
Madagascar Environment Program Profile

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The **USAID Madagascar Mission** focuses its environmental programs on one strategic objective (SO), which targets “Biologically diverse ecosystems conserved in priority conservation zones.” Social programs are covered under SO2, “Smaller, healthier families.” Recognizing the relationship between a healthy society, a healthy environment, and a healthy economy, the Mission also developed a Special Program Objective, entitled the “Improved Environment for Private Initiative.” Many environmental programs serve to capitalize on the natural synergies that exist among these objectives.

Madagascar is recognized as among the world’s five richest environmental sites. Although it occupies less than 2 percent of Africa’s total land area, the island nation is home to a quarter of all African plants, and 80 percent of its flora and fauna are found nowhere else on Earth. However, human poverty, a high population growth rate, and unsustainable government policies and practices are seriously threatening this globally significant, natural resources base. The destruction of Madagascar's biodiversity, loss of habitat, and the extinction of rare plants and animals are of global concern, particularly in regard to new genetic materials needed for advances in medicine and agriculture. To preserve this valuable heritage, USAID seeks to conserve biologically diverse ecosystems in priority conservation zones through improved natural resources management.

SO3: Biologically Diverse Ecosystems Conserved in Priority Conservation Zones

Cross-Cutting

Madagascar's National Environmental Action Plan (NEAP). Since 1990, USAID has been a lead donor to Madagascar's 15-year National Environmental Action Plan (NEAP), which supports biodiversity conservation, forest management planning, environmental policy development, and institutional strengthening for environmental organizations. The NEAP provides an overall framework for donors, maximizing the use of available resources and avoiding duplication of effort. The Action Plan is broken into three, five-year phases, each with a particular focus area. Phase one (EP1), which focused on institutional development, was completed in 1997. The second five-year phase of NEAP (EP2, 1997-2002), developed through an intensive participatory preparation and planning effort, focuses on the transfer of natural resources management responsibility from centralized to regional and local institutions and communities.

USAID support focuses on two broad areas:

1. Establish an enabling environment for natural resources management at the national level through policies, institutions, financial mechanisms, and information necessary for NEAP success.
2. Foster biodiversity conservation and sustainable natural resources management based on an applied landscape ecology approach.

USAID supports the landscape ecology approach in five priority conservation zones. These landscapes were selected based on:

1. Unique biologically diverse ecosystems
2. Priority Protected Areas and classified forest as identified by the Government of Madagascar (GOM)
3. Significant pressures on the natural resources base
4. Existing biological inventories and socioeconomic studies of the region
5. Potential for effective development interventions based on lessons learned from USAID-funded projects
6. Viable working relations with key actors in the area

USAID plans to provide funding to support the \$150 million EP2 over its five-year life. The United States is the second largest donor to EP2 after the World Bank (\$30 million), which provides institutional support to key NEAP institutions and funding for projects to address the problems of soil and water conservation.

The GOM strongly supports the NEAP, providing the equivalent of \$31 million (about 20 percent of total costs) for EP2 through contributions to operating costs and tax reductions. Other donors include the International Fund for Agricultural Development, the World Wildlife Fund, Conservation International, CARE, and the Netherlands.

Policy, Strategy, and Environment Assessment Unit of the National Office of Environment (ONE). USAID supports ONE's Environment Assessment Unit, which reviews investments for potential

environmental impacts. To date, five investment projects have formally completed the environmental review process established by the Inter-Sectoral Environmental Technical Committee. In 1998, a pilot framework for regional environmental assessments was drafted and initiated in the Fort Dauphin eco-region. The process focuses on analyzing cumulative impacts of potential regional activities in light of existing environmental and socio-economic conditions. This will allow ONE to provide better information and advice on the implications of policy and planning decisions. Continued work in improving environmental impact legislation supports the systematic integration of the environment into decision making and works towards overcoming a lack of governmental consultation.

Tany Meva (Africa's first private national environmental foundation). USAID supported the development of Tany Meva (*Beautiful Country*), which makes grants to rural communities nationwide through Regional Development Councils that identify potential recipients. Grantmaking officially began in October 1997, and within its first 18 months, Tany Meva funded more than 50 separate projects and disbursed almost US\$440,000. The Foundation is now fully operational as a non-profit organization. During EP2, USAID plans to increase its focus on identifying other sustainable environmental financing mechanisms to ensure both a gradual decrease in Madagascar's reliance on international donor assistance, and the long-term financial sustainability of environmental efforts beyond the NEAP's end in 2007.

Landscape Development Interventions (LDI) 1999-2002. USAID is collaborating with LDI, a consortium of Chemonics International; Cornell International Institute for Food, Agriculture and Development; and Pact Madagascar to arrest and reverse the negative trends in Madagascar's demographic growth, deforestation, and agricultural production. LDI is using the Landscape Ecology Approach, which seeks to influence how humans interact with the environment to ensure sustainable use of natural resources in the broader landscape. This approach also recognizes the need to alleviate poverty and address socio-economic pressures on critical habitats as a key element of any environmental strategy.

