GLOBAL ENVIRONMENT FACILITY
INVESTING IN OUR PLANET

GEF/ ME/C.42/Inf.01
May 8, 2012

GEF Council Meeting
June 5-7, 2012
Washington, D.C.

Country Portfolio Evaluation

Nicaragua (1996-2010)

(Prepared by the GEF Evaluation Office)

Main Conclusions and Recommendations

Background

At the request of the Global Environment Facility (GEF) Council, the Evaluation Office conducts country portfolio evaluations (CPEs) every year. In fiscal year 2011, Nicaragua and the Organization of Eastern Caribbean States (Antigua and Barbuda, Dominica, Grenada, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines) were selected.[1] CPEs aim to provide the GEF Council and the national government with an assessment of the results and performance of GEF-supported activities at the country level, and of how these activities fit in with national strategies and priorities as well as with the global environmental mandate of the GEF.

Nicaragua was selected primarily on the basis of its comparatively diverse, large, and mature GEF portfolio and because of its status as one of the poorest countries in the Western hemisphere, making it particularly vulnerable to global market trends and price fluctuations as well as to climate variability.

The evaluation of GEF support to Nicaragua had the following specific objectives:

- Independently evaluate the relevance and efficiency of GEF support in Nicaragua from several points of view: national environmental frameworks and decision-making processes, the GEF mandate and the achievement of global environmental benefits, and GEF policies and procedures
- Assess the effectiveness and results of completed projects aggregated at the focal area
- Provide additional evaluative evidence to other evaluations conducted or sponsored by the GEF Evaluation Office
- Provide feedback and knowledge sharing to (1) the GEF Council in its decision-making processes to allocate resources and to develop policies and strategies; (2) Nicaragua on its participation in, or collaboration with the GEF; and (3) the different agencies and organizations involved in the preparation and implementation of GEF-funded projects and activities.

Nicaragua's participation in the GEF started during GEF-1 in 1996 with the preparation of the World Bank–implemented Atlantic Biological Corridor project. Since then, the country has been involved in an additional 15 national projects. The GEF portfolio in Nicaragua accounts for $32.27 million in support and $165.24 million in of cofinancing. About 38 percent of the GEF funding has gone to support projects in the climate change focal area, 32 percent to biodiversity, 4 percent to persistent organic pollutants (POPs),

[1] The GEF fiscal year runs from July 1 through June 30.

Table 1.1

GEF National Projects in Nicaragua by Focal Area and Funding

Focal area	GEF grant (million $)	Cofinancing (million $)	Number of projects	GEF support as % of total
Biodiversity	10.312	51.315	5	32.0
Climate change	12.164	87.790	4	37.7
POPs	1.354	2.150	2	4.2
Land degradation	3.000	17.495	1	9.3
Multifocal	5.431	6.494	4	16.8
Total	**32.261**	**165.244**	**16**	**100**

Source: Authors' compilation.

9 percent to land degradation, and 17 percent to multifocal areas (table 1).

There are 17 regional and 6 global GEF projects in which Nicaragua participates, addressing biodiversity (7 projects), climate change (8 projects), international waters (4 projects), and multifocal areas (4 projects). As with the national projects, climate change and biodiversity are the most frequently targeted focal areas in terms of number of projects.

Evaluation Scope and Methodology

The Nicaragua CPE was conducted between December 2010 and August 2011 by an evaluation team comprised of staff from the GEF Evaluation Office and four consultants with a combination of extensive knowledge of Nicaragua's environmental sector and GEF programs. The methodology included a series of components making use of both qualitative and quantitative data collection methods and standardized analytical tools. Several sources of information at various national and local levels in areas of GEF project operations were used. These sources included national and municipal governments, civil society, GEF Agencies, and national convention focal points, along with GEF beneficiaries and supported institutions, associations, and local communities and authorities.

Both triangulation and quality control were key elements at all stages. The quantitative analysis used indicators to assess the efficiency of GEF support using projects as the unit of analysis (time and cost of preparing and implementing projects, and so forth). The evaluation team used standardized analysis tools and project review protocols for the CPEs and adapted these to the Nicaraguan context. Projects were selected for field visits based on several criteria, including (1) whether they had been completed or were near completion, (2) if project intervention areas and/or project components were accessible, and (3) time/resource constraints in conducting the evaluation. A field verification of a project terminal evaluation and a review of outcomes to impacts (ROtI) study were undertaken for two completed projects.[2]

The main focus of the CPE is the 16 national projects implemented within the boundaries of Nicaragua. An additional four regional (two under implementation and two completed), and four global projects (two under implementation

[2] The GEF Evaluation Office has adopted the ROtI as an innovative tool to assess a project's theory of change and to assess a project's progress toward impact after project completion. The Office has also developed guidelines for field verification of terminal evaluations for use in its annual performance reports.

and two completed) in which Nicaragua participates were reviewed; these were selected based on stakeholder input and availability of relevant information, and because they had significant in-country activities/components. A full assessment of the regional projects' aggregate results, relevance, and efficiency was beyond the scope of this CPE, given that only the Nicaragua components were assessed. National and regional project proposals under preparation were not part of the evaluation.

