

# Keeping the Promise on Water



GEF's Contributions to  
Sustaining Our Planet's  
Water Ecosystems

March 2003



## Keeping the Promise on Water

At the Second World Water Forum in 2000, the Global Environment Facility (GEF) pledged to provide one half billion dollars—double its previous commitment—to protect and restore freshwater and marine ecosystems over the next five years. By December 2002, less than two years later, GEF had kept that promise by providing \$396 million in direct grants for 94 country-driven projects related to land and water resources. Over the next four years, GEF expects to contribute another \$400 million to support innovative approaches to the management of transboundary waters.

Safeguarding international waters and water ecosystems has been a GEF priority from the beginning. GEF works with 139 countries to strengthen the integrated management of land and water resources that are critical to ecosystem health, poverty reduction, and sustainable development. A total of \$974 million committed by GEF over the past twelve years has leveraged \$2.1 billion in cofinancing from other sources.

### A sampling of GEF's impact:

- ◆ GEF facilitated an unprecedented 10-nation partnership to better integrate land and water management in the Nile River basin; the riparian countries are developing a transboundary management framework to improve the environment and strengthen sustainable development in the region.
- ◆ GEF contributed to the successful negotiation of important multi-country water treaties such as the Lake Tanganyika and Caspian Sea Conventions, which are now being finalized.
- ◆ GEF helped reverse the environmental decline of Lake Victoria, thus enabling the export industry to resume and earn a \$600 million return on investment over two years.
- ◆ GEF funding for restoring degraded wetlands in Romania has resulted in the removal of an estimated 55 tons of phosphorus, 1200 tons of nitrogen, and 40,000 tons of sediment from the Danube River before it enters the Black Sea.



## GEF's Contributions to Sustaining Our Planet's Ecosystems

Water covers more than three-quarters of earth. It nourishes our ecosystems, powers our industry, grows our food, and makes life itself possible. Yet the image of our “Blue Planet” is deceptive. We are rapidly losing our water ecosystems—our planet’s life support systems—as several linked crises of global proportions worsen. This trend poses new threats to domestic and international security.

People are already feeling the consequences of water resource mismanagement. For example, in communities that lack access to water resources, girls are deprived of their education because they spend so much time fetching water from far-away sources. Degraded water

ecosystems and declining fish stocks exacerbate world hunger.

Degradation of our land and water presents an enormously complex challenge. Partnerships—like the cooperative efforts now underway to clean up the Black Sea ecosystem and sustainably manage the Nile River Basin—are the most effective ways to remedy unsustainable use of such precious ecosystems.

Mohamed T. El-Ashry  
CEO and Chairman, Global Environment Facility

If the causes of the water crisis are not addressed, all of us will suffer eventually. New predictions of increased droughts and floods underscore the need for water resources management to rise to the top of the sustainable development agenda. At the World Summit on Sustainable Development (WSSD) in August 2002, the global community set targets and adopted action programs that recognize the important role of freshwater and marine ecosystems in underpinning poverty reduction and sustainable development.

GEF plays a key role in efforts to meet these critical targets. The GEF has been catalyzing

on-the-ground solutions to the world's land and water resource problems for more than a decade. Since its inception, GEF has invested a total of \$974 million in 177 water-related projects requested by 139 developing countries and those in economic transition.

At the Second World Water Forum, held in 2000 in The Hague, the GEF played a prominent role with its call for land, water, and ecosystems to be managed in an integrated fashion in order to avert the water crisis and reduce poverty. In an announcement at the Forum, GEF indicated that it was doubling its financial contribution to one-half billion dollars over the next five years to support country-driven projects related to land and water resources.

The GEF has not only kept its promise but is on track to exceed its target. Between March 2000 and December 2002, \$396 million in GEF grants have been approved for 94 country-driven projects, with total project costs amounting to \$1.6 billion.

