



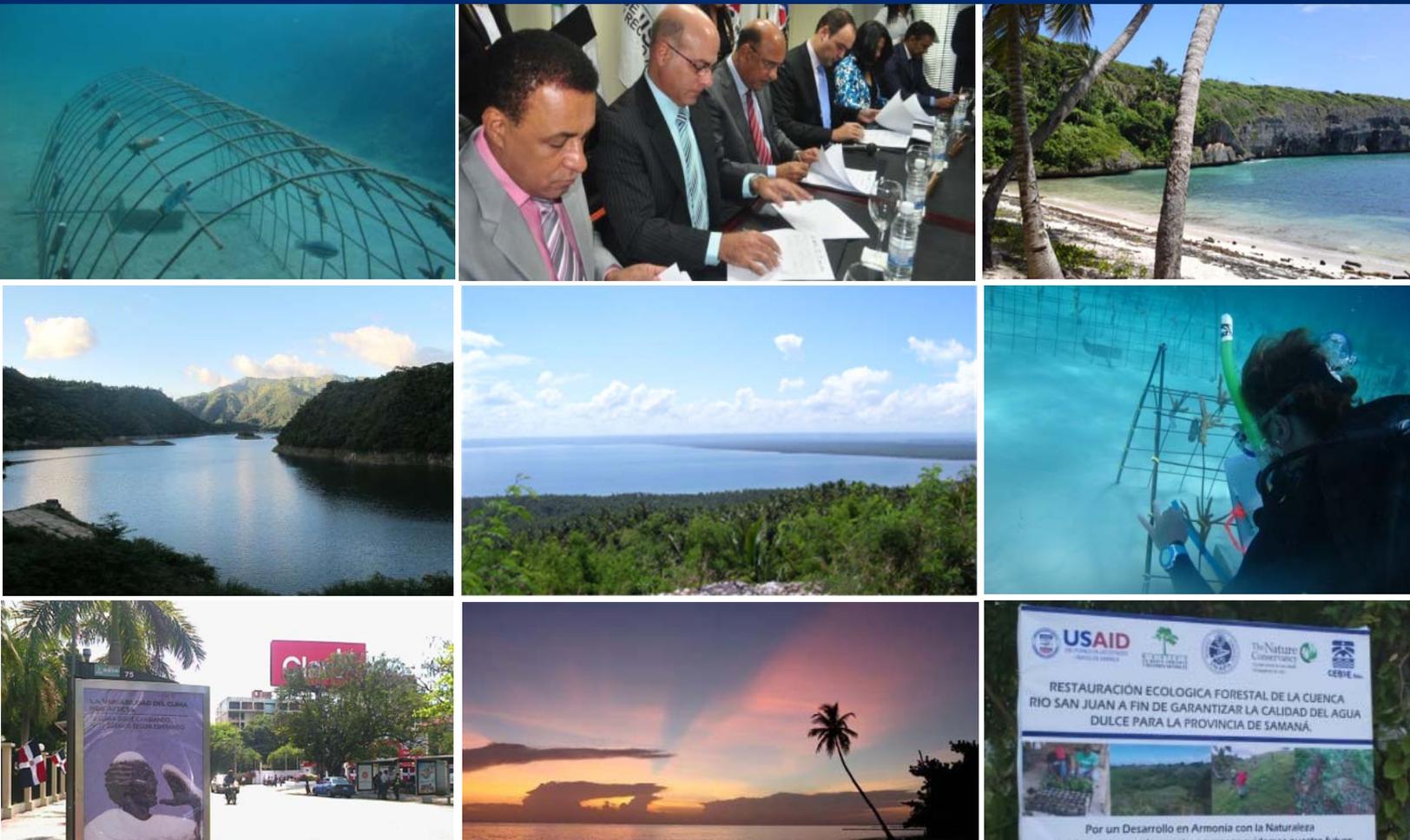
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Environmental Protection Program

Cooperative Agreement No. 517-A-00-09-00106-00

FINAL REPORT



April 1st, 2014

This report was produced for review by the United States Agency for International Development and prepared by The Nature Conservancy. It was made possible thanks to the generous support of the American people through the United States Agency for International Development (USAID) under the terms of its Cooperative Agreement No. 517-A-00-09-00106-00 (USAID Environmental Protection Program) implemented by prime recipient The Nature Conservancy and partners (CEBSE, INTEC, IDDI, FUNDEMAR, Plan Yaque and PRONATURA). The contents and opinions expressed herein are the responsibility of the Environmental Protection Program and do not necessarily reflect the views of USAID.