The following limitations were taken into account and addressed wherever possible while conducting the evaluation:

- CPEs are challenging, as the GEF does not yet operate by establishing country programs that specify expected achievement through programmatic objectives, indicators, and targets.[3]
- Attribution is another area of complexity. The evaluation does not attempt to provide a direct attribution of development and even environmental results to the GEF, but assesses the contribution of GEF support to overall achievements.
- Evaluating the impacts of GEF-funded initiatives is not straightforward. Many projects do not possess reliable monitoring information for key indicators to measure biodiversity and climate change outcomes and impacts, for example. Additionally, for some of the older projects, staff turnover and lack of institutional memory were constraints. The evaluation sought to overcome these difficulties by undertaking one field verification of a terminal evaluation and one field ROtI. Results reported come from triangulation of various sources: some have been established through meta-evaluation analysis; others are drawn from internal project reports: still others from original evaluative research conducted through interviews, terminal evaluation field verification, and the field ROtI.
- As with all countries that undergo CPEs, changes in government have occurred over the evaluation period that might have affected project performance in one way or another. Indeed, most of the projects included under this portfolio evaluation were largely designed and implemented under a previous government with different priorities from those of the present administration: 11 projects, 9 of which have already been completed, were approved from GEF-1 to GEF-3 (that is, 1996 to 2006). These changes in national priorities and emphasis in implementation were taken into account whenever possible in the analysis—in particular in the analysis of the evolving policy and institutional context—and must be kept in mind when reading this report.

All stakeholder comments on the draft CPE report that were submitted in writing by June 20, 2011, were taken into account in finalizing this report.

Conclusions

Results, Effectiveness, and Sustainability

Conclusion 1: Capacity development has been a strong component in all projects with sustainable achievements, establishing an adequate enabling policy environment for future larger-scale actions.

In the **biodiversity focal area**, the GEF supported a series of enabling activities that has resulted in development of the country's National Biodiversity

[3] Voluntary national portfolio formulation exercises have been introduced in GEF-5 (2010–14). Future CPEs conducted in countries that have performed such an exercise will use it as a basis for assessing the aggregate results, efficiency, and relevance of the GEF country portfolio.

Strategy and Action Plan, which in turn has set the stage for future work in biodiversity conservation in Nicaragua, as well as the submission of required national communications. Capacity has been built at the national level in the Ministry of Environment and Natural Resources (MARENA) to meet the country's global convention commitments, and Nicaragua has issued its Fourth National Communication to the Convention on Biological Diversity.

Capacity was also developed through medium- and full-size national and regional projects. The Atlantic Biological Corridor project (GEF ID 117), for instance, focused on building awareness of key stakeholders and supporting the development of plans promoting the protection of priority biodiversity areas and indigenous community development. The project support contributed to the successful passage of the Law on Indigenous and Ethnic Community Land Regularization. The Establishment of a Programme for the Consolidation of the Mesoamerican Biological Corridor regional project (GEF ID 243) developed community-based plans for corridor management. This key achievement helped reinforce the corridor concept, which remains viable to this day as a result.

Support for biosafety enabling actions also appears to have been effective. The GEF provided support to the global project Development of National Biosafety Frameworks: Building Capacity for Effective Participation in the Biosafety Clearing-house Mechanism (GEF ID 2128). The interinstitutional cooperation on living modified organisms fostered through this project led to Nicaragua's development of the National Regulatory Framework on Biosafety.

In the **climate change focal area**, GEF support to Nicaragua's preparation of its Initial National Communication to the United Nations Framework Convention on Climate Change, published in March 2001, helped the country build an awareness of climate change concerns and its capacity to meet convention obligations. Under this enabling activity, a national commission on climate change was created. A later enabling activity in this focal area, Additional Financing for Capacity Building in Priority Areas (GEF ID 1011), supported training on carbon fixation, exchange of experiences, and studies on adaptation to climate change related to the availability, quality, and quantity of hydrological resources. Capacity-building support was also provided to the Ministry of Energy and Mines through the Productive Uses of Hydroelectricity on a Small-Scale in Nicaragua (GEF ID 1266) project implemented through the United Nations Development Programme and the World Bank–implemented Off-grid Rural Electrification for Development (GEF ID 1079) project (these two projects were later merged to become the PCH-PERZA project). GEF support helped drive passage of the country's renewable energy law as well as the inclusion of small-scale hydroelectric plants as an area of work in the national rural electrification plan.

In the **persistent organic pollutants focal area**, a GEF enabling activity helped Nicaragua fulfill its obligations under the Stockholm Convention on POPs; this led to the development of a National Implementation Plan for POPs, with 57 representatives from different sectors participating in plan development. The process in turn helped establish an intersectoral coordination mechanism, raised awareness, and strengthened the capacities of various actors. It also led to consideration of changes to the existing law regulating pesticides, toxic substances, and hazardous materials, and a proposal to reform the national law on chemical safety.

Conclusion 2: In the biodiversity focal area, goals have tended to be overambitious, leading to unfulfilled expectations for actual results and impacts; modest progress toward impacts can be reported.

At the policy level, GEF support in Nicaragua was instrumental in raising the profile of biodiversity conservation at the national level. These efforts are expected to contribute to the protection of 5,796 species of flora and 12,290 species of fauna in 44 ecosystem categories within the biological corridor and 72 protected areas;[4] however, effective management and monitoring of these protected areas and ecosystems is needed to ensure this biodiversity conservation.

