

**Final Evaluation of UNDP/GEF project:
Mainstreaming and Sustaining Biodiversity Conservation in three
Productive Sectors of the Sabana Camagüey Ecosystem**

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1 Acronyms and Abbreviations

AOP	Annual Operational Plan
AZCUBA	Sugar Cane Business Group (Grupo Empresarial Azucarero)
BD	Biodiversity
CDR	Combined Delivery Report
CGB	Forest Rangers
CIM	Marine Research Centre
CITMA	Ministry of Science, Technology and the Environment
CNAP	National Centre for Protected Areas
CPAP	Country Programme Action Plan
CPD	Country Programme Document
CUC	Cuban Convertible Peso
CUP	Cuban Peso
DMA	Environment Directorate (CITMA)
EA	Executing Agency
EFI	Integrated Forestry State Company (Empresa Forestal Integral)
EMED	Executive Company of Donations (Empresa Ejecutora de Donativos)
ENPFF	National Enterprise for the Protection of Flora and Fauna
FORMATUR	Tourism Training System of Cuba (Sistema de Formación para el Turismo de Cuba)
GEF	Global Environment Facility
GIS	Geographic Information System
IA	Implementing Agency
ICM	Integrated Coastal Management
IES	Ecology and Systematics Institute
IPF	Institute of Physical Planning

M&E	Monitoring and Evaluation
MINAG	Ministry of Agriculture
MINAL	Ministry of Food Industry
MINAZ	Ministry of Sugar Industry
MINCEX	Ministry of Foreign Trade and Foreign Investment
MINFAR	Ministry of Armed Forces
MININT	Ministry of Interior
MINTUR	Ministry of Tourism
MPA	Marine Protected Area
NGO	Non-governmental organization
NP	National Park
ONIP	National Bureau for Fish Inspections
PA	Protected Area
PIR	Project Implementation Report
PMU	Project Management Unit
ProDoc	Project Document
QOR	Quarterly Operational Report
RSC	Regional Service Centre
SNAP	National Protected Areas System
SRF	Strategic Results Framework
TE	Terminal Evaluation
UMA	Environmental Units
UNDP CO	United Nations Development Program Country Office
UNDP	United Nations Development Program
USD	United States Dollars
ZBREUP	Zone under Special Regime of Use and Protection

ZBRMIC

Zone Under Regime of Integrated Coastal Management

2 Executive Summary

Table 1: Project Summary Table

Project Title:	Mainstreaming and Sustaining Biodiversity Conservation in three Productive Sectors of the Sabana Camagüey Ecosystem			
GEF Project ID:	43827		<i>At endorsement (Million US\$)</i>	<i>At completion* (Million US \$)</i>
UNDP Project ID:	3254	GEF financing:	4,119,498	4,050,728.78 (amount disbursed by FE but remaining funds earmarked)
Country:	Cuba	IA/EA own:		
Region:	LAC	Government:	22,032,000	54,229,980
Focal Area:	Biodiversity	Other:	1,521,178	1,521,178
FA Objectives, (OP/SP):	GEF 5, BD, SP2	Total co-financing:	23,353,178	59,801,887
Executing Agency:	Environment Agency (AMA) of the Ministry of Science, Technology and Environment (CITMA)	Total Project Cost:	27,472,676	63,852,615.78
Other Partners Involved:		ProDoc Signature (date project began):		March 2008
		(Operational) Closing Date:	Proposed: March-2014	Actual: Sep. 30, 2015

Overview of objective and methodology for Final Evaluation

This Final Evaluation (FE) was undertaken between April and June 2015 and adhered fully to the UNDP/GEF guidelines and Terms of Reference for this consultancy. Key issues addressed were project relevance, effectiveness, efficiency, sustainability, and impact. The methodology included a detailed review of all relevant project documentation. This was followed by an 11-day mission involving extensive interviews with stakeholders, site visits to five provinces across the country, and a presentation of the initial evaluation findings to representatives of AMA, UNDP Cuba, the project's biodiversity advisors and outcome coordinators, Ministry of External Trade and International Relations (MINCEX), and the Department of International Affairs of CITMA (GEF Focal Point). Follow-up communication with the PMU to fill in remaining gaps and a detailed analysis of the findings led to the preparation of the draft and final reports. Finally, the complete report was translated into Spanish.