The Third World Water Forum is a critical opportunity to focus on actions that countries and institutions must take to attain the global targets set at WSSD. In support of these efforts, GEF is prepared to contribute another \$400 million over the next four years to address critical global water issues and facilitate greater public and private sector participation in activities that



## Water Goals Proposed by GEF

- ◆ **Enact legal reforms in national water laws and those related to land use in 50 percent of all countries by 2005, 90 percent of all countries by 2015.**
- ◆ **Cut in half by the number of people who cannot reach or afford safe drinking water, and who do not have access to hygienic sanitation by 2015.**
- ◆ **Reduce by 20 percent the number of urban dwellers who do not have access to treated sewage by 2015.**
- ◆ **Implement integrated management of river basins in 90 percent of all countries by 2015.**
- ◆ **Achieve a 30 percent gain in the efficient use of irrigation water by 2015, with no net increase in water diversions over the amount used in 2000 to meet needs for food security.**
- ◆ **Develop country-driven partnerships with national and international support for one-third of the world's 64 large marine ecosystems and 276 major transboundary basins by 2010 with implementation by 2015.**

*The Challenge of Sustainability: An Action Agenda for the Global Environment*



## A Sampling of GEF Transboundary Basin Projects

Some 65 million people in **Cambodia, Laos, Thailand, and Vietnam** rely on the Mekong River and its wetlands for all most of their needs: food, water, and transport. However, the downstream river flow is being reduced by upstream dams. GEF's \$29 million Mekong Basin international waters project is helping the basin countries to determine how much water the region's wetlands need. The project, being implemented by the World Bank, will help the four countries, all members of the Mekong River Commission, implement key elements of the 1995 Agreement on Cooperation for Sustainable Development of Mekong Basin. The project builds the capacity of the Commission, which is developing water use rules for adoption by all four nations. A computer model is being developed to simulate water flow in the region. Ultimately, the project aims to sustain the Mekong River ecosystem—the water flow and the quality of the water itself—for multiple uses by local residents.

GEF is the largest financial supporter of the **International Consortium for Cooperation on the Nile**, launched in July 2001 following six years of preparation by ten Nile Basin countries. The consortium, created to support sustainable development in the region, received pledges from the donor community for an initial \$140 million for the Shared Vision Program of the Nile Basin Initiative, with an additional \$3 billion anticipated in investments for sustainable development. GEF played a significant role by providing preparation funds for the formulation of a GEF international waters project that would underpin the initiative.

The consortium produced a transboundary environmental analysis to build confidence and set priorities. The analysis was produced through a participatory process and included in-country consultations, national reports, and in-country interministerial coordination. In March 2001, the analysis was approved by the Nile Council of Ministers, marking the first time such a substantive document has received approval of all Nile riparian countries. This catalytic process proved to be a starting point for expanding the dialogue among the water ministries to include other ministries in each of the 10 countries, as well as NGOs. The transboundary analysis process was so successful that it became a model for other parts of the program, piloted through the GEF. In 2001, the GEF Council approved a \$17.2 million grant for the Nile Basin Initiative, with co-financiers contributing an additional \$90 million.

This basin-specific partnership is an excellent example of the action that is urgently needed to help countries make the transition to sustainable development strategies.

simultaneously yield national, regional, and global benefits.

## Safeguarding Transboundary Waters

Nature does not neatly segment environmental or water problems by geography or political unit. Most of the large rivers of the world cross national borders, often resulting in water use conflicts and tensions, as well as missed opportunities for sustainable development, peace, and security. About one-half of our planet's land area and population, and more than 60 percent of global freshwater flow, is located in transboundary basins. These systems, including their land area, must be managed in a sustainable way if

we are to achieve the Millennium Development Goals—specific targets established by world leaders to reduce poverty.

About one-half of our planet's land area and population, and more than 60 percent of global freshwater flow, is located in transboundary basins.

Since 1991, 127 countries have received GEF assistance to protect their shared transboundary basins and downstream marine ecosystems. GEF has provided \$563 million in grants with total project costs adding up to \$1.5 billion. These GEF projects include large transboundary river



and lake basins such as the Nile, Senegal, Niger, Okavango, Danube, Mekong, Paraguay, and San Juan, as well as Lakes Victoria, Malawi/Nyasa, Tanganika, Ohrid, and Titicaca. Large groundwater systems such as the Guarani in South America and the four-country Northwest Sahara Aquifer System in Africa have also been a priority for GEF funding.