A review of the GEF biodiversity portfolio in Nicaragua shows that several factors have compounded this challenge of effective biodiversity management:

- Weakly formulated and/or overly ambitious goals
- An absence of adequate feasibility studies at the project design stage, with less than optimal understanding of the root causes of the problems to be tackled by a given project
- Inadequate supervision from the GEF Agencies and/or weak executing agencies on the ground
- Decentralized project management

The Atlantic Biological Corridor project established a vision for corridor development and management for both the Atlantic and Mesoamerican Biological Corridors; the ongoing Corazon Transboundary Biosphere Reserve project (GEF ID 2099), is intended to build on this at the community level. Because of delays, the Corazon project is at a relatively early stage of implementation. Its design is ambitious, and at midterm it seemed unlikely to meet its original objective. Site visits and interviews with beneficiaries found that the project coordination's is largely centralized within MARENA, as with the Atlantic Biological Corridor, even though project implementation is decentralized. There were some initial difficulties regarding the financial mechanisms for funding decentralized conservation and alternative livelihood activities that aim to supply funds for enabling small actions. Since then, 97 subprojects at the community level have been selected via two competitions. According to the midterm evaluation, and as an early observation, both the degree of advancement and the sustainability of results are greater than in Honduras (which is the other country participating in this transboundary project). Nonetheless, the government must continue to strengthen regional and local management capacities. Modest progress toward impacts has been reported. For example, monitoring of changes in forest cover for the Corazon project detected a 2 percent increase in vegetation cover and a significant reduction in annual fires; site visits and interviews could not confirm these claims.

The Conservation of Dry Forest and Coastal Biodiversity of the Pacific Coast of Southern Nicaragua: Building Private-Public Partnerships project (GEF ID 1735) was also overly ambitious and had to be scaled down. The area under conservation shows some minimal growth in dry forest cover (less than 1 percent of the dry forest area, according to available data). The project has brought together the various stakeholders involved in the reserve, enabling them to communicate with one other in an effort to attain common ground regarding its protection. While there are signs of slow, steady change in the attitudes of

[4] Sistema Nacional de Información Ambiental–MARENA, "Capitulo 3: Biodiversidad y Áreas Protegidas" (2010); www.sinia.net.ni/descarga/Capitulo%203%20Biodiversidad%20y%20Areas%20Protegidas.pdf, accessed March 1, 2012.

residents and immediate neighbors regarding the refuge and conservation, the project had the unintentional effect of fostering conflicts among those inside and outside the reserve's core area, even though they shared the same goals of conservation through sustainable livelihoods. According to interviews with inhabitants in the buffer zone as well as the core area, these conflicts particularly involved the selection process of tourist guides, among other activities financed by the project. Recent data show that turtle nest counts are increasing, indicating some degree of success for the project's conservation actions.

Conclusion 3: Climate change mitigation projects have, on the whole, been successful in yielding both environmental and socioeconomic benefits, particularly through the promotion of renewable energy in isolated rural communities.

A large proportion of GEF support in Nicaragua has addressed climate change. Although the full- and medium-size project portfolio has faced challenges in terms of achievement of results, it has yielded sizable impacts—notably by providing access to energy through the development of microhydro and solar renewable energy schemes for isolated rural communities. Two projects account for this success, these have been formally merged as the PCH-PERZA project. In terms of global environmental impacts, the projects reported that 19,408 metric tons of carbon dioxide emissions were avoided over a four-year period; the post-project portfolio impact has been calculated as 67,478 metric tons of carbon dioxide per year.

A global climate change project with successful activities in Nicaragua, the Renewable Energy and Energy Efficiency project (GEF ID 667), implemented through the International Finance Corporation, also focused on the promotion of renewable energy schemes in Nicaragua. The project provided working capital to TECNOSOL, a supplier of photovoltaic solutions in isolated rural areas. In addition to leading to strong business growth for this private company, the project also resulted in avoided carbon dioxide emissions. The project's midterm review calculated that, as of June 2008, TECNOSOL had yielded offsets of 12,000 metric tons of carbon dioxide from the baseline.

PCH-PERZA also led to positive social and economic impacts due to communities' newfound access to energy—specifically, in terms of access to and dissemination of information (via radio, TV, and Internet), increased production in local repair shops and businesses, and improved health services (for example, due to refrigeration of medications). PCH-PERZA directly benefited more than 4,500 families and 60 small businesses over its four-year life; these latter included the first center for milk production, 45 shops equipped with refrigeration, and 10 wet coffee extraction centers.

Another completed project in Nicaragua with a climate change focus was the Renewable Energy and Forest Conservation: Sustainable Harvest and Processing of Coffee and Allspice project (GEF ID 847). This national project took a multifocal approach but was not particularly effective from a climate change perspective. Its difficulties were largely due to the lack of an adequate feasibility study on its two project sites prior to moving ahead with the project investment.

Conclusion 4: Adaptation to climate change is not well mainstreamed in the GEF Trust Fund portfolio, nor is it a focus of GEF project interventions, even though it is increasingly a central priority for Nicaragua.

Although recognized by Nicaraguan authorities as a priority for the country, only one project in the GEF Nicaraguan portfolio focuses on adaptation

to climate change. That project, the regional project Capacity Building for Stage II Adaptation to Climate Change (Central America, Mexico and Cuba) (GEF ID 1060), focused on capacity building at the individual and institutional levels, and on providing support in the production of national reports on adaptation issues. The project specifically supported development of an adaptation strategy for the hydrological resources and agricultural systems of watershed No. 64. Project efforts also fed into development of the Second National Communication to the United Nations Framework Convention on Climate Change.

Most of the remaining projects in the GEF Nicaraguan portfolio have not paid much attention to adaptation concerns in either their design or their execution. The project design documents of the majority of the portfolio—with the exception of the Capacity Building for Stage II Adaptation to Climate Change project—do not reveal sufficient analysis of the risks posed by the effects of climate change to global environmental benefits in the long term and at the global level, as well as the risks posed to the financial investment in the projects themselves. These have remained peripheral issues of GEF support in Nicaragua.

That being said, adaptation is not a mandated focus of the GEF Trust Fund, which is concerned with global environmental benefits. Adaptation that yields national- and local-level benefits is expressly supported by other funds managed in parallel by the GEF, namely the Least Developed Countries Fund and the Special Climate Change Fund. However, the GEF's Scientific and Technical Advisory Panel (STAP) has recommended that all mitigation projects and, as appropriate, all GEF strategies should incorporate climate adaptation measures, thus promoting mitigation-adaptation synergies as recommended by the Inter-Governmental Panel on Climate Change.[5] The STAP emphasizes that project designs should also consider the likely impacts of climate variability and change.