Cover information:

Different areas of intervention of the Environmental Protection Program.

Photos provided by: TNC, IDDI, CEBSE, FUNDEMAR, PRONATURA, INTEC, Environment Ministry, Agrofora.

The USAID/TNC Environmental Protection Program

Cooperative Agreement Information

The USAID Environmental Protection Program (USAID/TNC - EPP) seeks to strengthen the Dominican Republic's ability to comply with the requirements of the Central America-Dominican Republic-United States Free Trade Agreement (DR-CAFTA), promoting adequate levels of environmental protection and biodiversity conservation. As of the end of FY 11 the program is also working with national and local authorities and other stakeholders in promoting policies and strategies for climate change adaptation. It is a five-year initiative implemented through a cooperative agreement with The Nature Conservancy and sub-awards with the Technological Institute of Santo Domingo (INTEC), the Pro-Naturaleza Fund, Inc. (PRONATURA), the Center for the Conservation and Eco-Development of Samaná Bay and Its Surrounding Areas (CEBSE), the Dominican Institute for Integral Development (IDDI), and the Dominican Foundation for Marine Studies (FUNDEMAR) and Plan Yaque.

Reporting Period:-

This is the FINAL Report for the USAID Environmental Protection Program (USAID/TNC-EPP) which covers activities carried out from **March 9th, 2009 to February 28th, 2014**. The USAID/TNC - EPP falls under Cooperative Agreement No. 517-A-00-09-00106-00 between The Nature Conservancy (TNC) and the United States Agency for International Development (USAID).

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Acronyms:

ADOGRANJA	Dominican Association of Pork Farms
ASIEHaina	Association of Firms and Industries of Haina
BANELINO	Ecological Bananas of the Northwest Line
CCA	Climate Change Adaptation
CCAD	Central American Commission for Environment and Development
CDSS	Caribbean Decision Support System
CEBSE	Center for the Conservation and Eco-Development of Samaná Bay and Its Surrounding Areas
CEDAF	Center for Agricultural and Forestry Development
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CODOPESCA	Dominican Council of Fisheries and Aquiculture
CONFENAGRO	National Con-federation of Agricultural Producers
CP	Cleaner Production
CNCCMDL	National Council for Climate Change and Clean Development Mechanisms
CY	Calendar Year
DR	Dominican Republic
DR-CAFTA	Dominican Republic - Central America Free Trade Agreement
EBA	Ecosystem-Based Adaptation
ECA	Environmental Cooperation Agreement
EIA	Environmental Impact Assessment
EMS	Environmental Management Systems
ELI	Environmental Law Institute
EOP	End of Project
GCC	Global Climate Change
GoDR	Government of the Dominican Republic
IDDI	Dominican Integrated Development Institute
INTEC	Technological Institute of Santo Domingo
KAP	Knowledge, Attitude and Perception
ME	Ministry of Environment and Natural Resources
NASA	National Aeronautics and Space Administration
NEPAssist	Tool to facilitate the environmental review process and project planning
PMP	Project Monitoring Plan
PRONATURA	Pro-Nature Fund, Inc.
PUCMM	Pontifical Catholic University “Madre y Maestra”
RAUDO	Environmental Network of Dominican Universities
RENAEPA currently ECORED	National Network of Businessmen for Environmental Protection
SECTUR currently MITUR	Dominican Republic Tourism Ministry
SEMARENA	Dominican Republic Secretariat of Environment and Natural Resources (Now ME, see above)
TA	Technical Assistance
TNC	The Nature Conservancy
UAPA	Open University for Adults
UASD	Autonomous University of Santo Domingo
UCATEBA	Catholic Technological University of Barahona
UCATECI	Catholic Technical University of Cibao