Some GEF projects focus on large marine ecosystems—units of ocean space that parallel the continents and contain 95 percent of ocean fisheries. These downstream marine systems are often degraded by water withdrawals for irrigation, water diversions to cities, pollution discharges, and disruptions in water flow caused by dams. In Brazil, for example, a \$21 million GEF project,

## Reclaiming the Danube Delta

**The Danube delta in Romania is one of the largest marshlands in Europe. With small fishing communities and gardeners living amid the great reed beds, the wetland was left to itself, doing its age-old job of filtering the river waters on the way to the sea.**

**That is, until the 1980s when the Romanian government tried to replace the wetland with farms. The main result of the dams and dikes built to drain the marshes was not more farming—the soil is poor—but less wetland, almost 400,000 hectares less. This damaged the filtering action of the lower delta, which had been critical in absorbing toxins from upstream, where waste treatment was generally non-existent and some farmers saturated their lands with fertilizers. The diking damaged the natural aquatic vegetation. As a consequence, nitrogen and phosphates, heavy metals, and human sewage poured into the Black Sea.**

**Over-fishing of the sea had destroyed the species that kept plankton under control. The excess of nutrients from the Danube and other tributaries**

**fed free-floating plants, which ran riot and blocked sunlight and oxygen from the lower depths. This pattern is called eutrophication, meaning too much food for the wrong kinds of species. In the 1970s and 1980s, eutrophication in the Black Sea destroyed an underwater meadow as big as Belgium and the Netherlands. Plants starved and fish stocks plummeted.**

**To begin understanding what could be done, GEF supported a pilot project to pull out the dikes around two islands in the delta that are exposed to 58 percent of the sediment transport of the Danube. The islands, Babina and Cernovca, had dried out and lost their normal plants and animals. Once the dikes were removed, the results were astonishing. Within a few years, 60 percent of the islands were again covered by reeds and aquatic vegetation. Water lilies, butterflies, locusts, beetles, dragonflies, fish, white pelicans, and 66 species of spider rapidly re-conquered their neighborhood. This small pilot showed that it is possible to restore the filtering function of the Danube delta. In the new century, Romania's neighbors are following suit. Dikes are out. Wildlife and reeds are in.**

managed by the U.N. Environment Programme in partnership with the Organization of American States, is helping the government implement a new water law in the Sao Francisco basin, which drains into the Atlantic Ocean. The five states in the basin region are receiving assistance to address the environmental needs of the downstream coastal and marine ecosystems.

## Protecting Aquatic Biodiversity

Aquatic species in rivers, lakes, and coastal areas are among the most threatened biodiversity in the world. Declining fish stocks are a major threat to efforts to eliminate hunger in many developing countries, especially in light of the U.N. Food and Agriculture Organization estimate that approximately one billion people around the world rely on fish as their main source of animal protein. If water ecosystems are properly functioning, then the living conditions of people in developing countries can be improved. Polluted, muddied, drained, and dry water ecosystems can no longer provide livelihoods, protein from fish, or building supplies from wetlands. In addition, loss of wetlands often leads to downstream flooding problems and associated economic damage.

GEF is creating partnerships with governments to reverse these trends. In Jordan, an \$8 million

GEF project has provided a much-needed link between biodiversity conservation, land use, and water management in two unique ecosystems, the Dana and Azraq wetlands. The region's extensive system of spring-fed marshes and pools was threatened by upstream groundwater pumping for urban and agricultural use. The GEF project supported reforms in the sectors threatening the wetlands, as well as community-based, alternative income-generating activities to help protect the wetlands.

**Declining fish stocks are a major threat to efforts to eliminate hunger in many developing countries, especially in light of the U.N. Food and Agriculture Organization estimate that approximately one billion people around the world rely on fish as their main source of animal protein.**

On the Ganges floodplain in Bangladesh, a \$55 million GEF biodiversity project being implemented by the World Bank is demonstrating sustainable practices in fisheries used for local food needs and commercial harvest. Up to 50 pilot community-managed sanctuaries are being established in small rivers and channels to help



protect nurseries for fish. This is just a small sample of the types of interventions supported by the GEF, with \$103 million approved for 30 biodiversity projects between March 2000 and December 2002.