Brief project description

The Sabana Camagüey ecosystem harbours high levels of marine and terrestrial biota and terrestrial endemism, associated with significant variety of habitats. The main threats to the nationally and regionally important biodiversity (BD) of SCE stem from the tourism, fisheries and agricultural/livestock sectors. The project goal is to protect the marine and coastal biodiversity of global significance in the productive landscapes and seascapes of the Sabana-Camagüey Ecosystem of Cuba, while contributing to the country's social and economic development. The project objective is to promote operational changes within three key productive sectors to enable biodiversity conservation in the SCE and to support these

changes through improvements to the enabling environment. This was to be achieved through four planned Outcomes:

Outcome 1: A strengthened enabling environment will exist for the financial, institutional, environmental and social sustainability of biodiversity conservation in the tourism, fisheries and agriculture-livestock sectors in the SCE

Outcome 2: The tourism sector develops in accordance with the conservation of marine and terrestrial ecosystems within the SCE

Outcome 3: Sustainable fisheries are practiced within the SCE so that fish populations and marine ecosystem functions are maintained and/or restored.

Outcome 4: The declining sugar cane industry transitions into sustainable land use practices, with greatly reduced negative impacts on the coastal region of the SCE.

MAIN FINDINGS

Project Execution

The Environment Agency managed this project efficiently and conscientiously. High levels of communication and coordination among the EA and key stakeholders played an important role in the effectiveness of the project. Project planning was carried out in a participatory manner. Moreover, the EA employed adaptive management successfully on various occasions to deal with changes in the national context in terms of socio-economic policies, extreme weather events and other factors. In terms of monitoring and evaluation, regular quarterly and annual reporting, visits to field sites and activities such as the inception workshop and Mid-Term Review were satisfactorily implemented. The project did experience some difficulties in monitoring some of the ecological indicators, particularly the marine ones, due to various factors such as unavailability of vessels, high costs of renting those that were available, difficulties obtaining permits to rent vessels for scientific use from tourism authorities, and the time lags in observing ecological changes.

Project Implementation

As Implementing Agency for this project, UNDP effectively carried out its functions, including financial oversight and technical support, to support the achievement of project results. There was frequent communication between the PMU and the UNDP. UNDP monitored budgetary execution on an ongoing basis, participated in meetings to follow up on procurement issues, and processed payment requests efficiently. UNDP supported the preparation of the annual Project Implementation Reports (PIRs) and regularly visited provincial sites. It should also be noted that UNDP CO reviewed project publications before they went to print and advocated for an emphasis on communication and information dissemination. Moreover, the UNDP Regional Service Centre supported knowledge management by funding the publication of two documents to highlight project experiences.

Project Results and Sustainability

This third phase of UNDP/ GEF support to the government of Cuba's intervention in the SCE focused on promoting Integrated Coastal Management and mainstreaming biodiversity conservation in the key productive sectors of tourism, fisheries and agriculture. The project successfully led to greater levels of coordination between CITMA and these sectors, thus strengthening inter-sectoral planning and environmental management. Valuable lessons were learned on integrating conservation in productive sector activities, such as the validity of developing policy instruments to support adoption of sustainable practices, the importance of widely disseminating pilot experiences to promote upscaling, and the need for long-term engagement with productive sectors to ensure lasting impact. It was considered highly relevant by stakeholders and benefitted from high levels of participation from a wide array of actors and

extensive inter-institutional collaboration. Co-financing amounts exceeded projections and contributed to significant project ownership.