A program supported by the Adaptation Fund and to be implemented through the United Nations Development Programme has been approved for Nicaragua: Reduction of Risks and Vulnerability from Floods and Droughts in the Estero Real Watershed. The program will validate a system of adaptation as a means of implementing the national climate change strategy through targeted investments in water retention; long-term farm planning; and capacity building in local communities, municipalities, and government agencies. The intervention area comprises eight microwatersheds prioritized by the municipalities of El Sauce and Achuapa, in Leon and Villanueva, and Chinandega, benefiting a total of 2,000 families of farmers and producers in these watersheds.

Nicaragua has also submitted a proposal to the Special Climate Change Fund on Adaptation of Potable Water Supply to the Impacts of Climate Change in Nicaragua. The proposed project includes an investment program and institutional-strengthening activities that will help reduce the vulnerability of the drinking water supply, protecting hydric regulation and filtering functions of ecosystems in the coastal zone (wetlands and mangroves) in areas of high vulnerability to climate change and sea level rise. The coverage of the proposed work program is closely aligned with the World Bank Project for Rural Water Supply and Sanitation Project in Nicaragua (PRASNICA), the first investment of the project baseline

[5] STAP, "Recommendations for Improved Science and Technology Guidance in the GEF," GEF/C.35/13 (2009), www.thegef.org/gef/sites/thegef.org/files/documents/C.35.13_STAP.pdf, accessed March 1, 2012.

that complements the Special Climate Change Fund, and the areas particularly vulnerable to the impacts of climate change.

Conclusion 5: Support in the land degradation and persistent organic pollutants focal areas is promising in terms of progress toward impact. Efforts in both areas are still at an early stage, but to date, they have achieved the majority of key outcomes.

GEF support in the land degradation focal area has proved successful in achieving all its outcomes. The Sustainable Land Management in Drought Prone Degraded Areas of Nicaragua project (GEF ID 2440) led to the development of planning instruments at the local level to ensure territorial management and adequate water management, as well as to the capacity building of actors and municipalities in implementing those plans. A key test of impact will be the implementation of these plans and replication in other drought-prone areas.

At the national level, GEF support of POPs initiatives has contributed toward establishing an appropriate enabling environment for POPs management. The national inventory of POPs and obsolete pesticides in Nicaragua compiled by MARENA in 2004 identified 7 sites contaminated with 6.0 metric tons of POPs, and 41 sites contaminated with 30.0 metric tons of expired pesticides. From these data, it is evident that disposal of obsolete pesticides is a challenge. The Ministry of Agriculture and Forestry has made significant efforts in regulating the entry of these pesticides since the 1970s. There are no immediate risks of leakage or contamination in the wells that contain POPs, and risks to the environment and human health are considered to be low. The national inventory is presently being updated, with new data expected by the end of this calendar year.[6]

[6] Communication from MARENA, June 21, 2011.

The Improved Management and Release Containment of POPs Pesticides in Nicaragua project (GEF ID 3345) led to the development of the National Implementation Plan, setting the stage for future action in this focal area. The project essentially provided for a national diagnostic on POPs and capacity building for key actors. Authorities are exploring options for financing remediation for the sites identified in the National Implementation Plan. Although this stage was initially delayed, studies have begun regarding contaminated sites in the west of the country. These specific actions are coupled with actual reductions of POPS.

A regional project has also focused on the POPs issue in Nicaragua: the Reducing Pesticide Runoff to the Caribbean Sea project (GEF ID 1248) is intended to reduce pesticide use by farms and plantations, and is working closely with 400 agricultural stakeholders at demonstration farms located in the Río Coco, Rio Escondido, and Rio Punta Gorda watersheds. Although the project has produced some excellent results, it has suffered from delays related to the remoteness of the pilot areas and to complications regarding the coordination and execution of work plans—these need to be approved by four different levels of government from regional to community.

Conclusion 6: Integrated land use–based approaches are not fully taken into account in GEF interventions in Nicaragua, particularly in terms of ensuring that biodiversity concerns are mainstreamed into other GEF focal areas.

The GEF does not require integrated land use–based approaches to be mainstreamed as a biodiversity consideration into projects in other focal areas. However, because integrated land use–based approaches to the management of natural resources are a stated priority of MARENA, the evaluation team was asked to examine this subject.

Integrated land use–based approaches seek to balance the economic, social, and cultural opportunities in a specific area so as to maintain and enhance the health of the area's ecosystem. In implementing these approaches, all stakeholders come together to make decisions about how the land and its resources should be used and managed, and to coordinate their activities in a sustainable fashion.

Some efforts have been made to address this concern in GEF-supported activities, evidenced by the two biological corridor projects and the development of integrated regional management plans, a monitoring system, and community development and sectoral plans. In addition, watershed management approaches are beginning to be promoted. For instance, the new GEF-supported Integrated Management in Lakes Apanás and Asturias Watershed project (GEF ID 3981) has made such an approach an integral part of its design.

Although watersheds are being managed, full mainstreaming of biodiversity considerations into their management schemes remains deficient. For example, site visits and the terminal evaluation confirmed that reforestation and watershed management challenges remain regarding the PCH-PERZA project.

Efforts at fully integrating land use–based management approaches within in situ interventions are still somewhat limited in Nicaragua in non-GEF projects as well; this is primarily because a multiplicity of authorities are involved in its implementation and capacity is lacking at the local level.

