

MEDITERRANEAN

GEF Engagement in the Mediterranean Region

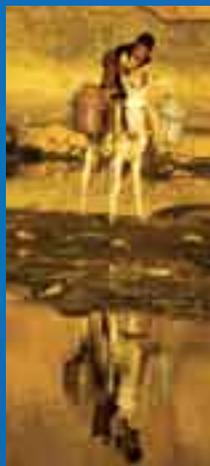


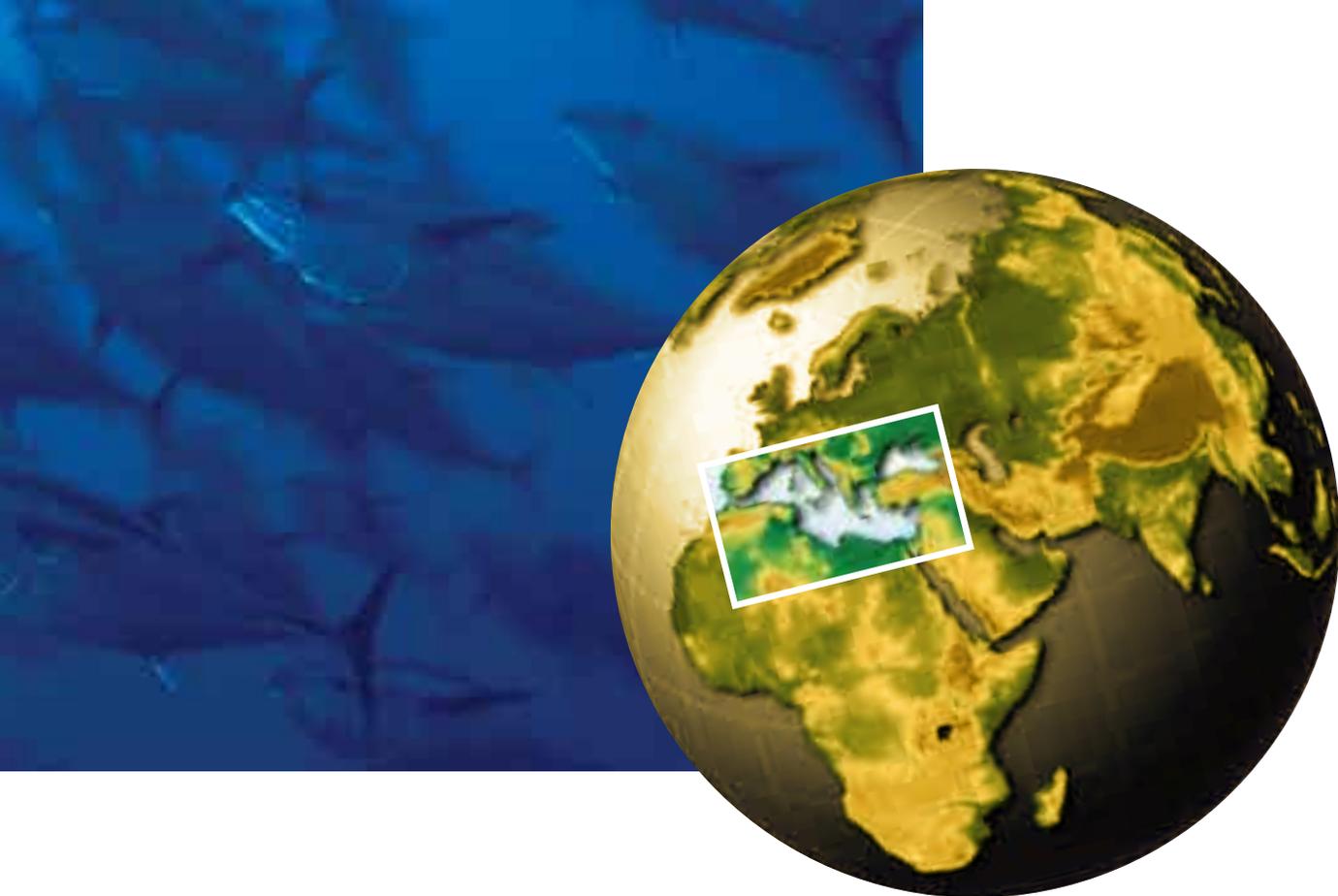


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FOREWORD

Protecting the environment is a central concern of both the Union for the Mediterranean (UPM)¹ and the Global Environment Facility (GEF). Indeed, as the underlying links between the environment and sustainable development are clearer than ever, the countries of the Mediterranean have emphasized the importance of integrating environmental concerns into their future development.

As evidenced in this report, the GEF has financed projects in the Mediterranean region that preserve and enhance the quality of its natural environment. We are pleased to see that the goals and priorities identified by the UPM are in harmony with those of the GEF. In order to increase the quality of life, create jobs, and stimulate sustainable economic growth, UPM priorities focus on cooperation to provide new foundations for effective development, including: preserving valuable terrestrial and marine ecosystems; addressing climate change; sustainably managing water, soil, and energy as well as tourism, agriculture, and industrial activities.

The UPM and the GEF each have projects under preparation. The GEF projects are consistent with the objectives of the UPM and are a natural outgrowth of the strong desire of Mediterranean countries to address their common environmental agenda. The cooperation of countries in the region on environmental matters for over two decades has led to significant achievements. In concert with the Mediterranean Basin riparians and the international aid community, the UPM and GEF will strengthen these regional efforts while fostering capacity building and technology transfer between the northern and southern rims.

The GEF has proven to be an important instrument for mobilizing the financial resources required to implement the broad range of actions needed to integrate crucial global environmental challenges, including climate change, into the development agenda. We are looking forward to collaborating with the GEF on UPM projects identified as priorities by the riparians, such as the Mediterranean Solar Plan, Adaptation to Climate Change in the Nile Delta, and the preservation of biodiversity.

We are confident that joint national and international efforts will provide a significant opportunity to further integrate the environment into the heart of Mediterranean development while preserving the region's heritage and ensuring its long-term sustainability.



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¹ UPM, established in July 2008, is co-chaired by the Presidents of Egypt and France. Its aim is to collaborate on concrete operational projects for the sustainable development of the region.





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EXECUTIVE SUMMARY

In the Mediterranean the human footprint driven by economic growth and, to a lesser extent, subsistence requirements has drastically increased. Protecting the environment of the Mediterranean Region—a biodiversity “hotspot”—is a priority for the beneficiary countries, the Global Environment Facility, and its partners, as evidenced in this report.

In the Mediterranean, GEF has been engaged in 5 focal areas: *Biodiversity* (BD), *Climate Change* (CC), *International Waters* (IW), *Land Degradation* (LD), and *Persistent Organic Pollutants* (POPs). Since its founding in 1991, GEF has invested about \$447 million (M) in the region, leveraging more than \$1.720 billion in co-financing. This corresponds to an annual average of \$15.3M up to the 3rd replenishment phase of the GEF. In the first two years of GEF’s current 4th Replenishment, GEF investments of about \$131M in the Mediterranean have more than quadrupled. This increase reflects recent environmental trends, as well as the financial gaps necessary to address the region’s mounting global environmental challenges.

Moreover, GEF-4 marks the first GEF investments to combat Land Degradation (LD) in the Mediterranean, with a \$35M LD GEF-4 allocation to the region. The groundbreaking *Integrated Nature Resources Management the Middle East and North Africa Region Program*, known as MENARID, is a multi-focal program (LD, IW, CC/Adaptation, and BD) that adopts an integrated approach to natural resources management in the drylands to improve the economic and social well-being of targeted communities through the restoration and maintenance of key ecosystem functions. Water scarcity in productive landscapes is a common concern.

Under GEF-4, the Mediterranean countries have also agreed on a collective effort to protect the natural resources of the Mediterranean Sea: the *Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem* (SPMS). SPMS provides financial resources and technical knowledge through a combination of capital investments, economic instruments, policy and regulatory frameworks, and public participation. It will also develop a strategic regional approach to investments to greater benefit the basin countries.

A renewed high-level commitment to a decade of transition to sustainability is needed to reverse the downward spiral in environmental, water, and human security. It will be critical to connect the plethora of institutions and fragmented programs. Along with all partners, the Mediterranean region is well poised for a country-led regional programmatic approach that could take the form of a Council on Environmental Management. Such a Council would integrate crucial environmental matters into development while maximizing the use of available GEF resources and co-financing.

Building a better future for the Mediterranean will require much closer focus on integrating economic and environmental progress, including preserving essential ecological services and curtailing global warming. The GEF stands ready to spur efforts in this direction along with the Mediterranean countries and their partners.

I. SUSTAINABLE DEVELOPMENT IN THE MEDITERRANEAN REGION

A. OVERVIEW OF GEF INVESTMENTS

The Global Environment Facility unites close to 180 countries in partnership with international institutions, non-governmental organizations (NGOs), and the private sector to address global environmental issues while supporting national sustainable development initiatives. The GEF is the financial mechanism for the Convention on Biological Diversity (CBD), the United Nations Framework Convention on Climate Change (UNFCCC), and the Stockholm Convention on Persistent Organic Pollutants (POPs), and is a financial mechanism for the UN Convention to Combat Desertification (UNCCD). These conventions provide guidance to the two governing bodies of the GEF, the GEF Council, and the GEF Assembly. GEF is also associated with many global and regional multilateral environmental agreements (MEAs) that deal with international waters and trans-boundary water systems. Today, GEF is the largest funder of projects aimed at improving the global environment. Since 1991, GEF has achieved a strong track record with developing countries and economies in transition, providing \$8.26 billion in grants and leveraging \$33.7 billion in co-financing for over 2,200 projects in over 165 countries¹.

In the Mediterranean, the GEF funds projects in five focal areas: Biodiversity, Climate Change, International Waters, Land Degradation, and Persistent Organic Pollutants. These projects are implemented by beneficiary countries through 10 GEF agencies². Recent trends in the Mediterranean are reflected in Box 1.

Since its creation, the GEF has granted \$463M and leveraged \$1.750 billion in co-financing for 122 projects and 764 small grants in the Mediterranean region, which includes Algeria, Egypt, Jordan, Lebanon, Libya, Morocco, The Palestinian National Authority, Syria, Tunisia, and Turkey. These resources have been provided over five replenishment periods, starting from a pilot phase (GEF-0) to the current fourth replenishment (GEF-4)³.

This significant level of investment has steadily increased over the replenishment periods, as reflected in Figure 1. GEF-4 investments are the largest to date. Overall, investment has risen from about \$48.3M during the GEF pilot phase (GEF-0) to \$131M during GEF-4. The number and size of projects have fluctuated over the years, with 6, 22, 34, and 28 projects, respectively, under GEF-0, GEF-1, GEF-2, and GEF-3. During the first half of the current GEF-4 replenishment period, 32 projects have already been approved.

The GEF has been particularly successful in leveraging significant co-financing in the Mediterranean region. On average, the co-financing ratio has been 1:4. The country co-financing ratios are as follows: Algeria (1:1), Lebanon (1:0.6), Libya (1:0.3), Syria (1:3), and Turkey (1:2). They have been impressive in Morocco (1:7.5), Jordan (1:4.7), and Egypt (1:4.6).

Since 1992, the Mediterranean has benefited from 764 projects under the Small Grants Programme⁴ (SGP) representing \$17.25M from the GEF and \$30.41M in associated co-financing. The majority of the SGP grants have focused on community-based demonstration projects in renewable energy, small-scale energy efficiency, coastal protection, alternative livelihoods, ecotourism, in situ protection of land species, sustainable land management, and support to international water bodies.

¹ www.thegef.org

² GEF agencies include the World Bank, the United Nations Environment Programme (UNEP), The United Nations Development Programme (UNDP), the Asian Development Bank (ADB), the Inter-American Development Bank (IDB), the African Development Bank (AfDB), The United Nations Industrial Development Organization (UNIDO), The Food and Agriculture Organization (FAO), The European Bank for Reconstruction and Development (EBRD), and the International Fund for Agricultural Development (IFAD).

³ In addition to the pilot phase (GEF-0) from 1991 to 1994, there have been four replenishment phases of the GEF trust fund: the first phase (GEF-1) from 1994 to 1998, the second (GEF-2) from 1998 to 2002, the third (GEF-3) from 2002 to 2006, and the current fourth phase (GEF-4) from 2006-2010.