In line with Outcome 1, the project led to a strengthened enabling environment for biodiversity conservation in productive sectors and enhanced sustainability. The project played a key role in the development and implementation of Integrated Coastal Management programs. An ICM methodology was adapted to the Cuban context and is now being used as a tool for environmental management. Seven Zones under ICM (so-called ZBRMICs) were officially declared in the SCE (as well as additional ZBRMICs outside of the SCE). Through the project, a wide variety of ICM measures were implemented, such as nature tourism, reforestation, protection of fisheries resources, and controlled livestock husbandry, among others. ICM Boards were set up for each of the ZBRMICs as a system of governance to oversee implementation of the ICM Programs. This is consistent with the greater level of decentralization in Cuba. A legal proposal for the establishment of an Advisory Board on ICM for the entire country was also developed through the project but is pending formal approval; this would be charged with conflict resolution and maintenance of an ecosystem-based approach. A second key result of this Outcome was environmental education and capacity building. A network of Capacity Building Centres for ICM was established with 20 such Centres in the SCE. Local governments, community members, CITMA specialists, productive sectors and others received extensive training and increased their level of understanding of the biodiversity values in the SCE, ICM and sustainable production.

The project disseminated lessons learned and information from the project, primarily through workshops, exchanges, audiovisual and printed material. The latter included publications on biodiversity, ICM, and sustainable financing, among others. The large amount of information produced through the three phases of intervention in the SCE is now available in an information repository. Media coverage, the production and airing of documentaries and participation in events served to increase project visibility. Further work to disseminate key project outputs to local and national stakeholders as well as within the UNDP and GEF systems would be useful to highlight the achievements and lessons learned through this biodiversity mainstreaming project, which represents one of the first of its kind in the Latin American and Caribbean region.

In order to enhance the financial sustainability of biodiversity mainstreaming, the project carried out research on sustainable financing, looking both at successful international models and at the specific pilot projects implemented through the project, for which economic valuations were carried out to assess the costs and benefits of different sustainable production practices. Such economic valuations were novel for Cuba and pave the way for future work on payments for environmental services. A proposal was developed for the Ministry of Tourism, which would involve charges to tour operators that would be reinvested in biodiversity conservation in productive sectors. This proposal is still being discussed and requires substantial follow-up in the future as this could represent an important financial mechanism for sustainability.

Numerous project achievements can be highlighted in the tourism, fisheries and agricultural sectors. For tourism, workshops were held to train tourism managers, tour operators, tourism workers, and personnel of the National Protected Areas System, reaching a total of 14,000 individuals over the course of the project. A fully equipped Centre for Sustainable Tourism Development was established within the School for Advanced Studies in Hospitality and Tourism of the province of Ciego de Avila (belonging to the FORMATUR system) and classrooms associated with the Centre were equipped in the remaining four provinces involved in the project, in order to carry out activities related to this sector. In terms of biodiversity conservation, the curriculum was strengthened and teachers trained. In addition, project funding supported the maintenance of the Coral Reef Early Warning Voluntary Monitoring Network. Several pilot projects for nature tourism were designed and established in association with the National Centre for Protected Areas, which has led to an increase in the numbers of tourists participating in such

activities (please see the recommendations section for particular issues that need to be addressed). The project had a significant impact on the development of tourism sector guidelines and planning strategies to promote biodiversity-friendly practices. For example, sustainable tourism indicators for ecologically sensitive areas (outside of protected areas) were designed and were validated through their application in 21 tourist hotels in the main SCE tourist zones. A manual of best practices in the hotel industry was developed and a manual of best practices in ecological gardening was produced. The project developed a draft national standard on the construction of roadways in fragile ecosystems (small cays), which is pending formal approval. In order to strengthen the incorporation of environmental criteria and considerations in planning for the tourism (and other) sectors, environmental planning was carried out and approved for nine municipalities, which will be integrated into existing land use plans for these territories.