Conclusion 7: Despite current efforts, institutional capacity at the local level, particularly of civil society actors, remains a challenge.

GEF support to capacity building in its focal areas has been focused in the following modalities:[7]

- Self-assessment of capacity needs
- Strengthening capacity-building elements in GEF projects
- Targeted capacity-building projects
- Country-specific programs for addressing critical capacity-building needs in least developed countries and small island developing states

Nicaragua's project portfolio contains one national project under the first modality (National Capacity Self-Assessment for Global Environmental Management (GEF ID 1380) and one national project—a follow-up initiative to the former—that could be considered as falling under the fourth modality (Mainstreaming the Multilateral Environmental Agreements into the Country's Environmental Legislation (GEF ID 3068).

In general, Nicaragua has a solid legal and institutional **framework** within which to work toward social and environmental sustainability of GEF results. Political support comes from the highest levels of government; for example, the Office of the President has endorsed the concept of environmental and natural resources as recently evidenced in the 2011 adoption of the United Nations (UN) Universal Declaration on the Common Good of Mother Earth and of Humanity; and approval of the National Human Development Plan, which allows for the integration of objectives, indicators, and goals for the environment throughout the annual government planning and budgetary process.

MARENA, the country's institutional anchor for global environmental issues, is backed—through GEF support, among other sources—by a functional institutional framework, solid environmental legislation, and planning tools that allow the

[7] GEF, "Strategic Approach to Enhance Capacity Building," GEF/C.22.8 (2003), www.thegef.org/gef/node/742, accessed March 1, 2012.

ministry to deal with issues of concern to the global environmental agenda in the various GEF focal areas. Important synergies, particularly within the energy sector, have been achieved between MARENA and the environmental units within diverse governmental institutions. The continuity of GEF-supported actions and results is strengthened by a broad spectrum of stakeholders, including the Regional Autonomous Governments from the Caribbean Coast, the Secretariats for Environment and Natural Resources, municipal government environmental units that have been strengthened by GEF support for sustainable land management, indigenous territorial governments in the Bosawás Biosphere Reserve, as well as national and international nongovernmental organizations (NGOs).

There has been a significant increase in the number of **protected areas**, area coverage, and action plans. These action plans are implemented by local committees in collaborative management arrangements for the conservation and sustainable use of natural resources and biodiversity. Institutional performance in this focal area has must ensure that the increased number of protected areas has the requisite basic infrastructure and personnel, as well as at least a functional management plan to ensure more effective management and lasting results. As of this writing, only 23 of the 72 protected areas have such plans.

Significant advances have been made regarding the national institutional set-up and its sustainability in the **climate change** focal area since 2007, when the Directorate of Climate Change was established and the National Environment and Climate Change Strategy was developed to meet UN convention requirements. Ongoing efforts continue beyond GEF support to promote energy access through the promotion of renewable energy schemes in isolated areas of the country (for example, microhydropower, through the Ministry of Energy and Mines), and of grid-connected privately funded investment schemes through an array of initiatives at the national level now under development.

MARENA has developed regional strategies for climate change adaptation in three major priority watersheds through the GEF-funded project on Capacity Building for Stage II Adaptation to Climate Change. A key challenge to institutional performance in this area is related to developing capacities that are essential in allowing Nicaragua to fully participate in confronting climate change impacts through the mainstreaming of climate change concerns into other sectoral investments and project results. Nicaragua is developing such capacity under the institutional frame of MARENA, national universities, the private sector, and NGOs, but this is very much a work in progress.

Greater efforts are required to improve institutional performance so that it resonates to the lowest practical levels. The GEF recognizes that long-term global environmental benefits can only be achieved when local populations become increasingly involved. Nicaragua can only benefit the global environment when its people begin to successfully implement national plans and strategies on a sustainable basis and benefit from them. Almost all GEF projects have targeted local populations in one way or another. The majority of enabling activities have involved participants from local populations and/or civil society. The majority of full- and medium-size projects in all focal areas have also had a local component. The GEF Small Grants Programme (SGP) support has been instrumental in leading to benefits and impacts for local populations. Nicaragua has supported the SGP with funds from its country allocation. Under the System for Transparent Allocation of

Resources (STAR) in GEF-5, Nicaragua has allocated $1.8 million to the SGP; this represents 27 percent of its total country allocation.[8]

At the project level, in the field, **institutional sustainability of civil society actors** remains a challenge. Field visits and interviews highlighted the difficulty with which beneficiary institutions could explain basic concepts of production costs and financing; such understanding is critical for ensuring future sustainability of operations and replication or scale-up of results. Exceptions to this general finding are two successful pilot projects—Sustainable Land Management in Drought Prone Areas of Nicaragua project at El Sauce and Reducing Pesticide Run-off to the Caribbean Sea—where local stakeholders are fully aware of the implications of the project and have full command of the terminology associated with the projects. Although implementation of decentralized management has been promoted and strengthened (as in the Strengthen the National System of Protected Areas Project (GEF ID 2702), for example, through collaborative management committees and local and international NGOs), GEF funds and institutional capacity development generally appear to be primarily focused on central institutions and government entities. Several projects and enabling activities have these entities as their main targets.

On the other hand, the SGP, although working with civil society organizations, focuses its support on achieving particular environmental and socioeconomic objectives—sometimes without proper emphasis and technical support to build the capacity of the civil society organizations themselves to sustain their efforts overtime. This apparent weak focus on institutional capacity development could be due in part to a lack of adequate planning in the design stage to address implementation challenges, but also to the nature of the SGP instrument itself.

Conclusion 8: The financial and economic sustainability of results, particularly in the biodiversity focal area, remains a challenge. Local benefits are essential for sustainability.

