Introduction: Environmental stress is a serious concern in the Middle East and North Africa (MENA) region, although it is not new. Stretching across the northern Africa and into the Arabian Peninsula, the region is dominated by the Sahara and Arabian deserts, two of the world’s driest zones. Over the centuries, the unique environmental constraints of water scarcity and severely limited arable land have shaped the evolution of the region’s human societies.

Recent years have witnessed important changes that are pushing the boundaries of the region’s environmental legacy. Economic growth, sustained by reliance on rich deposits of oil, gas, and other natural resources, has spurred population growth. That has fueled urbanization, industrial development, and increasingly unsustainable agricultural practices, compounding the harmful impact on the environment. Infrastructure is also stressed by the growing demand for new investments and growing numbers of urban poor.

The current trends are declining water resources per capita, shrinking arable land, deteriorating vulnerable coastal zones and marine resources, rising energy use, and mounting pollution, particularly in urban areas. If left unchecked, this environmental degradation would imply considerable costs and significant harm to livelihoods, public finances, and the economic competitiveness of the region. Recognizing this, over the past two decades important efforts have been made, at both national and regional levels, to enhance environmental management and protection.

The Global Environment Facility: At the same time, in seeking to diversify their growth sectors, countries in the MENA region have embraced a longer-term development vision founded on uses of natural capital that are optimized and sustainable. One of the ways forward has been through the World Bank’s partnership with the Global Environment Facility (GEF)².

1 The authors work at World Bank Headquarters in Washington, DC. They can be reached at dkayser@worldbank.org, sli@worldbank.org, syoshijima@worldbank.org. This MENA K&L Quick Note is based on a longer brochure issues by the World Bank and available by contacting the MNA K&L team (see back of the Quick Note) or the authors.

2 For more on the GEF see gef.worldbank.org
Over the past 20 years, the World Bank has channeled US$278.5 million in GEF grants to MENA countries to help them tackle complex global environmental problems. The grants have supported targeted local actions across a variety of economic sectors, including agriculture, water, and energy, as well as urban development, biodiversity conservation, poverty reduction, and social development. These grants have leveraged $2 billion of World Bank lending and other resources. These GEF grants have helped MENA countries take decisions in favor of the global environment and sustainable development by supporting innovation and adoption of new, diversified approaches. This has helped attract larger-scale program financing, setting the stage for next-generation projects. Important social benefits have been gained through job creation, greater economic and social inclusion, and strengthened governance capabilities. Across the region, these supported actions have served to help:

- diversify energy sources and increase energy security
- encourage green job creation
- optimize the productive and sustainable use of desert ecosystems;
- adapt economic development strategies and practices to the impacts of climate change
- manage protected areas better and conserve the biodiversity of fragile landscapes
- reduce the over-exploitation and resulting pollution of trans-boundary waters, and
- encourage more stringent pollution management through cleaner and smarter urban and industrial development

At present, the region’s most pressing environmental challenges stem from rapid urbanization and its resulting infrastructure needs, industrial pollution, overexploitation of scarce water resources, the unsustainable management of fragile ecosystem resources and vulnerability to climate variability and climate change. Decision makers working to address these problems also face many tightly linked and urgent social issues. These issues include meeting the aspirations of a quickly growing urban youth population; giving voice to gender and women’s issues; finding ways to spur job growth; and reversing the poor provision of basic services.

This MENA K&L Quick Note summarizes the value-added that two decades of World Bank GEF-funded work in support of the environment has contributed to the MENA region’s environmental, health, and social and economic development, and points to opportunities for further cooperation in support of green growth.

For a summary of MENA GEF projects see below:

**Protecting Biological Diversity and Managing Protected Areas:**


The El Kala National Park and Wetlands Complex was created in 1983 and is a mosaic of...
forest, lake, dune, and marine ecosystems located in the northeastern part of the country. It is rich in biological diversity and high in endemic species of great importance to the entire Mediterranean basin. The project focused on the park’s sustainable protection.


**Morocco:** *Supporting Conservation and Poverty Reduction with Small Grants (2000–2008)* - The Morocco Protected Areas Management Project supported the government in establishing and managing a network of national parks and reserves while fostering a sustainable partnership between the local populations and the Ministry of Water and Forestry, the national entity responsible for their management.

**Tunisia:** *Contributing to a Sustainable Mediterranean (2005–2012)* - In Tunisia, the government solicited GEF funding with the support of the World Bank to develop and put into practice a system for mitigating the loss of biodiversity in the Gulf of Gabes through integrated monitoring and participatory management.

**International Waters: Working Across Borders and Boundaries to Revitalize Shared Seas:**

**Regional: Red Sea and Gulf of Aden Large Marine Ecosystem (1999–2005)** - In 1999, countries in this maritime region, together with the World Bank and UN and regional conservation organizations, secured funding from GEF for a Strategic Action Program for the Red Sea and the Gulf of Aden. The partner countries are Djibouti, Egypt, Jordan, Saudi Arabia, Somalia, Sudan, and Yemen. The partnership developed an overarching regional framework for the protection and sustainable development of coastal and marine resources.