UCE	Central University of the East
UCNE	Northeastern Catholic University
UCSD	Catholic University of Santo Domingo
UNEV	National Evangelical University
UNIBE	Ibero-American University
UTESA	Technological University of Santiago
UGAM	Municipal Environmental Management Unit
UNPHU	Pedro Henríquez Ureña National University
UICN	International Union for Conservation of Nature
USAID	United States Agency for International Development
USFS	United States Forest Service
USG	United States Government
USAID-DSTA	USAID/Dominican Sustainable Tourism Alliance
USAID/ELE	USAID/Excellence in Labor and Environment
USAID/EPP	USAID/Environmental Protection Program
USAID/RED	USAID/Rural Economic Diversification Project
WIDECAS	Caribbean Sea Turtle Network

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2. EXECUTIVE SUMMARY

The USAID-TNC Environmental Protection Program has been a multifaceted five-year effort executed through a cooperative agreement (No. 517-A-00-09-00106-00) signed on March 2, 2009, between USAID and The Nature Conservancy (TNC). Formally launched on June 2, 2009, the program ended as scheduled on February 28, 2014. During project life, sub-awards for implementing various elements of the program were executed by TNC with various Dominican organizations, including the Technological Institute of Santo Domingo (INTEC), Pro-Nature Fund (PRONATURA), Center for the Conservation and Eco-development of Samaná Bay and its Surroundings (CEBSE), Dominican Institute for Integrated Development (IDDI), and the Dominican Foundation for Marine Studies (FUNDEMAR). The original objective of USAID-TNC EPP was to strengthen institutional capacities in the Dominican Republic (public and private) to promote more effective protection of environmental quality and conservation of biodiversity. The program was designed to accomplish three basic goals:

1. Enhanced Institutional Capacity to effectively enforce environmental laws and regulations;
2. Improved Biodiversity Conservation; and
3. Improved Private Sector Environmental Performance and Compliance.

Early stages of project life, from inception until late 2011 (now referred to as “Phase 1”), featured a heavy emphasis on assisting the Dominican Republic to prepare for and implement environmental policies compliant with Chapter 17 of the Dominican Republic – Central America Free Trade Agreement (DR-CAFTA). Operationally, Phase 1 was organized around four components, one designed to address directly each of the three goals identified above, plus one more focusing on market-based conservation. TNC, working with partners and stakeholders, achieved success throughout the program’s early years, both in helping prepare ME administrators and staff members at all levels to manage DR-CAFTA requirements, and in enabling a very wide range of public, private, and community-based entities to respond to the nation’s actual and potential environmental issues.

At about the mid-point of program life the project underwent a fundamental change. While a modification to some elements was originally foreseen in project design, TNC and partner performance during Phase 1 made such changes possible, since a series of intermediate targets and indicators had been achieved by that time. The USAID-TNC EPP project description was amended to reflect a new key objective: strengthening the Dominican Republic’s capacity for adaptation to global climate change. A new component was added to program’s workplan, emphasizing ecosystem based adaptation to climate change. During this period, TNC and partners worked very closely with the ME and with the National Council on Climate Change and Clean Development Mechanism (known by its Spanish acronym CNCCMDL), along with other government entities at central and local levels. Cooperation with the Ministry and Council involved engagement with key stakeholder groups in the private and community based sectors, in developing tools to address the impacts of climate change.

For Phase 2, the designated objectives of the program changed, to include:

1. Support the development of climate change adaptation policies and initiatives in the DR
2. Strengthen public and private Dominican institutions to achieve adaptation to global climate change, and to promote effective protection of the environment and biodiversity.
3. Encourage public/private agreements promoting improved governance and sustainability of climate change adaptation strategies.