⁴ Funded by the Global Environment Facility, as a corporate programme, SGP is implemented by the United Nations Development Programme on behalf of the GEF partnership, and is executed by the United Nations Office for Project Services.



Box 1: Sustainable Development Outlook for the Mediterranean¹

The Mediterranean region possesses one of the richest natural environments in the world, harboring 10% of Earth's higher plant species, half of them endemic to this region, as well as 18% of its large animal species. It is home to 6% of known marine species, one third of which are endemic.

The Mediterranean's environment is also one of the most vulnerable in the world. 30% of international maritime freight passes over the Mediterranean Sea, while 25% of all hydrocarbon traffic traverses its waters. A third of the region's population is concentrated along its coasts. Fresh water is scarce: around 3,500 m³ per capita per year is available along the northern coast, while only 1,000 m³ per capita per year is available on the southern coast (excluding Turkey); the global average is 6,800 m³ per capita per year.

The region has also been observed to be experiencing the effects of climate change more rapidly than the rest of the globe. The air temperature in the Mediterranean Basin increased, depending on the sub-region, between 1.5-4 °C in the last century, while the global average over the same period increased 0.7°C. Some regions have experienced a fall in precipitation of 20%.

At once an enclosed sea and an eco-region, the Mediterranean is characterized by a pronounced ecological interdependence among the countries along its coast, an interdependence that will become a major factor in future cooperation within the region.

The most striking recent trends in the Mediterranean are:

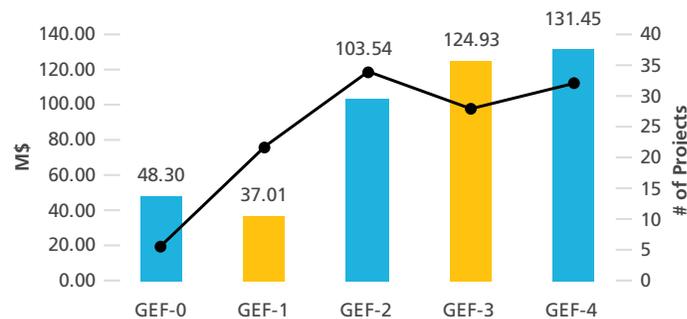
- Population has doubled along Mediterranean coasts in the last 30 years.
- International tourist arrivals more than quadrupled between 1970 and 2005, reaching 246M in 2005 (that same year, income from tourism was 243 billion Euros)
- 20M inhabitants have no access to drinking water
- 47M inhabitants have no access to sanitation
- In 2002, 60% of urban wastewater was released into the sea without prior treatment
- 9M inhabitants have no access to energy
- 290M could face water shortage by 2050
- Energy demand will increase 50% by 2025
- Fossil fuels now account for 80% of the Mediterranean countries' energy supply
- CO₂ emissions will rise 55%-119% in the region by 2025
- Climate change exacerbates several of these trends

¹ United Nations Environment Programme (UNEP), The Blue Plan's Sustainable Development Outlook for the Mediterranean, July 2008.



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FIGURE 1: GEF Focal Area Investments in the Mediterranean Region from GEF-0 - GEF-4



istockphoto

GEF achievements in the region are the result of coordinated efforts among the countries, the GEF Secretariat, and its implementing agencies, supplemented by extensive collaboration with other bilateral and multilateral institutions.

B. GEF-4 REFORMS AND PRIORITIES

The fourth replenishment (GEF-4) marks a milestone in the work of the GEF. In December 2006, the CEO presented to Council a five-point sustainability compact to increase the efficiency and impact of the GEF. Reforms included moving from the previous single-project interventions toward a more programmatic focus for the GEF. The purpose of this shift is to focus the limited funding resources of GEF-4 on a set of priority issues of global environmental concern, and for the GEF to achieve higher impacts by linking project interventions together in a programmatic context.

Upon the fourth replenishment of the GEF Trust Fund (GEF-4), the GEF Council requested the Secretariat to review the six focal area strategies, taking into account cross-cutting issues such as sustainable forest management and sound chemicals management.

C. GEF-4 INVESTMENTS

At mid-way in the fourth replenishment, total GEF-4 projects investment in the Mediterranean Region are estimated at \$131M. The \$131M invested so far during GEF-4 is expected to attract about \$574M in co-financing.

D. OUTLOOK

Despite its achievements, the scope of GEF projects in the Mediterranean region can be enhanced significantly, particularly in light of strategic developments at the GEF.

Up to GEF-3, the majority of funding was allocated to individual projects. As requested by the GEF Council and reflected in the GEF-4 strategy, one of the main aims of GEF-4 is to be more strategic through programmatic approaches in order to maximize impacts on the ground. Such a programmatic approach has been implemented through the following programs: MENARID, TerrAfrica, the Pacific Alliance for Sustainability, and the Coral Triangle Initiative.

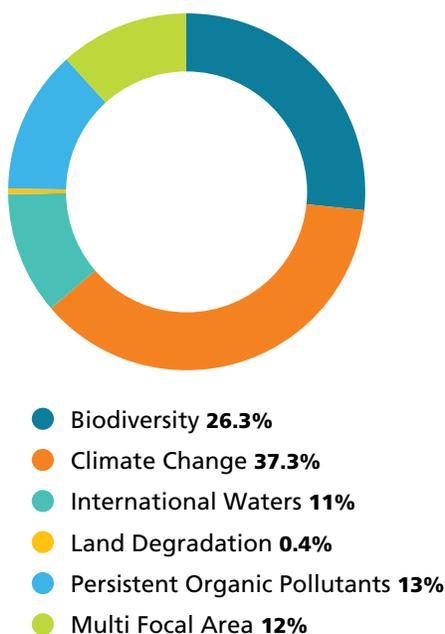
A renewed high-level commitment to a decade of transition to sustainability is needed to reverse the downward spiral in environmental, water, and human security. It will be critical to connect the plethora of institutions and fragmented programs. Along with all partners, the Mediterranean region is well poised for an overarching multi-focal, country-led, regional, and programmatic approach. Such an approach would integrate the crucial biodiversity, international waters, climate change and adaptation, and persistent organic pollutants elements, while maximizing the use of GEF resources and co-financing for countries. The approach could take the form of a Council on Environmental Management that would integrate critical environmental matters into the development agenda, thereby contributing to sustainable growth.

Countries of the region also continue to express the need for assistance in building capacity to take up the mounting environmental challenges they face. Previous GEF projects have addressed some of these concerns. However, future GEF operations in the region must provide substantial resources for capacity building and for environmental technology transfer.

II. FOCAL AND MULTIFOCAL AREA INVESTMENTS IN THE MEDITERRANEAN

Total investments in the Mediterranean region per GEF focal area, from the outset of the GEF, are depicted in Figure 2. So far, Climate Change represents the highest share of GEF investment, accounting for \$166M, or 37%, of total investment, followed by Biodiversity (27%), Persistent Organic Pollutants (13%), Multifocal Area Projects (12%), International Waters (11%), and Land Degradation (0.4%).

FIGURE 2: Total GEF Investments in the Mediterranean Region per Focal Area¹



¹ Investments from the LD, IW, and POPs. Focal Areas primarily funded the MFA portfolio; actual focal area investments may be higher than illustrated in the chart.

A. BIODIVERSITY

Mediterranean coastal ecosystems are transition areas between tropical and temperate ecosystems. The Mediterranean basin is a rich biotope with more than 25,000 species, about half of which are endemic. Destruction and fragmentation of marine, wetlands, and forest ecosystems and habitats, exacerbated by the effects of climate change, are the most serious issues. This has far-reaching effects: the loss of essential functions in the balance of ecosystems, reduction in goods and services provided, and species extinction. Wetlands along the Mediterranean Flyway are especially used by waders during spring migration, when they move north from African and Mediterranean wintering quarters. It is estimated that the population of waders has decreased by 65% in the Mediterranean Flyway. The monk seal; the audouin gull; and the leatherback, loggerhead, and green turtles represent some of the most threatened species. The natural exchange and circulation of the enclosed sea is limited, and invasive species threaten the sea's productivity. Over-proliferation of some species, due to warmer water and reduced populations of predators, can be an issue as well. For example, swarms of the jelly fish *Pelagia noctiluca*, a potent stinger whose reproduction is enhanced in warmer waters have become common in the Mediterranean, threatening tourism and fisheries.

GEF-BD Funding up to GEF-4

Countries, the GEF, and its partners have implemented a variety of projects to conserve Mediterranean biodiversity. Of note is the GEF contribution to the implementation of networks of protected areas. They now cover 115,194 km². Countries such as Egypt, with 10% of its land and waters under protection, are in the lead. GEF has supported 46 projects, ranging from capacity building activities to forests, mountains, marine, coastal, and wetlands protection and sustainable management as well as conservation of plants and wildlife. GEF Biodiversity funding amounted to about \$117M, representing 4% of the GEF biodiversity portfolio and generating a co-financing ratio of about 1 to 1, or about \$107M of co-financing (see Annex 1).

12 projects focus on Conservation of Biodiversity, 22 projects on Biodiversity Strategies and National Action Plans, and 12 projects on Biodiversity and Integrated Natural Resources Management. The majority of the projects focused on individual countries. Two projects, the Conservation of Wetland and Coastal Ecosystems in the Mediterranean Region and the Rescue Plan for the Cap Blanc Colony of the Mediterranean Monk Seal, were of regional nature. Examples of projects are in Boxes 2 and 3.



GEF-4 BD Investments

So far under GEF-4, four stand-alone biodiversity projects have been funded in the Mediterranean. As illustrated in the table below, they focus on mainstreaming biodiversity in productive land-seascapes, protected areas and natural resources management, and forest conservation. GEF-4 Biodiversity investments in the Mediterranean represent 10% of total GEF Biodiversity investments in the region. Biodiversity investments are also made in MENARID, while the biodiversity component of the Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem is included in the project's co-financing arrangements.



Outlook

Riparians increasingly recognize that economic activities, such as tourism, which depend on the vitality of ecosystems, will suffer if these ecosystems are not sustainably conserved. To date, more than 70% of Mediterranean habitats have been lost. Warming of the Mediterranean waters, resulting from climate change, is also an issue. As coastal zones are converted, the biodiversity of the region is adversely affected. According to UNEP's Blue Plan, 50% of the coastline could be developed in 2025, compared to 40% in 2000. The Mediterranean coasts also serve as home to 33% of the population and as a destination for 30% of global tourism. 30% of international maritime freight and 25% of the world's hydrocarbon traffic navigate its waters, directly affecting its marine biodiversity. Deforestation, coral degradation, and overfishing are major issues. It is estimated that bluefin tuna is fished at four times the sustainable rate, bringing stocks to the verge of collapse. The challenge for the riparians, the GEF, and its partners is to conserve essential habitats, breeding grounds, and essential ecosystems, including ones essential to the food chain. Action needs to be fostered at both a national and a regional level to mainstream biodiversity in productive land and seascapes. Sea grass beds, vital to the life cycles of fish and crustaceans, need to be better preserved. Implementing networks of coastal and marine protected areas and valuing such ecosystems, within a Mediterranean programmatic approach or the GEF-IW Strategic Partnership for the Mediterranean Large Marine Ecosystem, should be explored.

TABLE 1: GEF-4 Investments in the Biodiversity Focal Area

Name	Country	Focal Area	IA	GEF (\$M)	Co-finance (\$M)
Integrated Ecosystem and Natural Resource Management in the Jordan Rift Valley	Jordan	BD	WB	6.50	6.55
Mainstreaming Biodiversity Management into Medicinal and Aromatic Plants Production Processes	Lebanon	BD	UNDP	0.98	1.15
MENARID Support to Sustainable Land Management in the Siliana Governorate	Tunisia	MFA ¹	IFAD	0.4	2.05
Enhancing Coverage and Management Effectiveness of the Subsystem of Forest Protected Areas in Turkey's National System of Protected Areas	Turkey	BD	UNDP	1.00	1.43
Strengthening Protected Area Network of Turkey: Catalyzing Sustainability of Marine and Coastal Protected Areas	Turkey	BD	UNDP	2.40	4.00
Total GEF-4 funded projects within Biodiversity				11.28	15.18

¹ Multi Focal Area (MFA)



BOX 2: Conservation of Wetlands and Coastal Ecosystems in the Mediterranean Region

Mediterranean wetlands, typically river deltas, lagoons, and temporary marshes, are valuable natural resources. We depend on them for clean water, protection from floods, stabilizing the sea shore, fisheries, and agriculture. Wetlands are often the only places where many plants and animals are found. Since many Mediterranean wetlands have been lost in the last 100 years, the remaining ones are even more valuable.