Substantial biophysical information was collected to better understand the state of the fisheries, which supported the approval of key policies to ensure the sustainability of the fisheries, such as the national ban on bottom trawling in 2012. Training, technical assistance and exchanges for fishermen, inspectors and decision makers were carried out. Pilot projects to promote sustainable fishing alternatives were also put in place focusing on sponge cultivation, oyster cultivation and oceanic fisheries (demersal fisheries). These have provided tangible socio-economic benefits and some replication is already occurring.

With regard to biodiversity-friendly agriculture, livestock and forestry production, the project supported research and land use zoning at the level of productive units (UBPCs), as well as capacity building. Sustainable and diversified agricultural production models were tested. Buffalo management was strengthened to reduce environmental impacts on coastal ecosystems through training, purchase of materials, and the development of a draft national standard on the sustainable management of confined buffalo in coastal ecosystems, which is in the process of formal approval. The project supported the introduction of native tree species and trays with cells at nurseries. Reforestation and natural forest management were carried out, leading to an increase in forest coverage. An additional unexpected result of this Outcome was the development of a proposal for biological corridors, in light of the increased pressures on land through a recent government decision to allocate idle lands to individuals for agricultural production.

The project contributed to key impacts in terms of stress reduction and the creation of an enabling environment favoring BD conservation, through the training of productive sectors on how to mainstream biodiversity, development of tools such as best practice manuals, and contribution of data to support the approval of policies such as a national bottom trawling ban, to name a few. Overall, the project led to 3510.05 km² of seascape under biodiversity-friendly management in the fisheries sector, which includes 3498.58 km² under legal protection in fisheries reserves. Indirect benefits were experienced over an area of 27,877.74 km² of landscape and 4,811 km² of seascape. Through the project, 882 ha were reforested (both for conservation and for production in plantations) and a total of 41,809 ha of natural coastal forest was managed through the project.

A determination of the final project impact on indicators of the ecological status of key ecosystems is complicated by the fact that not all indicators were measured at project end and that external factors have a significant impact on the health of these ecosystems. Nevertheless, the available data generally pointed to positive global environmental benefits. The overall area of mangroves increased and coral reef coverage was maintained. There were no significant differences in fish biomass compared to the baseline in the sites that were assessed, as per the target in the Strategic Results Framework. In the case of seagrass beds, the results were mixed, likely due to the impact of bottom trawlers over many years and the lengthy recovery period. Sampling of contaminant loads associated with agricultural activities showed that some values remained stable, others decreased, and some increased; this was attributed to the fact that the monitoring was carried out in the rainy season while the baseline was established in the dry season. In addition to the project's environmental impacts, it put in place models for sustainable productive

practices, led to new jobs and increased incomes for local inhabitants of the Sabana Camagüey ecosystem.

As mentioned previously, further work to put in place financial mechanisms to reinvest funds in biodiversity mainstreaming are needed. The project did succeed, however, at promoting increased sectorial investments in biodiversity conservation. In terms of the institutional and governance framework, socio-political, and environmental issues, these are not considered to pose any substantial risks to sustainability.

Best practices

- *High level of training and participation of local governments in project activities, such as CBCs and ICM Programs*
- *Extensive coordination with a large number of key stakeholders*
- *Excellent communication among the national, provincial and municipal levels of coordination*
- *Pilot projects addressed productive sector interests as well as Ministerial objectives and helped address community problems*
- *Emphasis on education and environmental training at all levels, including the community level*
- *South-South cooperation for exchanges of information and experiences and to take advantage of regional expertise*
- *Synergy with other projects to maximize efficiencies*
- *Development of regulatory norms and best practice manuals based on project results in order to increase sustainability of project impact*
- *Incorporation of ICM in the curricula of educational/ technical training centres*
- *ICM Programs were developed in a participatory manner and the associated ICM Boards incorporate all key stakeholders*
- *Pilot projects were designed during project preparation phase*
- *Productive sectors managed activities to integrate biodiversity conservation directly*
- *Continuity of UNDP/GEF support for the Sabana Camagüey ecosystem over three phases increased impact. As an example, actions carried out during Phase 3 of the project built on the land use planning carried out in Phase 1 of the project, which identified ecologically sensitive areas with high biodiversity value, as well as on the Strategic Plan that was developed.*