Throughout its five-year life, this project made progress relating to environmental protection. Briefly, key impacts achieved with program's support include the following:

- Through a well thought out early strategy, the program worked with a series of partners to identify where needs for environmental protection initiatives were critical, where issues were already receiving adequate attention, and where gaps still existed. Numerous studies, baseline analyses, and surveys became a crucial toolbox for implementing the program effectively across a broad institutional, technological, and geographic front. As the program progressed, other knowledge gaps presented themselves, and the program adjusted, coordinating activities with such efforts as water quality studies, tourism carrying capacity analysis, and the climate change vulnerability assessment.
- At the national level, EPP and ME developed the Dominican Government's capacity to properly enforce existing environmental legislation, and to design and implement appropriate new environmental policies. Training of ME staff at all levels and the provision of needed equipment and technical assistance were an important part of this effort. Comprehensive training certificate training on 7 key areas was developed and carried out in 10 different cohorts. Parallel, the ME was given equipment and monitoring supplies with a value of US\$823,753 to strengthen its enforcement capacity. Also, the revision and /or development of policy instruments and processes within the ME were a key component of this initiative.
- The program provided assistance incorporating climate change considerations into the environmental permitting process. The process resulted in draft guidelines for four priority sectors. The program also assisted carrying out the strategic environmental assessment for the national zoning plan proposal, as per request of the Directorate of Land Use Planning (DGODT), as a means to contribute to the sustainable development and climate change adaptation of future development throughout the territory. These policy instruments represent ideal vehicles for the mainstreaming of climate change considerations in development planning for the DR.
- By coordinating with other entities, including the US Forest Service (USFS), the US Environmental Protection Agency (EPA), the Central American Commission for Environment and Development (CCAD), and other projects with a regional scope, the program enabled the GoDR to fulfill effectively the nation's responsibilities regarding DR-CAFTA. Two essential areas where compliance was significantly strengthened were cleaner production and environmental impact assessment (EIA). Time necessary to process environmental permits reduced to half, and 4 sustainable production agreements have been signed with productive association grouping over 450 individual firms/producers.
- To generate public demand for environmental action, general interest in and understanding of environmental issues must be created, and the program worked on this area by carrying out surveys

and analyses, developing two awareness raising campaigns, formal and non-formal training, dissemination of environmental and climate change information and the presentation of environmental and global climate change themes in schools (over 600 children were reached in Santo Domingo and Bayahibe, and over 900 in Samaná province, with the contribution of local youth communicators).

- At the local government level, the project worked extensively with municipalities and other community organizations to promote understanding of environmental and climate change issues, and to design and enact local environmental ordinances as well as planning mechanisms for adapting local decisions to mitigate expected climate change impacts. 5 Municipal fora were created, 33 environmental ordinances developed, motorcycles and monitoring equipment donated to 9 municipalities, 36 technicians trained in environmental municipal management, best practices guides were developed).

In a nation as geographically and environmentally complex as the DR, an effort to make fundamental changes in applied natural resources management is a daunting task. Hence, on-site initiatives have to be started, tested / adapted, and described and disseminated for eventual duplication throughout the country. The program principally concentrated field efforts on priority sites, including the extensive Samaná Bay area, the southeastern coast area around Bayahibe, the diverse highland area around Jarabacoa, and in a series of priority watersheds in the Santo Domingo area. In all of these areas, the program enabled a range of entities and stakeholder communities to make significant progress in a short period of time.

- For the ecologically important Samaná Bay area, the project – working with partners like CEBSE and many local groups – assessed local attitudes and perceptions regarding the environment and developed the provincial environmental agenda in response, fostered strong municipal government actions on environmental management issues important to the area, organized and trained three fishing cooperatives to address the threat of fish stock depletion, assisted in the design and execution of a whale monitoring program, trained scores of individuals from public and private sectors, worked to restore mangroves, carried out freshwater sources interventions, developed the first zoning plan with climate change considerations for the province and enabled communities in the area to incorporate environmental planning and strategies for adapting to climate change into official management plans.
- Interventions/impacts for the Bayahibe-Parque Nacional del Este regional ecosystem include tourism carrying capacity assessment, training of park management and tourism sector representatives, technical and equipment support for strengthening both municipal governance and protected area management, support for controlling invasive species such as lion fish, establishment of climate change monitoring and actual re-establishment of coral colonies, To date, 16 different structures divided in three coral nurseries have been installed near Bayahibe, and 14,068 cm of living tissue are available for coral restoration. Also, inter-institutional coordination for managing the area and the incorporation of climate change adaptation considerations in municipal strategic plans have been facilitated, including the creation of a community based CCA network.