The Mediterranean coastline is an area of high biodiversity, where more than 50% of the 25,000 plant species are endemic to the region. It also provides a critical path for migratory birds. Major threats to the exceptional biodiversity of these wetlands and coastal ecosystems include uncontrolled development, urbanization, increasing national and international tourism, land-based sources of marine pollution, and unplanned or over-exploitation of natural resources in particular freshwater resources.

A regional Mediterranean project, known as MedWet, conserves addressed conservation of globally threatened species in 15 important wetland and coastal sites in Albania, Egypt, Morocco, The Palestinian Authority, and Tunisia, as well as in Lebanon with FFEM funding. Through a combination of innovative land-use and wetlands policies at national level, site protection and management at local level, and regional networking and exchange of experience, the project provide a biodiversity protection increment to other projects addressing pollution and water resource issues.

The Goal of the MedWet Strategy is to stop and reverse degradation and loss of Mediterranean wetlands as a contribution to the conservation of biodiversity and to sustainable development in the region.

RESULTS

- **MedWet** was founded in 1991 to encourage collaboration among Mediterranean countries, specialized wetland centers, and international NGOs in protecting wetlands.
- **MedWet** today is a forum where 25 Mediterranean countries, specialized wetland centers, and international environmental organizations meet to discuss, identify key issues of, and take positive action toward protecting wetlands, for human benefit as well as for biodiversity. MedWet provides information and knowledge. It assists Mediterranean countries evaluating economic, social, and biodiversity values of wetlands; provides technical tools; and ensures good management of wetlands. In 2002 MedWet was recognized as a regional initiative under the global Ramsar Convention on Wetlands.

Box 3: Participatory Management of Plant Genetic Resources in Date Palm Oases of the Maghreb (GEF: \$3M; Co-Finance: \$ 3.5M; IA: UNDP)

The date palm is a key species in maintaining the fragile microenvironment of oases. It provides shade, moisture, and soil stability, and allows other species to grow and be cultivated.

Date producers of the Maghreb grow only a few high-value varieties of dates. For example, a single variety of date, the Deglet nour, which is grown for export, accounted for 2.3% of Tunisia's total date production in 1906; by 1991, it accounted for 52%. In the two most important Tunisian date-growing regions, the Deglet nour now represents 94.2% of output. In addition to market forces, the date palm faces other threats. These include: disease ("bayoud" has had the greatest impact, killing more than two million trees as it has spread eastward from Morocco to Algeria over the last century), inefficient traditional irrigation practices, and sand dune encroachment.

The project aimed to limit genetic erosion of date palm varieties in the Maghreb, to improve the economics of oasis living, and to arrest rural-to-urban migration. Project activities include:

- In-situ screening to make varietal selection more efficient.
- Adapting cultivation techniques to create a wider range of date palm varieties.
- Preserving local knowledge of date palm and oasis management by men and women.

- Developing alternative markets for date palm products.
- Developing national capacity to negotiate genetic property rights.
- Replicating best practices at other sites.

RESULTS

- Working with local farmers (more than 100 innovator farmers were involved in the project) to identify possible new varieties. In Algeria, for example, 20 varieties were eventually chosen for cultivation and 44 (including 38 very rare varieties) were chosen for conservation from an initial selection of 100.
- Ex-situ investigation in research facilities using genetic material gathered from sites. Nearly 1,300 plants grown in vitro have been planted in three countries. In 2001, there were fewer than 10 varieties of date palm being investigated in Maghreb laboratories; by 2004, the number had risen to around 60 varieties.
- The project has worked at all levels of the supply chain, from producers through wholesalers and retailers to consumers, in order to create alternative markets for date products and to provide incentives for farmers to grow a wider variety of date palms. It also identified and promoted different date palm products, such as sweeteners, high-fiber foods, pastes, the use of date leaves in weaving, and the use of date trunks in wood products. In Algeria, an investor is producing organic beverages using dates.

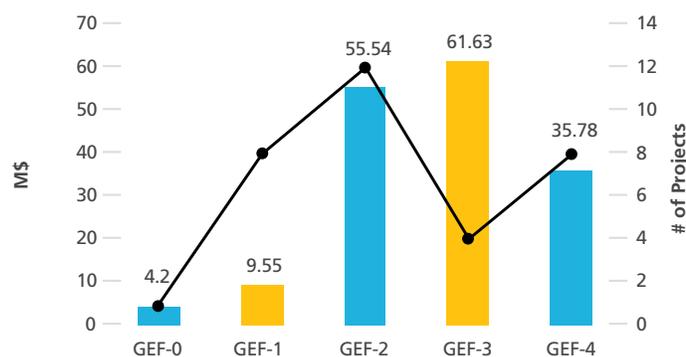


B. CLIMATE CHANGE

GEF-CC Funding up to GEF-4

Overall, GEF has supported 34 climate change projects in the Mediterranean Region. GEF funding amounted to about \$166M and generated co-financing of almost \$1.18 billion. The majority of projects focused on individual countries, and have largely concentrated on the energy sector. Examples of projects are in Boxes 4 and 5.

FIGURE 3: Climate Change Focal Area Investments in the Mediterranean Region



GEF-4 CC Investments

So far in GEF-4, 8 climate change projects have been funded in the Region, as illustrated below in table 2. GEF funding amounts to about \$31M and has generated co-financing of about \$275M.

TABLE 2: GEF-4 Investments in the Climate Change Focal Area

Name	Country	GEF (\$M)	Co-Financing (\$M)
Bioenergy for Sustainable Rural Development	Egypt	3.44	12.39
Adaptation to Climate Change in the Nile Delta Through Integrated Coastal Zone Management	Egypt	4.10	12.00
Sustainable Transport	Egypt	7.18	37.10
Energy Efficiency Investment Support Framework	Jordan	1.00	44.10
Energy Efficiency Codes in Residential Buildings and Energy Efficiency Improvement in Commercial and Hospital Buildings in Morocco	Morocco	3.28	12.61
Promotion of a Wind Power Market	Tunisia	6.35	135.90
Market Transformation of Energy Efficient Appliances in Turkey	Turkey	2.71	2.30
Community-based Adaptation (CBA) Programme	Global (Governments of Bangladesh, Bolivia, Guatemala, Jamaica, Kazakhstan, Morocco, Namibia, Niger, Samoa, Vietnam)	5.00	4.53
Promote Energy Efficiency in Buildings	Turkey	2.72	18.68

Total GEF-4 funded projects within Climate Change

35.78

279.60

Almost 86% of total GEF CC financing and more than half of GEF-funded projects in the region have been in the energy sector, with a focus on the promotion of energy efficiency and renewable energy markets, and the application of low-GHG-emitting energy technologies.

Outlook

Most of the Mediterranean region countries are characterized by strongly contrasting situations with urban and industrialized centers that consume large amounts of energy and rural areas where energy consumption is extremely limited and access to energy is often low. This situation should persist or even escalate, since most Mediterranean countries are facing significant population growth. The Mediterranean region economies continue to grow at a brisk pace, with real GDP increasing on average by 4.8% in 2006, up from an average of 4.4% in 2005.

According to the United Nations and the International Energy Agency, the population in the Mediterranean is expected to increase from 240 million in 2000 to 323 million in 2020. Moreover, the urban populations are expected to rise from 150 million in 2000 to 250 million in 2020. Taking into account recent economic growth, it is estimated that energy consumption from 2000-2020 will more than double. Hence,

the growth both in population and the economy, as well as increasing urbanization, puts pressure on the existing energy infrastructure, since it must compete with other infrastructure needs, such as health and education, for funding.

When high growth rates are combined with the adoption of inefficient energy supply and consumption patterns, the emission of greenhouse gases soars. Furthermore, the adverse impacts of climate change can become very unfavorable for the coastal and arid zones of the region.

Under these conditions, GEF seeks to strengthen its role in the region by promoting the transformation of market development paths into trajectories with lower GHG emissions in the energy, industry, transport, and land-use sectors. Also, GEF seeks to assist the Mediterranean countries in innovating ways to adapt to the adverse impacts of climate change, including increasing climate variability.

GEF will support the expansion of energy efficiency technologies in all economic sectors as well as the development of renewable energy markets—including those for solar technologies, wind geothermal, and other renewable energy technologies.

Box 4: Solar Projects

Solar energy is available in abundance in the Mediterranean, and could provide a greater portion of the region's energy needs. GEF is currently supporting two solar thermal projects in the Mediterranean, one in

Egypt and one in Morocco. These projects use the integrated solar combined cycle (ISCC) configuration, which combines the benefits of renewable energy with conventional fossil-fuel-based power plants.

Egypt: Solar Thermal Hybrid Project

IA: World Bank

GEF: \$49.8M, Co-Financing: \$278M

The project integrates conventional combined cycle gas turbines with solar thermal technology. It will demonstrate the operational viability of hybrid solar thermal power generation technology and contribute to replicating ISCC power generation technology in Egypt and elsewhere.

EXPECTED RESULTS:

Gas Turbine capacity: 2 x 41.5 MW

Steam Turbine capacity: 68 MW

Solar capacity: 30 MW

Total net energy produced by the plant: 985 GWh per year

Annual solar contribution: 65 GWh

(6.6% solar contribution)

Annual CO₂ reduction: 38,000 T

Morocco: Integrated Solar Combined Cycle Power Plant

IA: World Bank

GEF \$43.2M, Co-Financing: \$524.6M

The project's objective is to demonstrate the economic feasibility of solar thermal-based power generation worldwide. The Independent Power Producer (IPP) will be secured through either a Build Own Operate and Transfer (BOOT) or Build Own Operate (BOO) scheme.

EXPECTED RESULTS:

Combined capacity: 200 MW

Solar capacity: 20 MW

Total net energy produced by the plant: 1.590 GWh per year

Solar contribution: 55 GWh per year

(3.5% solar contribution)

Annual CO₂ reduction: 32,000 T





Box 5: Tunisia: Removal of Barriers to Encourage Market Transformation and Labeling of Refrigerators

IA: UNDP; GEF: \$710,000;

Co-Financing: \$1,236,000M

The purchase of a refrigerator represents one of the largest household expenditures by a family in Tunisia, while 40% of all electronic appliances together consume about 10% of the nation's consumption of electricity. A 1997 study in Tunisia highlighted the dynamics of the rapid expansion of manufacturing of refrigerators and the low efficiency of the models sold on the market. In this context, the Tunisian Government, with the support of GEF, launched a project in 2000 to implement a legal framework for the labeling of refrigerators produced and sold in Tunisia. Its first phase included the introduction of a mandatory labeling of the energy efficiency of refrigerators; and the second phase focused on the promulgation of the minimum energy performance standards (MEPS).

RESULTS

The project has been a major success with the following impacts:

- Promulgation of the laws introducing requirement to label electronic appliances, in particular refrigerators.
- Establishment of test procedures and infrastructure; design of refrigerator energy labeling & MEPS program.
- Design, implementation, and accreditation of refrigerator energy testing laboratory, and training of its staff on the operation of the laboratory.
- Design, validation, and implementation of energy labels.
- Launching of a vast communications campaign related to labeling to inform and better direct consumers on the performance of most appliances.
- A 2005 Regional Workshop to exchange experiences and practices within Arab countries.
- 10 out of 12 Tunisian manufacturers were trained on means to improve the energy efficiency of their products.
- Energy savings are expected to be 8.6 TWh for the period 2005-2030.
- Reduction of GHG emissions of about 3.4 MTECO₂.

C. INTERNATIONAL WATERS

The Mediterranean Sea Large Marine Ecosystem (LME) is a global biodiversity “hotspot”—listed in the top 15 marine hotspots by Conservation International (CI) and figuring prominently in the WWF Global 200 list—with immense environmental, economic, and cultural values. This huge patrimony is, however, under increasing threat due to pollution from land-based sources (particularly nutrients), uncontrolled coastal development, over-exploitation of coastal aquifers, and unregulated and unsustainable fishing. These threats are transboundary in nature and can only be solved through the concerted actions of the littoral countries.