In concert with local partners, LDI activities include:

1. Agricultural intensification: The LDI team will propose site-specific and pressure-specific production systems aimed at encouraging farmers to abandon destructive practices by offering them more attractive and sustainable alternatives, such as composting and weeding.
2. Community-based natural resources management: To combine secure land tenure and sustainable management of natural resources, rural communities will organize themselves into legally constituted bodies to which the state can transfer management rights over some or all of the resources on the communities' traditional land.
3. Environmental communication and education: To provide relevant information to stakeholders on the benefits of sustainable agriculture and biodiversity conservation, LDI will deliver information via diverse modes of media to audiences, such as policy makers, business, resource users, and partners.
4. Conservation enterprise development: LDI will support enterprises that increase incomes of rural communities and generate revenue from natural resources in a sustainable manner.
5. Local capacity building: LDI will assist farmers in strengthening and creating associations engaged in conservation and development activities, which will constitute the fundamental pillars for long-term rural development and sustainable management of natural resources.

(For more information on LDI, see the Sustainable Agriculture and Environmental Education and Communication sections below.)

Biodiversity Conservation

Malagasy National Park Service (ANGAP). USAID has supported the establishment of a Malagasy National Park Service (ANGAP) to manage national parks and reserves. The National Park System currently includes 11 ecosystems, or 70 percent of the ecosystem types recognized in country, and is expected to include all the differing ecosystem types by the year 2000. USAID also supported the development of regional offices for ANGAP, and this more decentralized organization resulted in improved trails, signs, interpretative materials, and campgrounds better responding to ecotourism needs. Substantial progress has been made in the development of a pilot ecotourism "investment zone" near Isalo National Park to facilitate private sector investment near protected areas. The ANGAP Board of Directors recently finalized Madagascar's first National Parks Act, which is currently being forwarded to the National Assembly.

Green for Green

In a debt-for-nature swap, an organization acquires some of a developing country's foreign debt, either by purchasing it at a discount from the debt's face value or by receiving it as a donation. The organization then agrees to cancel the debt in return for the borrower country's commitment of additional resources to local conservation.

Masoala National Park. The creation of Masoala National Park in Madagascar offers a good example of the importance of USAID's environmental work in Africa. The first decree signed by Madagascar's President Didier Ratsiraka created the 840-square-mile Masoala National Park in March 1997. Masoala represents the largest protected area in Madagascar to date. The establishment of this biodiversity-rich park results from a seven-year team effort between Malagasy environmental institutions and international nongovernmental organizations, with funding from USAID and strong support from the U.S. Embassy.

The Masoala peninsula, in the northeast of Madagascar, is known for its virgin tropical forests, extensive coral reef, 22 rare butterfly species, and the greatest diversity of palm species in the world. Within the boundaries of the national park, project conservation teams have found two of the world's rarest birds, the Madagascar serpent eagle and the red owl, which were thought to be extinct.

Debt for Nature Swaps. USAID purchased multilateral debt from the African Development Bank to establish the endowment for Tany Meva, Africa's first private national environmental foundation, which makes grants to rural communities nationwide through Regional Development Councils that identify potential recipients. (*See description of Tany Meva under Cross-Cutting section above.*)

While Madagascar has eliminated most of its private debt, opportunities for bilateral and multilateral swaps may still arise. USAID hopes to coordinate with the GOM to expand its Debt-for-Nature program and encourage other donors to participate.

Sustainable Forest Management

Multiple-Use Participatory Forest Management (ESFUM). As part of EP2, USAID has supported the development and implementation of four forest management plans that serve as models for local participation in the planning process as well as encourage local participation in the general management

of forest ecosystems. Efforts to achieve the goal of encouraging positive changes in local-level natural resources use have shown that communities in conservation priority zones are adopting alternatives to destructive resource use practices. Community associations and local nongovernmental organizations in five priority zones are recipients of grants that promote sustainable natural resources management and capacity building of village groups to diminish pressures on the natural resources base. Further, village development committees receive a share of park entrance fees for community-managed projects, thereby establishing a conservation/development link.

Environmental Education and Communication

Landscape Development Interventions (LDI) 1999-2002. To convey the benefits of sustainable agriculture and biodiversity conservation, LDI delivers messages through diverse media to all stakeholders. In doing so, LDI hopes to motivate stakeholders to change their behavior and adopt improved practices and technologies.

(For more information on LDI, see the Cross-Cutting and Sustainable Agriculture sections.)

Sustainable Agriculture

Landscape Development Interventions (LDI) 1999-2002. To feed a rapidly growing population, Madagascar has seen agricultural extensification claim primary natural forest cover at an alarming rate. LDI promotes a sustainable use of natural resources in a broader landscape by encouraging farmers to abandon destructive practices and offering more sustainable and profitable alternatives.

(For more information on LDI, see the Cross-Cutting and Environmental Education and Communication sections above.)