The economic and financial sustainability of GEF-supported results are partially guaranteed by financial resources from the Nicaraguan government, which is evident in the medium-term budget approved for 2011. By law, MARENA has has been allocated treasury resources amounting to $3.4 million per year for the period 2011–14. Additional funds to cover GEF project support are taken from international cooperation funds (grants and donations); these are estimated to be $4.5 million per year during the same period.[9] Clearly, given the scope of the task to promote the global environmental agenda in Nicaragua, sufficient financing remains a challenge. As an example, three biodiversity projects (the National Strategy and Action Plan and Report to the Conference of the Parties, the Mesoamerican Biological Corridor project, and the Assessment of Capacity Building Needs Add-on) focused on generating management tools. However, the financial resources required for their successful implementation were not available.

The GEF Agreement Plan 2011–20 requires an evaluation of the financial resources needed to ensure that the goals for this time frame are met. The government did include funds for management of toxic chemicals, especially of POPs. However, it does not appear that funds are available from any source for the replication or scale-up of projects to enable Nicaragua to fulfill its

[8] Communication from MARENA, June 21, 2011.

[9] The source for this calculation is a communication from MARENA, May 11, 2011.

obligations under the Stockholm Convention or of the Improved Management and Release Containment of POPs Pesticides, which focuses on demonstration projects for eliminating outdated POPs and the remediation of contaminated soils.

Field visits and interviews conducted during the evaluation found that the private sector has the least involvement with GEF projects is relevant because it will negatively affect the financial sustainability of project results. A notable exception to this finding is TECNOSOL, a private sector company integral to the global Renewable Energy and Energy Efficiency Fund project. A policy change limited the private sector's involvement in establishing private-public partnerships in the GEF dry forest project.

Conclusion 9: The three completed GEF-supported biodiversity initiatives ceased operation once funding ended. Projects that have sustained actions and results beyond project completion are in the climate change focal area.

Neither strategies nor sustainability plans were developed to ensure adequate financing for scale-up and further development of many completed biodiversity projects such as the Atlantic Biological Corridor and the Mesoamerican Biological Corridor. The dry forest project tried to involve the private sector in its financial strategy for project sustainability; however, policy changes required it to opt for a new tariff system instead. Although this system is currently being implemented, the funds generated are insufficient to continue project activities.[10] PCH-PERZA also lacked an adequate sustainability plan; however, during its implementation, project stakeholders obtained additional funds from donors and attempted to develop a financial mechanism based on paid user fees paid. The government is seeking funds to replicate the drought-prone area project in El Sauce.

In the climate change focal area, PCH-PERZA took the initiative in identifying the required financial resources for continued investment and operation of its energy production systems, particularly for renewable resource projects. This effort was supported by a strong government energy policy directed at expanding the coverage of renewable energy resources and a change in the energy production matrix. As of this writing, there are plans to double the delivery of renewable energy through 2017; however, an important sustainability challenge for this focal area and the renewable energy subsector in particular relates to the integration of watershed management into all hydroelectric projects. Such integration, while addressing environmental sustainability concerns (related to biodiversity conservation, water management, and adaptation to climate change), could indeed contribute to the future financial sustainability of projects as well.

Field visits and interviews revealed the need to strengthen the harmonization of sectoral economic and environmental policies at the national level so beneficiaries have incentives to switch from some of their current livelihood practices to the sustainable alternatives being promoted via GEF support. This harmonization is essential to ensuring the sustainability of some GEF results. For instance, the ROtI analysis provided a clear example of the lack of economic incentives to switch from livestock production—a major driver of deforestation and thus of greenhouse gas emissions—to nontimber-harvesting livelihoods. Identifying a market for such alternative products, and thus providing sustained economic incentives, is key to ensuring long-lasting results

[10] Communication from United Nations Development Programme–Panama, June 30, 2011.

of climate change and biodiversity projects that are trying to address deforestation considerations. Only in the last few years have beneficiaries of the allspice multifocal project begun to see a potential promise of economic gains by switching from cattle raising to cacao plantations, after a number of trials and errors with less competitive alternatives on the market.

Several full- and medium-size projects in Nicaragua have focused on supporting demonstration activities and, to some extent, basic activities and investments that must be replicated and scaled up with additional resources if further global environmental benefits are to be achieved or existing achievements maintained. On that front, the portfolio shows a mixed record in adequately planning for financial sustainability beyond GEF support.

Relevance

Conclusion 10: Overall, GEF support has been relevant to national human development/sustainable development strategies and environmental priorities, international conventions, regional processes, and the GEF mandate.

Most GEF projects in the Nicaragua portfolio were launched in parallel and subsequent to the development of the country's institutional and legal framework in the mid-1990s. Without exception, projects have targeted social and development issues addressed in Nicaragua's National Human Development Plan (2007–11),[11] the National Environmental and Climate Change Strategy (2010–15), and the government's medium-term priorities (2010–16). Seven of the 16 national projects have a strong focus on poverty reduction, making for a robust linkage between global environmental benefits and country socioeconomic development needs. Over 90 percent of the portfolio projects targeted key issues outlined in the National Environmental Action Plan (2006–26). This plan establishes a framework for prioritized actions regarding biodiversity conservation, forest resource protection, more effective management of representative protected areas, land degradation, and greenhouse gas emissions.