The Mediterranean countries have agreed on a collective effort to protect the natural resources of the Mediterranean Sea: the Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem. The Partnership, led by the UNEP-Marine Action Programme and the World Bank, co-funded by GEF, and involving other relevant agencies and bilateral and multilateral donors, will serve as a catalyst in bringing about policy, legal, and institutional reforms, as well as additional investments for reversing degradation of the Mediterranean Sea Basin, with its coastal habitats and marine living resources.

GEF-IW Funding up to GEF-4

In the International Waters focal area, GEF has supported 13 projects (6 are multi-focal) ranging from foundational capacity building activities to on-the-ground investment projects for marine and coastal waters, wetlands, groundwater, and rivers draining to the Mediterranean. GEF-IW funding amounted to \$68.8M (see Figure 4), and generated a co-financing ratio of about one to three or \$207M of co-financing. In the first half of GEF-4, \$10.3M per year has been invested in the Mediterranean countries. Some of these funds have been contributing to the MENARID programme (see Section D).

Getty Images; OPPOSITE: istockphoto



FIGURE 4: International Waters Investments in the Mediterranean Region¹



¹ Figure 4 includes the 6 MFA projects that IW is partly financing in the Mediterranean region.

TABLE 3: GEF-4 Investments in the International Waters Focal Area

Name	Country	Focal Area	IA	IW portion of GEF Project (\$M)	IW portion of Co-Finance (\$M)
Strategic Partnership for the Mediterranean Large Marine Ecosystem-Regional Component: Implementation of Agreed Actions for the Protection of the Environmental Resources of the Mediterranean Sea and Its Coastal Areas	Albania, Lebanon, Libya, Morocco, Montenegro, Syria, Tunisia, Turkey, and The Palestinian Authority	IW/POPs	UNEP / UNIDO	9.99	22.95
MENARID Reducing Risks to the Sustainable Management of the Northwest Sahara Aquifer System (NWSAS)	Algeria, Tunisia, and Libya	IW	UNEP	1.00	1.64
Eastern Nile Watershed Management Project	Ethiopia, Sudan, and Egypt	IW/LD	WB	2.70	11.58
MENARID Mainstreaming Sustainable Land and Water Management Practices	Jordan	MFA	IFAD	1.45	4.86
MENARID Participatory Control of Desertification and Poverty Reduction in the Arid and Semi-Arid High Plateau Ecosystems of Eastern Morocco	Morocco	MFA	IFAD/ UNIDO	1.00	3.01
MENARID - Land and Water Optimization Project	Tunisia	MFA	WB	4.55	35.41
Total GEF-4 funded projects within International Waters				20.69	79.45

Amounts for GEF funds and co-financing, above, reflect only the IW contribution.

The Strategic Partnership is supported by an Investment Fund for the Mediterranean Region amounting to \$75M, out of which the GEF Council has allocated \$25M. To date these funds have supported two investments - one in Tunisia and one in Egypt.

Of the 13 projects funded by GEF, three have a focus on implementing reforms and investments under the Strategic Partnership in a regional and national context. Another four projects focus on innovative wastewater management and agricultural pollution. Five projects focus on groundwater and aquifer management in this semi-arid zone bordering the sea. One project targets ship-based oil pollution. Six of the projects funded by the IW focal area are of a regional nature. Examples of these projects are in Boxes 6, 7, and 8.

GEF-4 IW Investments

To date in GEF-4, one International Waters project and five Multi-Focal Projects with IW co-financing have been approved by the GEF Council (Table 3).

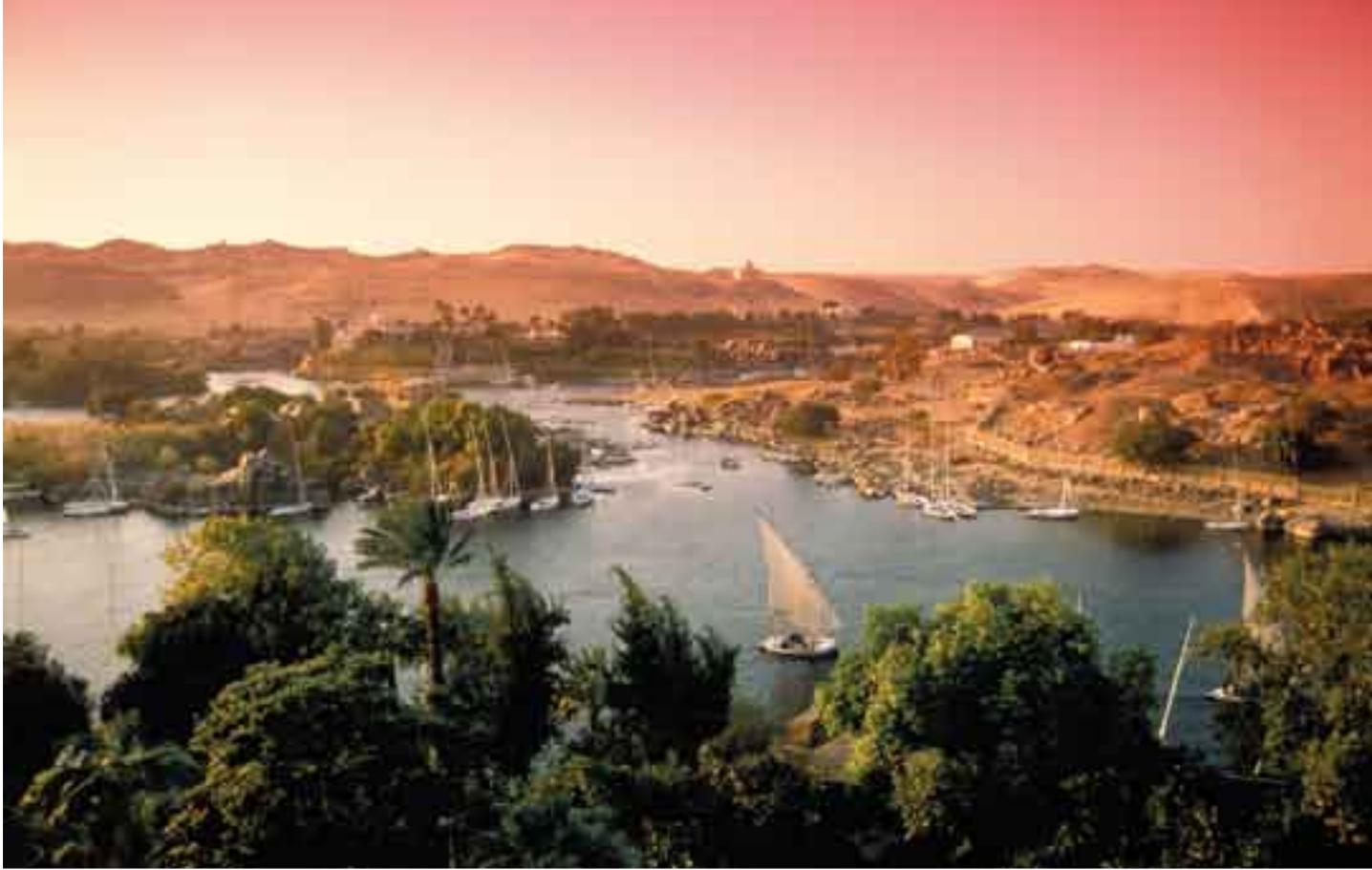
The GEF-4 IW investments in the Mediterranean region are equivalent to 29.7% of the total IW investments from GEF-0 to GEF-4 in the region. They include the MENARID programme and the Strategic Partnership. The Partnership involves single-country, single-sector investments like the successful Danube-Black Sea Basin Partnership through a combination of capital investments, economic instruments, policy and regulatory frameworks, and public participation. This reflects a shift from building capacity and relations among the countries to on-the-ground action.

Outlook

Future priorities and directions for the Mediterranean have been embodied through countries' agreement to work together on transboundary concerns, in two action programs funded by GEF: one for pollution reduction, the other for conserving coastal living resources and habitat. The Strategic Partnership Investment Fund serves as a platform for making the national investments and sector policy reforms needed to move toward more sustainable policies that do not degrade the Mediterranean and its coast.

Global climate models show the Mediterranean Rim to be the region of the world most at risk from future drought. A warmer, saltier, more polluted Mediterranean sea will be accompanied by increased droughts in the North and the South, failure of agriculture, increased migration of environmental refugees, and greatly reduced tourism to areas with a depleted resource base and social instability. Groundwater will become depleted, and the Mediterranean Sea will flow into the aquifers making them salty and unfit for use. GEF assistance in the IW focal area is being targeted to these problem areas that impede economic and social development.

The Mediterranean Strategic Partnership first approved by the GEF Council in GEF-3 has been accelerated with increased funding under GEF-4. The Partnership brings coherence and allows partners to work together with countries to provide funding where it is critically needed to address these difficult transboundary issues, where collective action is needed. GEF leadership under the Strategic Partnership with partners on the Mediterranean Sea, its coast, and its tributary rivers can be expected to align closely with the recently formed Union for the Mediterranean of the Barcelona Process.



BOX 6: Nile River Basin—Key Interactions with the Mediterranean

In 1999, the 10 Nile River Basin countries took a bold step, with assistance from the GEF and more than a dozen other development assistance organizations, to work together toward a common social and economic vision for sustainable development. The GEF pledged more than \$20M to foster collaboration while countries and other partners provided \$100M to establish the Nile Basin Initiative. Without cooperation on shared water, the future of the countries, and especially of those in the Nile delta is grim. Cooperation on basin-wide planning and management, as well as improved economic and social links among the countries, is designed to yield \$3 billion through a combination of: generating hydropower; improving food production; stimulating transportation, industry, and trade; and conserving the fragile environment and key water-related environmental assets of the basin.

GEF's impact through the Nile Basin Initiative is proving to be significant, as the countries are moving together to better utilize and manage their shared water system. The focus of this project on the water environment is proving to be an important step leading to cooperation and more sustainable water management in support of sustaining the basin's water ecosystems, including the downstream delta and the Mediterranean Sea.





Box 7: Land and Water Optimization Project in Tunisia (sub-project of MENARID)

Tunisia faces three inter-related problems posing serious challenges to the agriculture, water, and environment sectors: water scarcity and land degradation (both aggravated by climate change) and pollution of marine resources in the Mediterranean Sea.

This sub-project will evaluate and test several alternatives with the goal of improving water availability, reducing pollution in the Mediterranean Sea and the Gulf of Tunis, and increasing the sustainability of agricultural practices and livelihoods in the context of climate change. Field investments will be piloted in a number of areas to assess the viability of an integrated approach.

Three **scenarios for wastewater reuse** will be developed to reduce pollution of the Mediterranean Sea:

- 1. Transport to Sea:** This scenario will occur when treated water is not reused for agriculture during wet years.
- 2. Transfer to Agriculture:** An assessment will provide a detailed analysis of the existing constraints to water reuse, identifying (1) potential zones that would be most suitable for water reuse (initially 60-80 km from Greater Tunis); (2) the nature of reuse; and (3) related social, economic, and environmental impacts, based on location and reuse needs.
- 3. Treatment and Groundwater Recharge:** This scenario will look at possible improvement of wastewater treatment and regulation so that high quality of water can be discharged into the Gulf; reused on irrigated lands, or used to recharge aquifers.

Soil and Water Conservation, Sustainable Management and Use

This project will also complement the proposed activity co-financed by the World Bank, the Community-Based Integrated Rural Development (CBIRD) Project. It will demonstrate the feasibility on the ground of the second scenario above.

Communication and Outreach

Best practices for community-based control and prevention of land degradation will be documented and disseminated at the national level so that they may be replicated elsewhere in the country.

RESULTS

The project will help contribute to improvements in the global environment, e.g. through: increased vegetation cover on degraded watersheds, increased land productivity, preservation of ecological integrity and functions in agricultural landscapes, conservation of biological diversity, enhanced capacity to adapt to climate and system changes, reduction of carbon dioxide emissions and increases in carbon sequestration, restoration and maintenance of soil fertility in targeted areas, and improvement in water use efficiency in farming systems. Direct local benefits will include increasing net productivity of targeted agricultural systems, and improving the resilience of farmers to extreme climatic events.