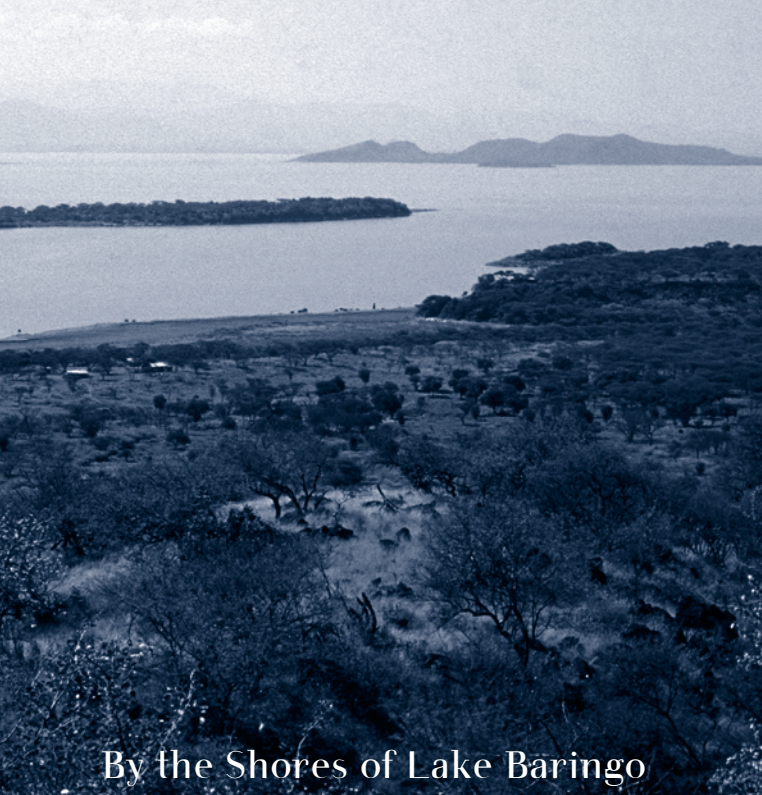
## Strengthening the Integrated Management of Land and Water Resources

To truly understand water issues, one must understand how the water is impacted by everything and everyone around it. Soil runoff from a recently cleared forest, for example, might damage aquatic habitat. In turn, people on land might not be able to catch enough fish, which they depend upon for protein. GEF's "integrated ecosystem management" projects take into account these sorts of linkages and interactions among natural systems and people. By focusing on a larger scale—beyond the boundaries of a single habitat type, conservation area, or a nation—it is possible to generate greater global environmental benefits.

Integrated ecosystem management projects also involve and empower a wide range of local residents in natural resource management. This approach often creates benefits in multiple areas such as land degradation, biodiversity, and waters. GEF has recently invested \$81 million in

19 integrated ecosystem management projects that have cross-cutting benefits for water and land resources.

In Africa, the five countries of the Lake Chad basin—Cameroon, Central African Republic, Chad, Niger, and Nigeria—are working together on a GEF project focused on the sustainable use of land and water resources. Leaders in these countries have realized that the security of poor communities often depends on access to functioning water ecosystems for multiple purposes and not just access to water for drinking. Livelihoods in fishing and agriculture will depend on restoration of the downstream water flow of the dams and the conservation of globally significant wetlands. The project aims to better prepare the community for fluctuating weather conditions, especially drought, through low-cost drip irrigation, water harvesting demonstrations, land tenure security, and an improved joint management commission. The U.N. Development Programme, the World Bank, and the UN-DESA (Department of the UN Secretariat for Economic and Social Affairs) manage the project.