All global, regional, and national enabling activities in biodiversity, climate change, and POPs have helped Nicaragua fulfill its reporting commitments under the relevant UN conventions and protocols, as well as the more recent Universal Declaration on the Common Good of Mother Earth and of Humanity. Biodiversity projects have aimed to establish biological corridors between and among protected areas, ensuring representative coverage of the national system of protected areas and focusing on alternative income-generating activities that can help lead to sustainable conservation. With one exception, all biodiversity projects are terrestrial and linked to the National Biodiversity Strategy, which was developed with GEF funds and is in line with the Convention on Biological Diversity. Nearly all biodiversity projects are tied to the Tropical Forestry Action Plan. Few projects focused on international or marine waters, but were instead developed in four nearshore coastal areas, even though there is a strong need to improve Nicaragua's capacity for addressing coastal and marine issues.

In climate change, projects are integrally tied to the National Action Plan for Confronting Climate Change and Nicaragua's Renewable Energy Policy Framework. The latter aims to develop appropriate measures for assisting the most vulnerable sectors of the economy and hydrological resources, mainly within the forestry sector. The GEF portfolio appears to be more strongly tied to climate

[11] This plan incorporates the Poverty Reduction Strategy developed by previous administrations.

change mitigation, with the intention of generating global environmental benefits, while the link to climate change adaptation,[12] which has become increasingly relevant to the Nicaraguan context, remains weaker.

The pilot project on Sustainable Land Management in Drought Prone Areas of Nicaragua is anchored to the country's Strategy for Combating Desertification; and tied to the UN Convention to Combat Desertification (which it ratified in 1997), the GEF–International Fund for Agricultural Development initiatives in Central America (organized by the Central American Commission on Environment and Development, the Central American Agricultural Council, and the Council of Health Ministers of Central America), and the Central American Integration System's commitments under the climate change, biological diversity, and desertification conventions.

The two POPs pilot projects are consistent with Nicaragua's Strategy for the Management of Chemical Products, and they operate in synergy with efforts in other Central American countries to reduce the use of DDT for combating malaria and to reduce pesticides in the Caribbean Sea.

Initiatives supported via the SGP were varied in nature, but were overall directly relevant to Nicaragua's priorities in biodiversity, climate change, and land degradation. All but three SGP projects included gender equity in their project design; 10 projects worked with indigenous and ethnic communities on the Caribbean coast. In general, there was active participation by key stakeholders at the national, regional/departmental, and local levels.

[12] GEF, "Focal Area Strategies and Strategic Programming for GEF-4," GEF/C.31/10 (2007), www.thegef.org/gef/node/433, accessed March 1, 2012.

Efficiency

Conclusion 11: Project processing times are generally twice as long for full-size projects as for medium-size projects in Nicaragua.

Full-size projects take about twice as long as medium-size projects to move from pipeline entry to the effectiveness milestone in the GEF activity cycle. The overall average length of Nicaragua's five full-size projects that are either completed or under implementation was 3.4 years. This duration is slightly longer than the average among other CPE countries. The only completed full-size project in the portfolio took approximately seven years for implementation (from effectiveness to actual project completion), which included a difference of 30.4 months between proposed and actual completion dates—the equivalent of a 2.5–year extension. The average cost of project preparation using either a project preparation grant or a project development facility was approximately $393,333 for full-size projects and $32,500 for medium-size projects.

The country's four medium-size projects took an average of 1.3 years from pipeline entry to effectiveness; this is generally on par in comparison to other country averages. Enabling activities took approximately 309 days from Chief Executive Officer approval to effectiveness.

Stakeholders in Nicaragua believe that, overall, projects have taken too long to be approved by the GEF and its Agencies—even without taking into account any time needed for project restructuring. Negotiating among the many actors involved in a project is a factor in slowing activity cycle processes.

Conclusion 12: Monitoring and evaluation information is used inconsistently throughout the portfolio to enhance project performance. Combined with weak GEF Agency supervision,

this shortcoming has been an impediment to the efficiency and effectiveness of several projects.

Monitoring and evaluation of GEF support in Nicaragua occurs mainly at the project level, and difficulties at this level regarding baseline information and the wording of indicators and outcomes were present in a number of the projects reviewed. Most national full- and medium-size projects had progress implementation reports and terminal evaluations/reports for those that were completed. In some cases, midterm evaluations were available. The GEF does not require evaluations for enabling activities, and none had annual reviews or completion reports.

Most of the portfolio did comply with the reporting requirements of the GEF and its Agencies. Issues regarding appropriate wording of indicators and outcomes have led to reformulations of outcomes in logframes (for example, for the Conservation of Dry Forest and Coastal Biodiversity of the Pacific Coast of Southern Nicaragua: Building Private-Public Partnerships project).

Unfortunately, there have been challenges with respect to the integration of information from monitoring and evaluation to effect change. The tropical dry forest project did not demonstrate adequate change in implementation in the field based on recommendations provided by midterm reviews; in this sense, it lacked adequate adaptive management. Similarly, there was no evidence of adaptive management in the allspice project. After a supervisory mission by the GEF Agency highlighted clear issues of conflict with the grant recipient as well as incorrect assumptions in the project design, nothing was changed regarding project activities, management, or the logframe. It was only after project closure, with funding from the SGP as well as other donors, that the project idea was altered. As of this writing, the project's original beneficiaries are beginning to reap economic benefits. The Atlantic Biological Corridor project showed some potential adaptive management in incorporating an integrated monitoring framework to monitor social, economic, and environmental changes to feed into management decision making regarding the project. However, this component was not funded by the GEF and was only beginning to be applied near project end; it is now no longer in use.

The evaluation confirmed that two projects—Strengthen the National System of Protected Areas Project and PCH-PERZA—have used information from monitoring, evaluation, and lessons learned. The design of the former project was based on lessons learned from previous GEF initiatives incorporated into a viable project design; PCH-PERZA used positive results related to emissions avoided and socioeconomic changes in the areas in which it was working and continued using the existing model and project activities. The Corazon project shows potential for adaptive management in response to a recent midterm review. The project was found to be clearly overambitious, and it has begun to modify its activities according to the midterm recommendations.