Recommendations to build on lessons learned and to guide future actions

Recommendations related to project design

- *Carefully select environmental impact indicators to ensure that they are realistic and that changes can be observed in time span of project*
- *Clearly explain the methods used to establish baseline values for all indicators in the ProDoc*
- *Dedicate sufficient resources in M&E Plan budget to monitor ecological indicators, including at project end*
- *Negotiate agreements during PPG phase for the use of vessels in coastal/marine monitoring*

Recommendations to guide project execution

- *Report on indicators with quantitative data if the baselines do so and employ the same units/methods of measurement to facilitate comparison*
- *Measure all indicators at project closure to determine final project impact*
- *Obtain the commitment of relevant institutions to track both co-financing and leveraged resources*
- *Ensure that all necessary materials for productive technological innovations are purchased*
- *Carry out final workshop before final evaluation*

Recommendations to guide future projects

Recommendations for financial sustainability:

- *Continue to develop financial mechanisms to support the implementation of sustainable productive activities in key sectors that affect biodiversity*
- *Promote institutional coordination at the central level to achieve an integrated vision on ICM and secure agreement on relevant financial mechanisms*

Recommendations to maximize impacts of pilot sustainable productive sector activities and promote further replication/upscaling

- *Publish succinct pamphlets on the pilot projects to promote replication*
- *It is recommended that CNAP follow-up on the nature tourism products developed with the project through the National Commission on Sustainable Tourism to ensure that there is sufficient support for their management and promotion*
- *Continue promotion of nature tourism products*
- *Translate nature tourism material into English, including at Visitor Centres*
- *Ensure that the pilot project experiences under the direction of AZCUBA are shared with MINAG*

Recommendations to maximize environmental impact:

- *Follow-up with IPF and tourism developers to ensure that BD considerations are incorporated in the construction and operation of new tourism developments, including in the cays of the province of Camagüey*
- *Develop biological corridors to consolidate BD conservation in the landscape, including protected and productive areas*
- *Follow up on system of environmental indicators for productive sectors and on sustainable tourism indicators to ensure their formal approval*
- *Promote use of native species in coastal reforestation*
- *Continue to provide training and environmental education in the long-term*

Recommendations for further information dissemination and knowledge management:

- *Increase accessibility of the information in the repository*
- *Earmark funds to continue to print out key project outputs and disseminate project results and experiences within Cuba and internationally*
- *UNDP Cuba Country Office to ensure that lessons learned from this BD-2 project and key documents that systematize the project experience are shared within the UNDP system and with GEF*

Table 2: Ratings of Project Performance

Criteria:			
1. Monitoring and Evaluation	Rating	2. IA& EA Execution	Rating
M&E Design at Entry	Satisfactory	Quality of UNDP Implementation	Highly Satisfactory
M&E Plan Implementation	Satisfactory	Quality of Execution- Executing Agency	Highly Satisfactory
Overall quality of M&E	Satisfactory	Overall quality of Implementation/ Execution	Highly Satisfactory
3. Assessment of Outcomes	Rating	4. Sustainability	Rating
Relevance	Relevant	Financial resources:	Likely
Effectiveness	Satisfactory	Socio-political:	Likely
Efficiency	Highly Satisfactory	Institutional framework and governance:	Likely
Overall Project Outcome/Results rating	Satisfactory	Environmental:	Likely
		Overall likelihood of sustainability:	Likely
Impact	Significant		

Ratings for Effectiveness, Outcomes, Efficiency, M&E, I&E Execution are on a *six-point scale of Highly Unsatisfactory to Highly Satisfactory*. Ratings of sustainability are on a four-point scale from Highly Unlikely to Likely. Ratings of relevance are on a two-point scale (Relevant or Not relevant) and ratings of impact are on a three-point scale (Negligible, Minimal and Significant).