Box 8: Lake Manzala Leads the Way in Engineered Wetlands Technology

Constructed/engineered wetlands are one among a range of technologies that are being tested by GEF International Waters projects around the world to decrease nutrient release to fresh and marine water systems. The first project that has carried out full scale interventions is the Lake Manzala project, implemented by Egypt with UNDP.

The completed Lake Manzala Engineered Wetlands project was handed over as a fully operating facility by Egypt's Ministry of Environmental Affairs to the Ministry of Water Resources and Irrigation. Its success allowed for replication and the inauguration of 60 fish farms replenished by treated water from the lake.

The GEF \$4.88M project was designed to tackle the problem of polluted drainage water that enters the lake, and eventually the Mediterranean Sea, from drains carrying pollution from nearby urban centers and other industrial, domestic, and agricultural sources. Pollutants included high levels of particulate matter, nutrients, bacteria, heavy metals, and toxic organics.

The project uses a very simple system that costs just 10% of traditional chemical-intensive wastewater treatment systems and requires lower maintenance. After being pumped into sedimentation ponds, water flows through the site's 60 acres of engineered wetlands. In its experimental stage, the Constructed Wetland has had the capacity to treat 25,000m³ of water a day, which is estimated to be approximately 10,000 below its actual capacity. Following treatment, the water is used for irrigation, agriculture, and fish farming. The engineered wetlands system also provides local livelihoods through support services and small-scale manufacturing ventures. Private sector investment is anticipated now that the system has completed its trial period.

"This project can be recreated in a wider range of rural areas," said the Minister of Irrigation and Land Resources, Abu Zeid, at the project hand-over ceremony. Already the Governor of Port Said has called for the establishment of a similar facility at East Port Said and offered to provide the land for it to be built on.

The project has indeed demonstrated the efficiency of constructed wetlands in treating wastewater, with removal rates of 61% for Biological Oxygen Demand (BOD); 80% of total suspended solids; 15% of total phosphorous; 51% of total nitrogen; and 97% of total coliform. Fish growth rates have improved by 50% due to the reduced BOD, while the economic efficiency of fisheries has improved four-fold due to the reduced need to replace water in ponds. Freshwater use in irrigation has also been reduced through the use of reclaimed wastewater by nearby farmers.

For further information on the Lake Manzala project please visit:

http://www.undp.org/gef/05/spotlight/lake_manzala.html



GEF

D. LAND DEGRADATION

Land, Water, and Natural Resources Degradation

The Middle-East and North Africa (MENA) region includes a diversity of ecosystems. Arid and semi-arid areas with low and variable rainfall predominate, with significant zones of extreme aridity (i.e., deserts). The more humid areas have a Mediterranean climate, characterized by long, dry summers and mild, wet winters. Low precipitation levels, high temperatures, and elevated evapo-transpiration rates make the region the most arid in the world. Over the last 50 years, temperatures in certain areas have increased due to global warming. Across the region, climate change is expected to increase water stress and contribute to the expansion of deserts. Cropland in the region (already less than six % of total land area) continues to shrink as a result of land degradation and recurring drought.

Total renewable water resources for the MENA region are estimated at about 432 billion m³/yr (representing less than one % of the world's total). In a number of countries, extraction of groundwater is already exceeding recharge rates and is depleting strategic reserves. Furthermore, annual renewable water resources per capita are expected to decrease from 1,045 m³/yr in 1997 to 740 m³/yr in 2015. Overuse and conflicting use of water from transboundary surface and groundwater resources across the MENA region have resulted in significant ecological and economic damage, reduced livelihoods for the poor, and increased conflicts and tensions among upstream and downstream users. Taking into account the expected expansion of irrigated areas in the region, it is projected that water use for irrigation will

soon account for 67 % of the total renewable water resources in the region.

Despite its arid conditions, the MENA region hosts some globally important biodiversity. Its desert biodiversity, for example, is quite high in places. Its grasslands, in the semi-arid and dry sub-humid drylands, are even richer than the deserts, with many serving as rangelands for animal herding and grazing. In the region's Mediterranean biome, species richness is high and endemism narrow (including a large variety of species such as medicinal and aromatic plants), but the Mediterranean's biodiversity is threatened by fragmentation, continued habitat conversion, high population density coupled with abandonment of traditional practices, and invasive alien species. Habitat fragmentation is a particular problem in the region; the original vegetation that remains exists in small scattered patches. Many of the endemic plant species in the basin are confined to very small areas, thus extremely vulnerable to habitat loss, overgrazing, and urban expansion. The Mediterranean Basin in the MENA region is considered one of the 25 generally recognized global "biodiversity hotspots", i.e., terrestrial areas rich in endemic species but suffering significant habitat loss. Of particular interest are the coastal areas of Algeria, Syria, and Lebanon; the mountainous areas of the Moroccan Mediterranean Coast; the High and Middle Atlas Mountains in Morocco; and the wetlands of Iran. In recognition of the valuable but extremely threatened natural heritage of the Mediterranean Basin, many countries in the MENA region are planning expansion of their protected area systems, especially in Lebanon, Tunisia, and Syria.

TABLE 4: GEF-4 Focal Area Investments in the Land Degradation Focal Area

Name	Country	Focal Area	Agency	GEF (\$M)	Co-finance(\$M)
MENARID Cross Cutting M & E Functions and Knowledge Management for INRM within the MENARID Programme Framework	Algeria, Egypt, Iran, Jordan, Morocco, Tunisia, and Yemen	LD	IFAD	0.73	1.60
Eastern Nile Watershed Management Project	Ethiopia, Sudan and Egypt	IW/LD	WB	6.00	25.72
MENARID Mainstreaming Sustainable Land and Water Management Practices	Jordan	IW/LD	IFAD	5.00	16.77
SFM Safeguarding and Restoring Lebanon's Woodland Resources	Lebanon	LD	UNDP	0.98	1.28
MENARID Participatory Control of Desertification and Poverty Reduction in the Arid and Semi-Arid High Plateau Ecosystems of Eastern Morocco	Morocco	IW/LD	IFAD/UNIDO	5.00	15.03
MENARID Support to Sustainable Land Management in the Siliana Governorate	Tunisia	BD/LD	IFAD	4.60	23.54
MENARID - Land and Water Optimization Project	Tunisia	CC/IW/LD	WB	4.54	35.34
Total GEF-4 funded projects within Land Degradation				26.85	119.28

The increasing impacts of climate change, droughts, and water scarcity are expected to increase dramatically. Furthermore, over-extraction of shallow groundwater resources, soil salinization due to improper irrigation, and saline intrusion along coasts are becoming significant threats. Adding further weight to these concerns, the 2007 Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) suggests a worsening of climatic conditions in the MENA region, e.g., likely increases in temperature of 2.2-5.4°C for 2070-2099 and a likely decrease in mean annual rainfall of 12 % along the Mediterranean coast. Considering this rainfall scenario, the global drought projection for the 21st century appears to be more accurate, further affecting cultivated lands in the region. By the 2080s, a significant decrease in the production potential for cereals on rain-fed lands is estimated. Such a decrease could be as high as 50% during 2000-2020.

Barriers to Integrated Natural Resources Management (INRM)

Despite steady improvement in tackling the root causes of land and ecosystems degradation in the MENA region, and the significant efforts to minimize the impacts of the harsh ecological and climatic conditions, many countries in the region still face challenges. In the MENA region, landscapes have been shaped and are maintained by human use and intervention with a view to maximizing ecosystem goods and services, as defined in the Millennium Ecosystem Assessment. Achieving a balance between biodiversity conservation and human development is an important conservation strategy for the MENA region.

GEF-LD Funding up to GEF-4

The Land Degradation Focal Area (FA), approved in 2003, is one of the most recent GEF focal areas. GEF-4 is the first replenishment period through which LD FA funding has been allocated to the Region.

GEF-4 LD Investments

So far in GEF-4, two LD projects on knowledge management and sustainable woodland management and five MFA projects have been funded in the Region. The main LD FA investment in GEF-4 will be through MENARID, a program supporting integrated natural resources management in the region (see Box 9). MENARID will allocate a total of \$35M from the LD FA, \$11M from the IW FA, and \$4.42M from CC/SPA to the region. The amounts from the BD and CC FAs will depend upon the commitment of country RAF resources to projects under the MENARID program framework.

All projects under MENARID will focus on the implementation of National Action Plans to combat land degradation and desertification in particular. The majority of the projects will be country-based; two future projects will be of regional nature.

Box 9: MENARID-Integrated Nature Resources Management in the Middle East and North Africa Region

In April 2008, the GEF Council approved a program framework for the Middle East and North Africa (MENA) region with 13 projects to be financed through four GEF focal areas: Land Degradation, International Waters, Biodiversity, and Climate Change/Adaptation. The maximum total GEF investment volume will be \$50M, with an indicative co-financing amount of \$138M. The program, executed by countries, is coordinated by IFAD with projects implemented also by the AfDB, FAO, UNDP, UNIDO, UNEP, and the World Bank.

The objective of the program is to promote an integrated approach to natural resources management in the drylands of the MENA region to improve the economic and social well-being of the targeted communities through the restoration and maintenance of key ecosystem functions. The common factor for all countries participating in MENARID is water scarcity in production landscapes, which needs to be fully taken into account when managing natural resources.

MENARID will work towards: mainstreaming the principles of sustainable land management into production sector frameworks and policies; improved governance for natural resources management; and coordinated investments that will (1) promote an enabling environment to support the Sustainable Land Management (SLM) agenda at national and regional scales, and (2) generate mutual benefits for the global environment and local livelihoods through catalyzing SLM investments for large-scale impact.

The programmatic approach allows targeting limited GEF-4 resources to priority issues of regional concern and realizing higher visibility and greater impact by linking project interventions. It also allows a shift towards an integrated and landscape approach to address processes that provide people with ecosystem goods and services at both the local and wider scales. The landscape approach will embrace ecosystem principles. While the focus is on land degradation, synergies with other focal area objectives are also encouraged, including: adaptation to climate change, biodiversity conservation in production landscapes, and reductions in pollution and sedimentation of international water bodies.

Outlook

The Mediterranean region is highly vulnerable to climate change, which will greatly affect the natural resource base over the years to come. The GEF programmatic approach with a clear overarching framework, will allow for a coordinated long-term investment in the MENA region focusing on integrated natural resources management. The program framework is flexible enough to include or strengthen emerging issues such as adaptation to climate change, the supply of sustainable energy to rural populations (with a focus on renewable energy), and the improved management of scarce water resources for irrigated agriculture and livestock keeping. There is great potential for additional synergies across GEF focal areas which can be tapped in the future.

E. PERSISTENT ORGANIC POLLUTANTS

Mounting evidence of damage to human health and the environment has focused the attention of the international community on Persistent Organic Pollutants (POPs). POPs are pesticides, industrial chemicals, or unwanted by-products of industrial processes or combustion. They are characterized by persistence: the ability to resist degradation in various media (air, water, sediments, and organisms); bio-accumulation: the ability to accumulate in living organisms at higher levels than those in the surrounding environment; and potential for long-range transport: the capacity to travel great distances from the source of release through various media (air, water, and migratory species). Because of these properties, POPs are found throughout the world and in Mediterranean ecosystems, including areas far from their original source. Their effects on humans and animals include disruption of the endocrine system, suppression of the immune system, reproductive dysfunction, and developmental abnormalities.

Although many countries have banned these substances, the situation in developing countries is characterized in many instances by inadequate legislative and regulatory frameworks coupled with limited capacity for enforcement and lack of awareness of the hazards associated with exposure to POPs. The limited local capacity leads to regional and ultimately global contamination of the environment by POPs, and damage to the health and well-being of human populations. The poor in particular are at greatest risk.

GEF – POPs Funding up to GEF-4

The countries in the Mediterranean region were active participants in the negotiations leading to the adoption of the Stockholm Convention on Persistent Organic Pollutants. Not surprisingly, these countries were some of the earliest countries to engage with the GEF, as the financial mechanism to the Convention, and to start taking steps to implement it.