Conclusion 13: There has been significant involvement of actors from various sectors in GEF projects. The extent of coordination among them was mixed.

Overall, a wide variety of different actors—including NGOs, local communities, government ministries at the national and provincial levels, and various donors—has been greatly involved in the implementation of the GEF portfolio. However, there appears to be a lack of coordination among government ministries at times. For example, in the PCH-PERZA project, communication was poor between MARENA and the Ministry of Energy and Mine. Communication was also poor

for the MARENA delegation in El Cuá, the coordination unit in Bosawás, and the Corazon project, specifically with the GEF Agencies regarding management of watersheds. When coordination did take place, it tended to be centralized in Managua.

This deficiency notwithstanding, synergies were noted between sustainable livelihoods and biodiversity conservation efforts, and full- and medium-size project initiatives were sometimes complemented by SGP support in a given area. At times, though, these efforts at building synergies can also have conflicting effects.

Synergies between other donors and GEF projects have been clearer. For example, small hydro efforts initiated through PCH-PERZA support are being scaled up and will continue to receive funding from Switzerland and Norway under the small hydro program piloted by the Ministry of Energy and Mines. Similarly, the allspice project has been followed up with support from the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and Catholic Relief Services, albeit with a different focus than the original project's. In the case of the last project, the Farmers and Ranchers National Union supported these synergies.

Recommendations

To the GEF Council

Recommendation 1: In highly vulnerable countries, the GEF should put more effort into mainstreaming adaptation to climate change in project design in all focal areas and to building synergies with adaptation actions funded by other donors.

Adaptation to climate change is a priority in a country like Nicaragua. It is the second poorest country in Latin America after Haiti, and has been increasingly subject to extreme weather events over the past two decades. These factors have made Nicaragua particularly vulnerable to climate change impacts. By design and mandate, GEF Trust Fund support in the climate change focal area is focused on mitigation. Nonetheless, the Nicaragua CPE found a lack of explicit integration of adaptation concerns in GEF support in all focal areas.

The GEF should make a particular effort should be made by the GEF—especially in poor vulnerable countries such as Nicaragua—to better mainstream adaptation concerns not only in its climate change mitigation portfolio, but also in its biodiversity, international waters, POPs, and land degradation initiatives. The potential also exists to exploit synergies with other support mechanisms for climate change adaptation—for instance, the Adaptation Fund or the Special Climate Change Fund.

Improved mainstreaming of adaptation will also help ensure more resilient results and impacts for GEF projects in all focal areas. This echoes the findings of the Evaluation Office's Evaluation of the GEF Strategic Priority for Adaptation, which recommended that the GEF continue to provide explicit incentives to conduct mainstreaming of resilience and adaptation in all the GEF focal areas as a means of reducing risks to the GEF portfolio. The GEF Council restated the importance of such mainstreaming in the decisions from its 39th meeting.[13]

[13] GEF, "Enhancing Resilience to Reduce Climate Risks: Scientific Rationale for the Sustained Delivery of Global Environmental Benefits in GEF Focal Areas," GEF/C.39/Inf. 18 (Washington, DC: GEF, 2010).

To the GEF Council and the Government of Nicaragua

Recommendation 2: Avoid overly ambitious project designs and ensure an adequate focus on building the institutional and financial capacity of local actors needed to help secure the sustainability of results.

GEF resources are undeniably limited with respect to country level needs to effect change to ensure and sustain global benefits in the focal areas targeted by the GEF and the global conventions in Nicaragua. GEF support can only serve as a catalyst in this regard. While enabling activities are meant to lay the foundation for larger-scale actions, full- and medium-size projects in Nicaragua have tended—especially in the biodiversity focal area—to be overly ambitious and weak in design in terms of what can be achieved during the lifetime of a project given the scale of the challenges.

While the GEF portfolio has provided lessons and demonstrations of what can and cannot work, these efforts can only be carried forward and scaled up appropriately if adequate attention is given to building the institutional and financial capacity of local actors. The evaluation highlighted the importance of decentralized actors predisposed to support GEF efforts. To this end, the capacity of these stakeholders to execute and continue project work once GEF support has been concluded must be developed and ensured. Future project designs should focus on project execution through such local actors, and adequate support and flexibility from GEF Agencies to provide support through such channels. GEF support must focus more on building the institutional capacity of community and cooperative organizations, among others, to ensure lasting and catalytic results.

The existing limited institutional and financial management capacity of some of these actors poses a clear challenge for both the country and the GEF. A sustained and continued commitment from the government is required so that it continues and actually increases its financial commitments within the various focal areas—particularly biodiversity, given the challenges associated with effective biodiversity conservation as highlighted in this report.

To the Government of Nicaragua

Recommendation 3: Working closely with the GEF Agencies, provide for proper baseline, monitoring, and evaluation data in project implementation and at the national level.

Obtaining baseline data and monitoring information was clearly a challenge during this portfolio review. Such data and information are crucial for adaptive management and enabling informed decision making based on project performance. Baseline data are also needed in measuring impact, another challenge faced during this portfolio evaluation.

An important next step is to examine how to strengthen monitoring and evaluation in GEF projects in Nicaragua. This step can only be undertaken through a dialogue with the GEF Agencies, which must build upon their monitoring and evaluation requirements under the GEF.

In addition, national environmental monitoring systems must be streamlined and fully operationalized. These systems underlie the ability to adequately report on progress, or the lack thereof, and to ensure proper and coordinated management of global benefits through GEF support and by Nicaragua itself.