Green financing frameworks, guidelines aligned with climate goals and long-term reforms
- Support to increase financing from treasury markets/private actors/banks for green and climate resilient investments
- Innovative business models to increase private sector investments in climate mitigation and resilience

EXAMPLES OF COUNTRY-LEVEL INTERVENTIONS

Egypt
Climate-smart public
financial management



Djibouti
National disaster risk
management, financing and
insurance strategy

Morocco
Climate-smart public
financial management



Jordan
Financial Sector Assessment
Program: climate risks and
green finance opportunities

Lebanon
Unlocking private finance for
climate-smart development