The Convention was adopted in 2001 and entered into force in 2004. Throughout 2001 and 2002, the most eligible countries in the sub-region received GEF funding to prepare their National Implementation Plans (NIPs) for the Stock-

holm Convention. In response to convention guidance, the GEF has adopted the NIP as the basis for intervention and for establishing national funding priorities. The NIP provides the framework for a country to develop and implement priority policy and regulatory reforms, capacity building, and investment programs for POPs reduction, in a systematic and participatory way.

In GEF-4, support has been given to 7 projects, ranging from enabling activities to full-size projects on management and demonstration of best practices of Polychlorinated Biphenyls (PCBs). GEF funding has amounted to \$61M, generating a co-financing ratio of 1:1.5, or \$92M. In the first half of GEF-4, investments in the Mediterranean countries (including regional and global projects with partner countries in the Mediterranean region) amounted to \$32M (Figure 5). Examples can be seen in Boxes 10 and 11.

Outlook

This trend of an increase in POPs support of projects to phase out and reduce releases of POPs is expected to continue in the region as countries implement their NIPs. For the remainder of GEF-4, another four projects are expected to be submitted for GEF funding. Looking forward, a strong GEF support to POPs reduction activities is also expected under GEF-5. This is due to a combination of factors, including the strong global benefits achieved through protection of the marine environment of the Mediterranean Sea, but also in view of the urgency and opportunity created by the rapid industrialization of the region.

FIGURE 5: POPs Focal Area Investments in the Mediterranean Region, GEF-0 - GEF-4

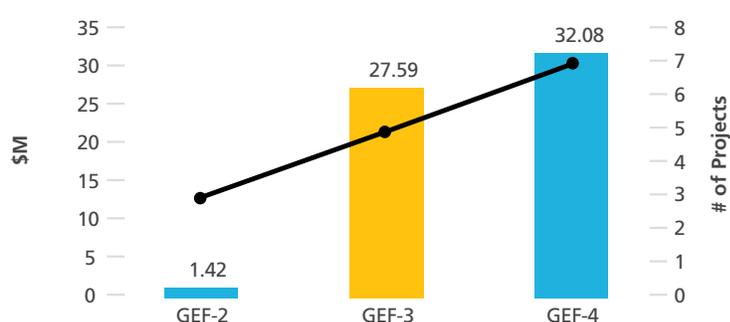


TABLE 5: GEF-4 Investments in the POPs Focal Area in the Mediterranean Region

Name	Country	Focal area	IA	GEF (\$M)	Co-Finance (\$M)
Safe Management and Disposal of PCBs	Morocco	POPs	UNDP/UNIDO	4.76	7.55
Prevention and Disposal of POPs and Obsolete Pesticides in Syria	Syria	POPs	FAO	0.98	1.61
Demonstrating and Promoting Best Techniques and Practices for Managing Healthcare Waste and PCBs	Tunisia	POPs	WB	5.84	17.00
Demonstrating and Promoting Best Techniques and Practices for Reducing Health-Care Waste to Avoid Environmental Releases of Dioxins and Mercury	Regional (incl. Lebanon)	POPs	UNDP	11	13.5
Promotion of Strategies to Reduce Unintentional Production of POPs in the PERSGA Coastal Zone	Egypt, Jordan, Sudan, and Yemen	POPs	UNIDO	1	2
Demonstration of Sustainable Alternatives to DDT and Strengthening of National Vector Control Capabilities in Middle East and North Africa	Regional (incl. Egypt, Jordan, Morocco, and Syria)	POPs	UNEP	5.6	8.4
Strategic Partnership for the Mediterranean Large Marine Ecosystem-Regional Component: Implementation of Agreed Actions for the Protection of the Environmental Resources of the Mediterranean Sea and Its Coastal Areas	Albania, Lebanon, Libya, Morocco, Montenegro, Syria, Tunisia, Turkey, and The Palestinian Authority	IW/POPs	UNEP/UNIDO	2.90	6.66

Total GEF-4 funded projects within POPs

32.08

56.72



iStockphoto

Box 10: The Africa Stockpiles Program (ASP)

Large amounts of obsolete pesticides have accumulated in the Mediterranean region and across Africa. These hazardous pesticides are contaminating soil, water, air, and food sources. They pose serious health threats to both rural and urban populations and contribute to land and water degradation. These chemicals particularly harm poor communities. Children often face heightened exposures and are at higher risks from the pesticides than adults. The ASP is addressing this urgent situation. The program seeks to clear all obsolete pesticide stocks from the region and to put in place measures to help prevent their recurrence. Morocco and Tunisia are two of the first participants in the program.

Specifically, the ASP aims to: (1) clean up stockpiled pesticides and pesticide-contaminated waste (e.g., containers and equipment) in an environmentally sound manner; (2) catalyze development of prevention measures; and (3) provide capacity building and institutional strengthening on important chemical-related issues.

In Morocco, it is estimated that there are some 700 tons of obsolete pesticides at 225 sites throughout the country, accumulated, in significant part, as a means to control the locust population. The program intends to prevent future stockpiling in Morocco by:

strengthening the regulatory, legal, and management framework for pesticide management; undertaking a public communications campaign; disseminating information on pesticide risks; and refurbishing pesticide storage facilities. Furthermore, the capacity of the Centre for Poison Control of Morocco will be strengthened, a direct contribution to the objectives of the Strategic Approach to International Chemicals Management.

In Tunisia, large quantities (1,200 tons) of obsolete stocks were identified at a large number of containment sites. In addition to removal, clean-up, and disposal at these sites, the program aims to strengthen existing regulatory systems for pesticide control; promote ongoing Integrated Pest Management (IPM) efforts, particularly with small-scale farmers; promote certified organic agricultural production; develop a communications campaign to raise awareness about pesticide impact and opportunities created by IPM; and upgrade storage facilities.



Box 11: The Polychlorinated Biphenyls (PCBs) Management Project

In the context of the Barcelona Convention for the Protection of The Mediterranean Sea (1976), a number of countries are addressing PCB management and disposal, particularly targeting the largest stakeholders, the electric utilities. Building on the Stockholm Convention's NIPs and on existing initiatives in some Mediterranean states, the program will provide the first harmonized initiative on PCBs that meets the obligations of the Stockholm and the Barcelona Conventions and that is compatible with the requirements under the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (1992), to which all the Mediterranean states are Party.

All Mediterranean countries have identified PCB equipment that continues in service stockpiles of electrical equipment that contain PCBs and quantities of discarded equipment and oil that consist of, or are contaminated by, PCBs. The aim of these activities is to introduce environmentally sound management (ESM) at all stages of the lifecycle of electrical equipment containing or contaminated by PCBs. Activities to be implemented in Egypt, Lebanon, Libya, and Syria include: (1) reforming the institutional and legal frameworks for the implementation of ESM of PCBs; (2) implementing demonstration projects for the appropriate management and disposal of PCBs, and facilitating the implementation of NIPs; (3) technical train-

ing on the ESM of PCB equipment; (4) raising awareness of the importance of ESM of PCB equipment; and (5) strengthening national capacity to implement PCBs phase-out and disposal programs.

Demonstration projects for the appropriate management and disposal of PCBs and for facilitating the implementation of NIPs, will be carried out by improving maintenance, servicing, and storage operations, and through working with national electrical company officials to review or develop phase-out plans for equipment containing, or contaminated with, PCBs. Opportunities to undertake all or part of these operations on a national or sub-regional basis in order to build sustainable capacity and to retain value from potentially recyclable metal components, minimizing international disposal costs, are emphasized. In addition, Tunisia and Morocco are engaged in complementary national PCB management projects. A number of other national projects are under preparation to increase impact on the ground, and reduce pollutant releases to the Mediterranean ecosystems.

Annexes

ANNEX 1: GEF Investments in the Mediterranean up to September 2008¹



Replen	Name	Country	Focal Area	Agency	Status	GEF (\$M)	Co-Fin (\$M)
REGIONAL							
GEF-0	Oil Pollution Management Project for the Southwest Mediterranean Sea	Algeria, Morocco, and Tunisia	IW	WB	Project Completed	18.26	1.74
GEF-1	Conservation of Wetland and Coastal Ecosystems in the Mediterranean Region	Albania, Egypt, Lebanon, Morocco, The Palestinian Authority, and Tunisia	BD	UNDP	Project Completed	13.27	26.32
GEF-2	Rescue Plan for the Cap Blanc Colony of the Mediterranean Monk Seal	Mauritania	BD	UNEP	Project Completed	0.15	0.08
GEF-2	Determination of Priority Actions for the Further Elaboration and Implementation of the Strategic Action Programme for the Mediterranean Sea	Albania, Algeria, Bosnia and Herzegovina, Croatia, Egypt, Lebanon, Libya, Morocco, Slovenia, Syria, Tunisia, and Turkey	IW	UNEP	Project Closure	5.95	4.18
GEF-3	Africa Stockpiles Program, P1	Botswana, Cameroon, Cote d'Ivoire, Ethiopia, Lesotho, Mali, Morocco, Mozambique, Namibia, Niger, Nigeria, South Africa, Swaziland, Tanzania, and Tunisia	POPs	WB	Under Implementation	25.7	35
GEF-4	Community-based Adaptation (CBA) Programme	Global (Governments of Bangladesh, Bolivia, Guatemala, Jamaica, Kazakhstan, Morocco, Namibia, Niger, Samoa, and Vietnam)	CC (SPA)	UNDP	Under Implementation	5.00	4.53
GEF-4	MENARID Reducing Risks to the Sustainable Management of the North West Sahara Aquifer System (NWSAS)	Algeria, Tunisia, and Libya	IW	UNEP	PIF Approved	1.00	1.64
GEF-4	Eastern Nile Watershed Management Project	Ethiopia, Sudan, and Egypt	IW/LD	WB	FSP/Council Approved	8.70	37.30
GEF-4	Strategic Partnership for the Mediterranean Large Marine Ecosystem-Regional Component: Implementation of Agreed Actions for the Protection of the Environmental Resources of the Mediterranean Sea and Its Coastal Areas	Albania, Lebanon, Libya, Morocco, Montenegro, Syria, Tunisia, Turkey, and The Palestinian Authority	IW/POPs	UNEP/ UNIDO	CEO Endorsed	12.89	29.61
GEF-4	MENARID Cross Cutting M & E Functions and Knowledge Management for INRM within the MENARID Programme Framework	Algeria, Egypt, Iran, Jordan, Morocco, Tunisia, and Yemen	LD	IFAD	PIF and PPG Approved	0.73	1.60
GEF-4	Demonstrating and Promoting Best Techniques and Practices for Reducing Healthcare Waste to Avoid Environmental Releases of Dioxins and Mercury	Global (incl. Lebanon)	POPs	UNDP	Under Implementation	11	13.5
GEF-4	Promotion of Strategies to Reduce Unintentional Production of POPs in the PERSCA Coastal Zone	Egypt, Jordan, Sudan, and Yemen	POPs	UNIDO	CEO Endorsed	1	2
GEF-4	Demonstration of Sustainable Alternatives to DDT and Strengthening of National Vector Control Capabilities in Middle East and North Africa	Regional (incl. Egypt, Jordan, Morocco, and Syria)	POPs	UNEP	CEO Endorsed	5.6	8.4