## By the Shores of Lake Baringo

Freshwater Lake Baringo, lying in the mythic Rift Valley and fittingly close to a peak called World's End, has a melodious ring for bird lovers. More than 470 species have been recorded here, their names equally musical and mythic: Gabar goshawk, Paradise flycatcher, African fish eagles, marabou storks, and white-faced Scops owl.

Perspiring in the early morning glare, a farmer named Katiar, a Pokot tribesman from Lonuge village, surveys his sprouting corn. He looks through the thorn scrub, raises his eyes to the blinding yellow hills, and then rests them on the chocolate-colored lake.

“At dawn, my friends and I used to sail the lake in our small canoes and dip our nets and long lines into the water. We would take catfish and tilapia home and everyone would have a delicious meal. Then we would tend to our herds.”

But during the past twenty years, an imbalance between people and nature has gradually laid waste to the region's abundance. The topsoil floated away into the lake. The lake silted up and got saltier, and its shoreline receded.

While the birdwatchers wondered where the birds had gone, the local tribes found themselves close to starvation. The Njemp fishermen caught fewer and fewer fish. The Tugen and Pokot farmers saw their soil washing away into the lake. “The farms ceased producing. The fish and livestock declined precipitously. The people were reduced to eating hippos and USAID food rations,” said William Kimoip, the government's local warden and member of the county council.

Support from the GEF helped launch an integrated conservation and development project wherein a variety of local partners addressed the poverty and scarcity of food along with the root causes—biodiversity loss, land degradation, and lack of water management.

The project started with one farmer, a respected Tugen who was open to new ideas. The project's extension expert, Philip Kisoyan, taught him to build long, low earthen mounds to keep the soil from washing away. For the first time in seven years there was a crop. And who came to help with the harvest but the other farmers? They saw the miracle and copied it, setting in motion a cycle of renewal. The old abundance of wildlife, food, and productive land and water is beginning to show signs of returning.

## About the Global Environment Facility

The Global Environment Facility (GEF) channels multilateral funds into projects initiated by people in developing countries to create global environmental benefits. GEF has grown from a pilot program to the largest single source of funding for the global environment. In 2002, donor nations cast an extraordinary vote of confidence by replenishing GEF's trust fund by \$3 billion—the largest amount ever.

**GEF's mandate is to forge international cooperation and finance actions that address critical threats to the global environment: biodiversity loss, climate change, degradation of international waters, ozone depletion, desertification, and persistent organic pollutants.**

GEF's third replenishment caps a decade of successful efforts to link global environmental benefits and sustainable development. Since its creation in 1991, the GEF has allocated more than \$4 billion in grants and leveraged an additional \$13 billion in co-financing from other sources to support more than 1,200 projects in over 140 developing nations and countries with economies in transition. In addition, GEF has

made more than 3,000 small grants, up to \$50,000 each, directly to NGOs and community organizations.

GEF's mandate is to forge international cooperation and finance actions that address critical threats to the global environment: biodiversity loss, climate change, degradation of international waters, ozone depletion, desertification, and persistent organic pollutants. An independent assessment of GEF's performance found that it has "produced significant results" by "effectively using its resources for global environmental protection and sustainable development." One hundred and seventy four countries are GEF members.



[www.gefweb.org](http://www.gefweb.org)

**Photo Credits**

Front and Back Cover: Alfred Duda

Inside Cover, page 1: Panos Pictures/Giacomo Pirozzi

Page 2: Alfred Duda

Page 5: Still Pictures/Ron Giling

Page 6: GEF International Waters map, Alan Kettler

Page 8-9: GEF International Waters map, Alan Kettler

Page 16: Graham Maughan

Inside Back Cover: Alfred Duda

**For more information contact:**

**Hutton Archer**

**Senior External Affairs Coordinator**

**Global Environment Facility**

**1818 H Street NW**

**Washington, DC 20433 USA**

**Tel: 1 (202) 473-0508**

**Fax: 1 (202) 522-3240**



**The Global Environment Facility  
1818 H Street, NW  
Washington DC 20433 USA**

**Tel: 1 (202) 473-0508  
Fax: 1 (202) 522-3240  
[www.gefweb.org](http://www.gefweb.org)**