Integrated Conservation and Development Projects (ICDPs). USAID funded six ICDPs, bringing some half million hectares of primary rainforest and other critical vegetation under protected area management. This effort employed more than 370 Malagasy and relied on the leadership and technical assistance of six international nongovernmental organizations. Performance reporting completed in 1997 showed that by 1996, about half of mapped communities surrounding the ICDPs were participating in conservation-based activities. These focused primarily on promoting sustainable agriculture techniques (principally alternatives to slash and burn agriculture), alternative revenue generation activities, and improving natural resources management and land conservation, of which 21 percent was conducted in partnership with local nongovernmental organizations.

Commercial Agricultural Promotion. Madagascar's

Natural Killer

Madagascar is under siege again by the biggest outbreak of grasshoppers and locusts this century. Island officials responded by spraying about 12 million acres with broad-spectrum pesticides, which attack not only locusts, but also the island's unique plant and animal species. With a grant from USAID, scientists at Montana State University are working with the GOM on a gentler alternative: a fungus native to Madagascar that won't harm other life forms. The project could have spin-offs for the United States, which faces similar problems with grasshoppers that damage crops and rangeland.

<http://www.montana.edu/wwwpb/univ/round53.html>

neglected roads contribute to a deteriorating agricultural system, leaving many farmers unable to feed their families. Lacking reliable farm-to-market routes, many farmers cannot market their products or obtain inputs. With USAID funding, Chemonics is managing the rehabilitation of 250 km of rural roads and helping community members form associations to manage and maintain them. The roads have helped farmers increase their incomes and lower production costs. The project estimates that 150,000 farmers market \$1.2 million more produce than before the rehabilitation. Meanwhile, the associations are spurring community action in other areas, such as composting, forest protection, and the revitalization of ailing fruit production efforts. The project is also helping agribusiness expand in the country's newly liberalized economy.

Pesticide Monitoring. In response to one of the largest locust invasions in Madagascar's history, USAID helped introduce environmental considerations into locust control efforts, thereby helping safeguard biodiversity and human health. With USAID support, a system is now in place to monitor the use of pesticides and avoid environmental damage. (See text box.)

Global Climate Change

USAID Madagascar supports the USAID Global Climate Change Initiative (GCC) to reduce threats to sustainable development posed by climate change. Efforts in decreasing the rate of forest loss, increasing the number of ecosystems captured in protected areas, and increasing the hectares of protected areas/sustainable forestry management can all be attributed to GCC Intermediate Result 2: decreased net greenhouse gas emissions from the land use/forest management sector.

USAID Madagascar's programs have resulted in measurable reductions in the loss of carbon stocks as well as contributed to their preservation. Several indicators show positive trends, such as increasing number of hectares under National Park Service protection and a decreasing rate of forest loss. These results will be incorporated into the G/ENV program of GCC results reporting. Madagascar's natural resources program works extensively with local natural resources management organizations in capacity building to ensure these monitoring efforts will continue.

CONTACTS

Cross-Cutting

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REFERENCES AND FURTHER INFORMATION

For general information on the Madagascar program, see:

- USAID Madagascar Mission Home Page
<http://www.usmission.mg/usaid/>
- FRAME's Madagascar Page
<http://www.frame-web.org/CtryRegHome/madagascar.html>

For Environment and Natural Resources section, see:

- Madagascar Biodiversity and Conservation
<http://www.mobot.org/MOBOT/photoessay/welcome.html>
- Conservation International's Madagascar Page
<http://www.conservation.org/web/fieldact/regions/afrireg/madagasc.htm>
- World Bank's Environment Overview for Africa
<http://www-esd.worldbank.org/envmat/vol2f96/africa.htm>
- Chemonics Madagascar Page
<http://www.chemonics.com/madagasc.htm>
- PACT
<http://www.pactworld.org/>
- World Wildlife Fund (WWF)

-
- <http://www.panda.org>
 - International Resources Group's (IRG) Home Page
<http://www.irgltd.com/>
 - International Rice Research Institute
<http://www.cgiar.org/irri/>
 - Montana State University
<http://www.montana.edu/>

For Global Climate Change section, see:

- UNFCCC's Madagascar Page
<http://www.unfccc.org/resource/country/madagasc.html>

The Madagascar Environment Program Profile is one in a new series of reports that describe USAID-supported environment activities in priority countries. The document will help USAID staff working in other regions and colleagues from other development agencies to better understand the breadth and depth of the Agency's environment program in India. Comments on this document can be submitted to kpage@genv.org.

This profile — like the ones on other USAID priority countries that will follow — focuses on activities on the ground, an area not covered by most other readily available documentation on USAID environment programs. It also feeds this information to a revolving database that will, once a number of profiles have been completed, track activities, provide information on environment programs in a number of sectors and regions, and be updated regularly.

Any database, however, is only as good as the information that populates it. Therefore, we ask that you keep this in mind when circulating descriptions of activities and technical reports and **PLEASE SHARE COPIES OF YOUR REPORTS** with us and our audience. Questions about this and other services of USAID's Environment Information Clearinghouse can be sent to:

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