¹ GEF investments according to GEF PMIS records

Replen	Name	Country	Focal Area	Agency	Status	GEF (\$M)	Co-Fin (\$M)
ALGERIA							
GEF-0	El Kala National Park and Wetlands Complex Management	Algeria	BD	WB	Project Completed	9.69	2.36
GEF-1	National Biodiversity Strategy, Action Plan and Report to the CBD	Algeria	BD	UNDP	Project Completed	0.23	
GEF-1	Elaboration of a National Climate Change Strategy and Action Plan	Algeria	CC	UNDP	Project Completed	0.19	
GEF-2	Participation in the Clearing House Mechanism of the CBD	Algeria	BD	UNDP	Project Completed	0.01	
GEF-2	Biodiversity Conservation and Sustainable Natural Resource Management	Algeria	BD	UNDP	Project Completed	0.75	1.37
GEF-2	Conservation and Sustainable Use of Globally Significant Biodiversity in the Tassili and Ahaggar National Parks	Algeria	BD	UNDP	Project Completed	3.72	2.53
GEF-2	Assessment of Capacity Building Needs and Country Specific Priorities in Biological Diversity (add on)	Algeria	BD	UNDP	Project Completed	0.10	
GEF-2	Climate Change Enabling Activity (Additional Financing for Capacity Building in Priority Areas)	Algeria	CC	UNDP	Project Completed	0.10	
GEF-2	Enabling Activities to Facilitate Early Action on the Implementation of the Stockholm Convention on Persistent Organic Pollutants (POPs) in Algeria	Algeria	POPs	UNIDO	Project Completed	0.49	
GEF-3	National Capacity Needs Self-Assessment (NCSA) for Environmental Management	Algeria	MFA	UNEP	Project Completed	0.20	0.06
EGYPT							
GEF-0	Red Sea Coastal and Marine Resource Management	Egypt	BD	WB	Project Completed	4.75	0.98
GEF-1	Clearing House Mechanism Enabling Activity	Egypt	BD	UNEP	Project Completed	0.01	
GEF-1	National Biodiversity Strategy, Action Plan and First National Report to the CBD	Egypt	BD	UNEP	Project Completed	0.29	
GEF-1	Building Capacity for GHG Inventory and Action Plans in Response to UNFCCC Communications Obligations	Egypt	CC	UNDP	Project Completed	0.40	0.12
GEF-1	Lake Manzala Engineered Wetlands	Egypt	IW	UNDP	Project Completed	5.26	6.63
GEF-2	Conservation and Sustainable Use of Medicinal Plants in Arid and Semi-arid Ecosystems	Egypt	BD	UNDP	Project Completed	4.29	4.77
GEF-2	Climate Change Enabling Activity (Additional Financing for Capacity Building in Priority Areas)	Egypt	CC	UNDP	Project Completed	0.05	0.01
GEF-2	Introduction of Viable Electric and Hybrid-Electric Bus Technology	Egypt	CC	UNDP	Project Completed	0.75	0.97

Replen	Name	Country	Focal Area	Agency	Status	GEF (\$M)	Co-Fin (\$M)
GEF-2	Developing Renewable Ground Water Resources in Arid Lands: a Pilot Case - the Eastern Desert of Egypt	Egypt	IW	UNDP	Project Completed	0.83	1.01
GEF-3	Assessment of Capacity Building Needs in Country Specific Priorities in Biodiversity Management and Conservation in Egypt	Egypt	BD	UNEP	Project Completed	0.15	0.04
GEF-3	Support the Implementation of the National Biosafety Framework	Egypt	BD	UNEP	Project Completed	0.91	1.39
GEF-3	Solar Thermal Hybrid Project	Egypt	CC	WB	Project Completed	50.10	277.77
GEF-3	Alexandria Integrated Coastal Zone Management Project - under Investment Fund for the Mediterranean Sea LME Partnership	Egypt	IW	WB	PDF-B	7.50	70.00
GEF-3	Developing Renewable Ground Water Resources in Arid Lands: a Pilot Case - the Eastern Desert of Egypt	Egypt	POPs	UNIDO	Project Completed	0.50	
GEF-3	National Capacity Self-Assessment (NCSA) for Environmental Management	Egypt	MFA	UNDP	Project Completed	0.20	0.04
GEF-4	Bioenergy for Sustainable Rural Development	Egypt	CC	UNDP	CEO Endorsed	3.44	12.39
GEF-4	Strengthening Protected Area Financing and Management Systems	Egypt	CC	UNDP	Council Approved	3.62	13.80
GEF-4	Sustainable Transport	Egypt	CC	UNDP	CEO Endorsed	7.18	37.10
GEF-4	Adaptation to Climate Change in the Nile Delta Through Integrated Coastal Zone Management	Egypt	CC (SCCF)	UNDP	Council Approved	4.10	12.00
GEF-4	Mainstreaming Global Environment in National Plans and Policies by Strengthening the Monitoring and Reporting System for Multilateral Environmental Agreements	Egypt	MFA	UNDP	CEO Approved	0.50	0.81
JORDAN							
GEF-1	Building Capacity for GHG Inventory and Action Plans in the Hashemite Kingdom of Jordan in Response to UNFCCC Communications Obligations	Jordan	CC	UNDP	Project Completed	0.24	
GEF-2	Climate Change Enabling Activity (Additional Financing for Capacity Building in Priority Areas)	Jordan	CC	UNDP	Project Completed	0.10	0.02
GEF-3	Enabling activities for the Stockholm Convention on Persistent Organic Pollutants (POPs): National Implementation Plan for Jordan	Jordan	POPs	UNEP	Project Completed	0.46	0.08
GEF-3	National Capacity Self-Assessment (NCSA) Environmental Management	Jordan	MFA	UNDP	Project Completed	0.20	0.03
GEF-4	Integrated Ecosystem and Natural Resource Management in the Jordan Rift Valley	Jordan	BD	WB	CEO Endorsed	6.50	6.55
GEF-4	Energy Efficiency Investment Support Framework	Jordan	CC	WB	PIF Approved	1.00	44.10
GEF-4	Developing Policy Relevant Capacity for Implementation of the Global Environmental Conventions in Jordan	Jordan	CB (MFA)	UNDP	CEO Approved	0.50	0.50
GEF-4	Promotion of a Wind Power Market	Jordan	CC	WB	CEO Endorsed	6.35	135.90
GEF-4	MENARID Mainstreaming Sustainable Land and Water Management Practices	Jordan	MFA	IFAD	CEO Endorsed	6.80	22.80



Replen	Name	Country	Focal Area	Agency	Status	GEF (\$M)	Co-Fin (\$M)
LEBANON							
GEF-1	Clearing House Mechanism Enabling Activity	Lebanon	BD	UNDP	Project Completed	0.01	
GEF-1	Strengthening of National Capacity and Grassroots In-Situ Conservation for Sustainable Biodiversity Protection	Lebanon	BD	UNDP	Project Completed	2.53	0.76
GEF-1	Building Capacity for GHG Inventory and Action Plans in Response to UNFCCC Communications Obligations	Lebanon	BD	UNDP	Project Completed	0.29	0.04
GEF-1	Biodiversity Strategy and Action Plan and Report to the CBD	Lebanon	BD	UNDP	Project Completed	0.15	
GEF-2	Assessment of Capacity Building Needs and Country Specific Priorities in Biodiversity (add on)	Lebanon	BD	UNDP	Project Completed	0.10	0.05
GEF-2	Barrier Removal for Cross Sectoral Energy Efficiency	Lebanon	CC	UNDP	Project Completed	3.40	2.00
GEF-2	Climate Change Enabling Activity (Additional Financing for Capacity Building in Priority Areas)	Lebanon	CC	UNDP	Project Completed	0.10	
GEF-3	Integrated Management of Cedar Forests in Lebanon in Cooperation with other Mediterranean Countries	Lebanon	BD	UNEP	Project Completed	0.56	0.66
GEF-3	National Capacity Needs Self-Assessment for Global Environmental Management	Lebanon	MFA	UNDP	Project Completed	0.20	0.05
GEF-4	Mainstreaming Biodiversity Management into Medicinal and Aromatic Plants Production Processes	Lebanon	BD	MSP	CEO Approved	0.98	1.15
GEF-4	SFM Safeguarding and Restoring Lebanon's Woodland Resources	Lebanon	LD	UNDP	CEO Approved	0.98	1.28
LIBYA							
GEF-2	Enabling Activities for the Preparation of Initial National Communication Related to the UNFCCC	Libya	CC	UNEP	Project Completed	0.28	0.10
GEF-3	National Capacity Needs Self-Assessment (NCSA) for Libya to Manage the Global Environmental	Libya	MFA	UNDP	Project Completed	0.20	0.05
MOROCCO							
GEF-1	National Biodiversity Strategy, and Action Plan and First National Report to the CBD	Morocco	BD	UNEP	Project Completed	0.19	
GEF-2	Strengthening the Clearing House Mechanism Focal Point for the Participation in the Pilot Phase of the CHM of the CBD	Morocco	BD	UNEP	Project Completed	0.01	
GEF-2	Protected Areas Management	Morocco	BD	WB	Project Completed	10.75	5.20
GEF-2	Transhumance for Biodiversity Conservation in the Southern High Atlas	Morocco	BD	UNDP	Project Completed	4.37	5.39
GEF-2	Market Development for Solar Water Heaters	Morocco	CC	UNDP	Under Implementation	2.97	1.70
GEF-2	Elaboration of a National Climate Change Strategy and Action Plan	Morocco	CC	UNDP	Project Completed	0.14	0.03
GEF-2	Initial assistance to Morocco to meet its obligations under the Stockholm Convention on Persistent Organic Pollutants (POPs)	Morocco	POPs	UNDP	Project Completed	0.50	0.06
GEF-2	Integrated Solar Combined Cycle Power Plant (formerly Solar Based Thermal Power Plant)	Morocco	CC	WB	CEO Endorsed	43.20	524.60
GEF-3	Energy and Environment Upgrading of the Industrial Park of Sidi Bernoussi Zenata, Casablanca	Morocco	CC	WB	Under Implementation	0.75	11.15
GEF-3	The Middle Atlas Forest Restoration project	Morocco	MFA	UNDP	CEO Approved	1.00	2.11
GEF-3	National Capacity Self-Assessment (NCSA) for Global Environmental Management	Morocco	MFA	UNDP	Project Completed	0.20	0.05

Replen	Name	Country	Focal Area	Agency	Status	GEF (\$M)	Co-Fin (\$M)
GEF-4	Energy Efficiency Codes in Residential Buildings and Energy Efficiency Improvement in Commercial and Hospital Buildings in Morocco	Morocco	CC	UNDP	Council Approved	3.28	12.61
GEF-4	Safe Management and Disposal of PCBs	Morocco	POPs	UNDP/UNIDO	Council Approved	4.76	7.55
GEF-4	MENARID Participatory Control of Desertification and Poverty Reduction in the Arid and Semi Arid High Plateau Ecosystems of Eastern Morocco	Morocco	MFA	IFAD/UNIDO	CEO Endorsed	6.35	19.09
SYRIA							
GEF-1	Biodiversity Strategy and Action Plan and Report to the CBD	Syria	BD	UNDP	Project Completed	0.19	0.04
GEF-1	Supply-Side Efficiency and Energy Conservation and Planning	Syria	CC	UNDP	Project Completed	4.61	25.79
GEF-2	Assessment of Capacity-Building Needs and Country-Specific Priorities in Biodiversity	Syria	BD	UNDP	Project Completed	0.12	0.06
GEF-2	Additional Enabling Activity Support for Participation in the Clearing House Mechanism of the CBD	Syria	BD	UNDP	Project Completed	0.01	
GEF-3	Biodiversity Conservation and Protected Area Management	Syria	BD	UNDP	Under Implementation	3.49	3.43
GEF-3	Enabling activities for the Stockholm Convention on Persistent Organic Pollutants (POPs): National Implementation Plan for Syria	Syria	POPs	UNEP	Project Completed	0.47	0.06
GEF-3	National Capacity Self-Assessment (NCSA) for Global Environment Management	Syria	MFA	UNDP	Project Completed	0.20	0.03
GEF-4	Prevention and Disposal of POPs and Obsolete Pesticides in Syria	Syria	POPs	FAO	PIF Approved	0.98	1.61
TUNISIA							
GEF-0	Conservation of the Dana and Azraq Protected Areas	Tunisia	BD	UNDP	Project Completed	6.30	0.46
GEF-0	Solar Water heating	Tunisia	CC	WB	Project Completed	4.20	16.90
GEF-1	Biodiversity Strategy, Action Plan and National Report	Tunisia	BD	WB	Project Completed	0.09	
GEF-1	Final Consolidation and Conservation of Azraq Wetlands and Dana Wildlands by RSCN to Address New Pressures	Tunisia	BD	UNDP	Project Completed	1.95	0.75
GEF1	Barrier Removal to Encourage and Secure Market Transformation and Labeling of Refrigerators	Tunisia	CC	UNDP	Project Completed	0.71	1.24
GEF-1	Emissions Inventory of Greenhouse Gases : National Strategy and Action Plans for Emissions Reduction and Fulfillment of National Communications under the UNFCCC	Tunisia	CC	UNDP	Project Completed	0.57	0.38
GEF-1	Vulnerability and Adaptation to Climate Change	Tunisia	CC	UNDP	Project Completed	0.09	0.02
GEF-1	Reduction of Methane Emissions and Utilization of Municipal Waste for Energy in Amman	Tunisia	CC	UNDP	Project Completed	2.74	2.82
GEF-1	Gulf of Aqaba Environmental Action Plan	Tunisia	IW	WB	Project Completed	3.00	8.97
GEF-2	Protected Areas Management Project	Tunisia	BD	WB		5.58	4.55
GEF-2	Conservation and Sustainable Use of Biodiversity in Dibeen Nature Reserve	Tunisia	BD	UNDP	Project Completed	1.00	1.02
GEF-2	Assessment of Capacity Building Needs and Country/Authority Specific Priorities in Biodiversity (Additional Financing)	Tunisia	BD	UNDP	Project Completed	0.09	0.04
GEF-2	Experimental Validation of Building Codes and Removal of Barriers to Their Adoption	Tunisia	CC	UNDP	Under Implementation	4.36	6.33
GEF-2	Development of a National Plan for the Implementation of the Stockholm Convention on POPs	Tunisia	POPs	UNEP/UNIDO	Project Completed	0.43	0.09
GEF-3	Capacity Building for the Implementation of the National Biosafety Framework	Tunisia	BD	UNEP	CEO Approved	0.85	0.92

