

HELPING COMMUNITIES THAT DEPEND ON AQUATIC BIODIVERSITY

It is perhaps our most precious resource, the basis of all life on this blue planet—water. Chemically, it is simple; yet, it affects all our lives in a myriad of ways.

The GEF recognizes the complex nature of this basic resource, using a variety of approaches to tackle problems of water degradation, pollution, scarcity, and sustainable use. GEF projects focus on freshwater systems as well as coastal and marine biodiversity, in support of the Convention on Biological Diversity and other water agreements.

Freshwater biodiversity represents the most highly threatened global ecosystem, with over one-half the wetlands already lost to agriculture or urban conversion, diking, and reductions in flows from irrigation diversions or hydropower. Because of this situation, many of GEF's inland

and freshwater projects focus on the sustainable use of wetlands.

At the heart of the GEF's work on water is helping communities around the world. Many GEF projects relate to the sustainable use of land and water ecosystems so that poverty may be reduced, more food grown, and natural resources conserved. In this aspect, GEF projects are yielding critical results in meeting the needs of the poor in developing countries as they gain livelihoods, food security, and other resources from water ecosystems, such as wetlands.

CONSERVING AND RESTORING WETLANDS

In the West Bank and Gaza, GEF assistance through a Mediterranean Wetlands biodiversity project has helped farmers utilize new rain water harvesting and irrigation efficiency techniques. Farmers have dramatically increased production and doubled yields through more efficient water use in order to conserve groundwater that recharges important wetlands of Wadi Gaza.

An \$8 million GEF project in Jordan 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.



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With so much wetland loss, countries are finding it imperative to restore wetlands for economic and environmental benefits. A good example is the Romania Danube Delta project. In the 1980s, the Romanian government replaced portions of the wetland with farms by draining and diking. Almost 400,000 hectares of wetlands were lost. This damaged the filtering action of the lower delta, which had been critical in absorbing toxins from upstream. GEF support was used to pull out the dikes around two islands in the delta. 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 for use by local communities. The delta could once again support fisheries and filter the river water. GEF is now helping other countries of the Danube Basin replicate these successes.

FOSTERING SUSTAINABLE FISHERIES AND AGRICULTURE

Throughout the world, maintaining sustainable fisheries is vital for local livelihoods. On the Ganges floodplain in Bangladesh, a \$5 million GEF biodiversity project is demonstrating sustainable practices in fisheries used for local food needs and commercial harvest. Fifty pilot community-managed sanctuaries are being established in small rivers and channels to help protect nurseries for fish.

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 that is focusing 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 depend on restoration of

the downstream water flow of the dams and the conservation of globally significant wetlands in the Waza-Lagone and Komadougou-Yobe floodplain wetlands.

The project aims to better prepare the communities for fluctuating weather conditions, especially drought, through low-cost drip irrigation, water harvesting demonstrations, land tenure security, and an improved joint management commission. Improved flows from the dams is the central intervention aimed at sustaining the wetlands for use by human settlements. All across Africa, restoration and maintenance of floodplain ecosystems and flow regimes will prove to be key to communities' security during worsening times of drought.

PROMOTING PIONEERING EFFORTS

The GEF is supporting biodiversity projects involving protected areas that emphasize the services ecosystems provide and encourage payment for those services. One of the pioneering efforts in this realm is a GEF project in Costa Rica. The Ecomarkets Project supports Costa Rica's program of Payments for Environmental Services, operated by the National Fund for Forest Financing. Under national law, land users can receive payments for specified land uses—including new plantations, sustainable logging, and conservation of natural forests—which are thought to generate such positive environmental externalities as protecting hydrological flows, conserving biodiversity, sequestering carbon, or enhancing scenic beauty. Through this program, several private and public water users—including several hydroelectric power producers, a bottler, and a municipal water supply system—have signed contracts to pay to conserve the watersheds from which they draw their water. This is an example of how downstream beneficiaries sustain high quality water flows by contributing to upstream stewardship of water supply catchments.

FOR MORE INFORMATION

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