**Coping with the Changing Climate:**

**Yemen:** *Adapting to Climate Change by Exploiting Agrobiodiversity in the Rain-fed Highlands (2010–2014)* - In the highlands of Yemen, a GEF-funded agro-biodiversity and climate adaptation project is enhancing strategies for coping with climate change by preserving and using agro-biodiversity and traditional agricultural practices.

**Mitigating Climate Change:**

**Egypt:** *Harnessing the Power of the Sun (2007–2011)* - In Egypt, the Kureimat Solar Thermal Hybrid project, which made use of GEF funding, allowed the government to increase its share of renewable energy by building one of the most innovative commercial-scale solar energy-assisted power plants in the region. Concentrating solar power (CSP) does exactly as its name suggests: it allows for the power of the sun to be harnessed through the use of mirrors, which reflect and concentrate, or capture, the sun’s energy onto receivers, typically piping that carries the energy in the form of heat.

**Morocco:** *Integrated Solar Combined Cycle (ISCC) Power (2007–2012)* - Under a global GEF-supported program designed to accelerate cost reduction and the commercial adoption of large-scale low-greenhouse-gas (GHG) emitting generation technologies (see Egypt above), the Government of Morocco with the World Bank’s support secured GEF grant to finance an ISCC power plant. The project’s overall objectives were to reduce GHG emissions from energy production by increasing the market share of low-GHG-emitting technologies and to test the viability of solar thermal technology.

**Tunisia:** *Building a Sustainable Energy Efficiency Market (2004–2011)* - The GEF funded Tunisian Energy Efficiency Project was designed to overcome institutional and capacity barriers to a sustainable market for energy efficiency by encouraging the adoption of an appropriate policy framework. The project offered incentives for industries by administering an output-based subsidy, to be paid once demonstrable energy efficiency measures were in place.
Persistent Organic Pollutants:

**Tunisia:** *Africa Stockpiles Program (2005–2012)* - Over the past decades, poor pesticide management combined with bans on the use of certain chemicals led many African countries to accumulate large quantities of pesticides. A number of countries in the region, Tunisia included, supported by the World Bank and the Food and Agriculture Organization (FAO), developed a regional GEF project to prevent further accumulation, support clean-up, and facilitate the destruction on these stockpiles.

**Tunisia:** *Promoting Best Practices for Managing Healthcare Waste and Polychlorinated Biphenyls (PCBs) (2011–2017)* - With the assistance of the World Bank, the Government of Tunisia recently embarked on a new project that will work to improve both the global environmental impact and the national public health in Tunisia related to PCBs and healthcare waste management. It will do so by strengthening the institutional and management capacity of all relevant agencies in the waste management arena.

**Algeria:** *Improved Desert Ecosystems and Climate Resilient Oases* - The Algeria Improved Desert Ecosystems and Climate Resilient Oases project (ALG-DELP) will demonstrate how ongoing government agriculture and rural development programs can benefit from climate change mitigation and adaptation, soil and water conservation, and income diversification.

**Jordan:** *Saving the Badia Ecosystem and Promoting Livelihoods (2012–2017)* - The Jordan Badia, a desert region that receives annual rainfall of only 50 to 200 mm, comprises 80 percent of the country’s territory. Over the past two decades, human and natural factors alike, including climate change, have significantly degraded the area’s land and its unique agro-biodiversity. Under the overall management of the National Center for Agricultural Research and Extension (NCARE), a semi-autonomous institution under Ministry of Agriculture, the project will work in three “poverty pockets” in the Badia, with the objective of supporting sustainable livelihoods and enhancing ecosystem services through participatory approaches.

**Morocco:** *Investing in Social and Integrated Agriculture (2013–2017)* - The Social and Integrated Agriculture Project will attempt demonstrating that it is possible to improve small farmers’ livelihoods while protecting natural ecosystems, thus breaking the cycle of poverty on marginal lands. The project will pilot land and biodiversity conservation measures in parallel with investments of the Plan Maroc Vert in the Marrakech-Tensift-Al Haouz and Souss-Massa-Draa regions.

---

3 The MENA region is home to two of the world’s largest desert ecosystems, the Sahara and the Arabian desert. These ecosystems make possible a unique set of conditions that are vital to the livelihoods of their inhabitants. Yet many desert biomes are stressed by growing natural and man-made pressures. The recently developed MENA-Desert Ecosystems and Livelihoods Program (MENA-DELP), a partnership between the World Bank, GEF, and a group of MENA Countries, addresses these challenges through a multi-focal area approach. The program aims to enhance desert ecosystem livelihoods by harnessing their value in an environmentally and socially sustainable manner, and optimizing the use of desert goods and services. It takes a cohesive regional approach in which the goals of individual projects are both embedded within national strategies and linked to overall regional objectives.

---

**Contact MNA K&L:**
Gerard A. Byam, Director, Strategy and Operations. MENA Region, The World Bank
Preeti S. Ahuja, Manager, MNADE
Regional Quick Notes Team:
Omer Karasapan and Roby Fields
Tel #: (202) 473 8177

*The MNA Quick Notes are intended to summarize lessons learned from MNA and other Bank Knowledge and Learning activities. The Notes do not necessarily reflect the views of the World Bank, its board or its member countries.*