Replen	Name	Country	Focal Area	Agency	Status	GEF (\$M)	Co-Fin (\$M)
GEF-3	Assessment of Capacity-building Needs for Biodiversity and Participation in the Establishment of a Clearing House Mechanism (CHM) - ADD ON	Tunisia	BD	UNEP	Project Completed	0.19	0.08
GEF-3	Conservation of Medicinal and Herbal Plants	Tunisia	BD	WB	Project Completed	5.35	9.21
GEF-3	Gulf of Gabes Marine and Coastal Resources Protection	Tunisia	BD	WB	Under Implementation	6.66	3.50
GEF-3	Development of an Energy Efficiency Program for the Industrial Sector for Tunisia	Tunisia	CC	WB	CEO Endorsed	8.50	23.30
GEF-3	Private Sector Led Development of On-Grid Wind Power in Tunisia	Tunisia	CC	UNDP	Under Implementation	2.28	2.00
GE-F4	Demonstrating and Promoting Best Techniques and Practices for Managing Healthcare Waste and PCBs	Tunisia	POPs	WB	Council Approved	5.84	17.00
GEF-4	Self-Assessment of National Capacity in Tunisia to Manage the Global Environment	Tunisia	MFA	UNDP	Project Completed	0.20	0.03
GEF-4	MENARID Support to Sustainable Land Management in the Siliana Governorate	Tunisia	MFA	IFAD	Council Approved	5.35	27.38
GEF-4	MENARID - Land and Water Optimization Project	Tunisia	MFA	WB	Council Approved	9.73	75.70
TURKEY							
GEF-0	In-Situ Conservation of Genetic Biodiversity	Turkey	BD	WB	Project Closure	5.10	0.60
GEF-2	Biodiversity and Natural Resources Management Project	Turkey	BD	WB	Under Implementation	8.54	3.35
GEF-3	Consultation for National Reporting, Participation in the National Clearing House Mechanism and Further Development of the National Biodiversity Strategy and Action Plan (NBSAP)	Turkey	BD	UNEP	Project Completed	0.37	0.10
GEF-3	Anatolia Watershed Rehabilitation Project - under WB-GEF Strategic Partnership for Nutrient Reduction in the Danube River and Black Sea	Turkey	IW	WB	Under Implementation	7.30	38.11
GEF-3	Enabling activities to facilitate early action on the implementation of the Stockholm Convention on Persistent Organic Pollutants (POPs) in the Republic of Turkey	Turkey	POPs	UNIDO	Project Completed	0.47	0.00
GEF-4	Enhancing Coverage and Management Effectiveness of the Subsystem of Forest Protected Areas in Turkey's National System of Protected Areas	Turkey	BD	UNDP	CEO Approved	1.00	1.43
GEF-4	Strengthening Protected Area Network of Turkey: Catalyzing Sustainability of Marine and Coastal Protected Areas	Turkey	BD	UNDP	Council Approved	2.40	4.00
GEF-4	Promote Energy Efficiency in Buildings	Turkey	CC	UNDP	Council Approved	2.72	18.68
GEF-4	Market Transformation of Energy Efficient Appliances in Turkey	Turkey	CC	UNDP	Council Approved	2.71	2.30
GEF-4	National Capacity Self Assessment for Global Environmental Management (NCSA)	Turkey	MFA	UNEP	CEO Approved	0.20	0.06

Total GEF funded investments in the Mediterranean countries *

446.85 1733.32

* Algeria, Egypt, Jordan, Lebanon, Libya, Morocco, The Palestinian Authority, Syria, Tunisia, and Turkey

Annexes

ANNEX 2: GEF-4 Investments in the Mediterranean¹



National Geographic Society

Name	Country	Focal Area	Agency	Status	GEF (\$M)	Co-Fin (\$M)
MENARID Reducing Risks to the Sustainable Management of the North West Sahara Aquifer System (NWSAS)	Algeria, Tunisia, and Libya	IW	UNEP	PIF Approved	1.00	1.64
Eastern Nile Watershed Management Project	Ethiopia, Sudan, and Egypt	IW/LD	WB	FSP/Council Approved	8.70	37.30
Strategic Partnership for the Mediterranean Large Marine Ecosystem-Regional Component: Implementation of Agreed Actions for the Protection of the Environmental Resources of the Mediterranean Sea and Its Coastal Areas	Albania, Lebanon, Libya, Morocco, Montenegro, Syria, Tunisia, Turkey, and The Palestinian Authority	IW/POPs	UNEP/UNIDO	CEO Endorsed	12.89	29.61
MENARID Cross Cutting M & E Functions and Knowledge Management for INRM within the MENARID Programme Framework	Algeria, Egypt, Iran, Jordan, Morocco, Tunisia, and Yemen	LD	IFAD	PIF and PPG Approved	0.73	1.60
Promotion of Strategies to Reduce Unintentional Production of POPs in the PERSGA Coastal Zone	Egypt, Jordan, Sudan, and Yemen	POPs	UNIDO	CEO Approved	1	2
Demonstration of Sustainable Alternatives to DDT and Strengthening of National Vector Control Capabilities in Middle East and North Africa	Djibouti, Egypt, Jordan, Morocco, Islamic Republic of Iran, Sudan, Syria, and Yemen	POPs	UNEP	CEO Endorsed	5.6	8.4
Demonstrating and Promoting Best Techniques and Practices for Reducing Health-care Waste to Avoid Environmental Releases of Dioxins and Mercury	Argentina, India, Latvia, Lebanon, Philippines, Senegal, Tanzania, and Vietnam	POPs	UNDP	CEO Endorsed	11	13.5
Community-based Adaptation (CBA) Programme	Global (incl. Morocco)	CC (SPA)	UNDP	Under Implementation	5.00	4.53
Bioenergy for Sustainable Rural Development	Egypt	CC	UNDP	CEO Endorsed	3.44	12.39
Strengthening Protected Area Financing and Management Systems	Egypt	BD	UNDP	Council Approved	3.62	13.80
Sustainable Transport	Egypt	CC	UNDP	CEO Endorsed	7.18	37.10
Adaptation to Climate Change in the Nile Delta Through Integrated Coastal Zone Management	Egypt	CC (SCCF)	UNDP	Council Approved	4.10	12.00
Mainstreaming Global Environment in National Plans and Policies by Strengthening the Monitoring and Reporting System for Multilateral Environmental Agreements	Egypt	MFA	UNDP	CEO Approved	0.50	0.81
Integrated Ecosystem and Natural Resource Management in the Jordan Rift Valley	Jordan	BD	WB	CEO Endorsed	6.50	6.55
Energy Efficiency Investment Support Framework	Jordan	CC	WB	PIF Approved	1.00	44.10
Developing Policy Relevant Capacity for Implementation of the Global Environmental Conventions in Jordan	Jordan	CB (MFA)	UNDP	CEO Approved	0.50	0.50
MENARID Mainstreaming Sustainable Land and Water Management Practices	Jordan	MFA	IFAD	CEO Endorsed	6.80	22.80
Mainstreaming Biodiversity Management into Medicinal and Aromatic Plants Production Processes	Lebanon	BD	MSP	CEO Approved	0.98	1.15

¹ GEF-4 Funded projects in the Mediterranean



Name	Country	Focal Area	Agency	Status	GEF (\$M)	Co-Fin (\$M)
SFM Safeguarding and Restoring Lebanon's Woodland Resources	Lebanon	LD	UNDP	CEO Approved	0.98	1.28
Energy Efficiency Codes in Residential Buildings and Energy Efficiency Improvement in Commercial and Hospital Buildings in Morocco	Morocco	CC	UNDP	Council Approved	3.28	12.61
Safe Management and Disposal of PCBs	Morocco	POPs	UNDP/UNIDO	Council Approved	4.76	7.55
MENARID Participatory Control of Desertification and Poverty Reduction in the Arid and Semi Arid High Plateau Ecosystems of Eastern Morocco	Morocco	MFA	IFAD/UNIDO	CEO Endorsed	6.35	19.09
Prevention and Disposal of POPs and Obsolete Pesticides in Syria	Syria	POPs	FAO	PIF Approved	0.98	1.61
Promotion of a Wind Power Market	Jordan	CC	WB	CEO Endorsed	6.35	135.90
Demonstrating and Promoting Best Techniques and Practices for Managing Healthcare Waste and PCBs	Tunisia	POPs	WB	Council Approved	5.84	17.00
MENARID Support to Sustainable Land Management in the Siliana Governorate	Tunisia	MFA	IFAD	Council Approved	5.35	27.38
MENARID - Land and Water Optimization Project	Tunisia	MFA	WB	Council Approved	9.73	75.70
Strengthening Protected Area Network of Turkey: Catalyzing Sustainability of Marine and Coastal Protected Areas	Turkey	BD	UNDP	Council Approved	2.40	4.00
Enhancing Coverage and Management Effectiveness of the Subsystem of Forest Protected Areas in Turkey's National System of Protected Areas	Turkey	BD	UNDP	CEO Approved	1.00	1.43
Promote Energy Efficiency in Buildings	Turkey	CC	UNDP	Council Approved	2.72	18.68
Market Transformation of Energy Efficient Appliances in Turkey	Turkey	CC	UNDP	Council Approved	2.71	2.30
National Capacity Self Assessment for Global Environmental Management (NCSA)	Turkey	MFA	UNEP	CEO Approved	0.20	0.06

Total

128.16 569.84

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ACRONYMS

ADB	Asian Development Bank
AfDB	African Development Bank
ASP	The Africa Stockpiles Program
BAPs	Biodiversity Action Plans
BAT	Best Available Techniques
BD	Biodiversity
BEP	Best Environmental Practices
BOD	Biological Oxygen Demand
CBD	Convention on Biological Diversity
CC	Climate Change
CI	Conservation International
DDT	Dichloro-Diphenyl-Trichloroethane
ESM	Environmentally Sound Management
FA	Focal Area
FFEM	Fonds francais pour l'environnement mondial
GEF	Global Environment Facility
GHGs	Greenhouse Gases
IA	Implementing Agency
INRM	Integrated Natural Resources Management
IPPs	Independent Power Producers
ISCC	Integrated Solar Combined Cycle
IUCN	World Conservation Union
IW	International Waters
KM	Knowledge Management
LD	Land Degradation
LME	Large Marine Ecosystem
M	Million
MA	Millennium Ecosystem Assessment
MEAs	Multilateral Environmental Agreements
MENA	Middle East and North Africa Region
MENARID	Integrated Natural Resources Management in the Middle East and North Africa
MEPS	Minimum Energy Performance Standards
MFA	Multi Focal Area
NGO	Non-Governmental Organization
NIP	National Implementation Plan
PCB	Polychlorinated Biphenyls
POPs	Persistent Organic Pollutants
SGP	Small Grants Programme
SLM	Sustainable Land Management
SPMS	Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization
WB	World Bank
\$	U.S. Dollar

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