- In Jarabacoa, the project worked with multiple public and private groups to plan, coordinate, and implement an extensive range of important environmental interventions. An important area for agriculture and tourism, it also includes the headwaters of major river systems that provide water throughout much of north central DR. The impacts are remarkable; running the gamut from watershed protection based on sustainable agricultural and forestry practices to inclusion of climate change adaptation strategies in community-wide municipal development plans and the creation of a community based CCA network.

A major potential threat to the DR in the context of global climate change is the sustained availability of quality fresh water. Program's partners supported Dominican efforts in this area over the life of the project, with watershed management activities in several key watersheds, including several upon which the nation's important cities depend. To solve or to effectively mitigate problems relating to river basin flooding, downstream infrastructure and soil loss, mud slides, and many surface water quality and availability issues, a damaged watershed must be treated from the top down, beginning at the headwaters. That has been the approach of USAID-TNC EPP and partners in improving water source monitoring and protection, in the area of Jarabacoa and the Yaque del Norte system, and in the immediate areas around Santo Domingo. Leveraging on work carried out under the EPP the Water Funds for Santo Domingo and Yaque del Norte were launched by TNC. These represent an ideal opportunity to finance freshwater conservation and promoting public-private alliances in water conservation and protection.

The DR is a nation with spectacular natural endowments in environmental diversity, and also one facing unusual risks related to global climate trends. The GoDR, and especially the ME, recognize those risks, and in coordination with many other entities and individuals, domestic and international, are working to prepare. One of those entities is USAID. To sum up, USAID-TNC EPP has made a profound impact on the environmental, biodiversity, and natural resources management situations in the DR, and has substantially enhanced Dominican prospects to prepare for and to adapt successfully to the expected impacts of global climate change. It is not a job even half-done, but it is an extraordinary beginning, and is a foundation for expanding and extending similar efforts.

3. BACKGROUND AND INTRODUCTION

The United States Agency for International Development (USAID) Environmental Protection Program (USAID-TNC EPP) for the Dominican Republic (DR) was signed as a cooperative agreement (No. 517-A-00-09-00106-00) with The Nature Conservancy (TNC) on March 2, 2009. The Project was formally launched on June 2, 2009, as a five-year initiative to strengthen public and private institutions and promote protection of environmental quality and biodiversity. On June 5, 2009, a sub-award was signed with the Technological Institute of Santo Domingo (INTEC) as the initial implementing partner. The Dominican Republic Secretariat of Environment and Natural Resources (SEMARENA) was the primary public sector partner. (SEMARENA was subsequently re-named the Ministry of the Environment, “ME”). In order to address all work areas covered by the program other sub-agreements were executed with the Center for the Conservation and Eco-Development of Samaná Bay and its Surrounding Areas (CEBSE), the Pro-Nature Fund (PRONATURA) and the Foundation for Marine Studies (FUNDEMAR).

In adjusting to dynamic needs for the environmental sector, major changes were made during execution, and in early FY 2012, changing the program’s focus towards climate change adaptation (CCA); additional sub-agreements took place to incorporate the new dimensions and work areas that the new approach demanded, with PLAN YAQUE, and the Dominican Integrated Development Institute (IDDI). The USAID-TNC / EPP concluded on February 28, 2014.

3.1. Antecedents, Objectives, and Strategic Considerations

Historical Context: the Dominican Republic possesses an incredibly diverse and endowed natural resource patrimony, from the highest mountain peak in the Caribbean region to miles of spectacular beaches and coral reefs. In between are fertile hills and valleys, a wealth of flora and fauna, networks of river basins, coastal plains, and wetlands. Among informed and concerned sectors of Dominican society there emerged in the latter part of the 20th century a growing awareness that there were limits to the capacity of natural abundance to absorb growing human interventions and resource utilization. Several laws and regulations relating to more cautious management of natural resources were enacted in the 1960s and 1970s, and a quick review of literature from the DR and international donor/NGO communities shows that the 1980s and 1990s in particular were characterized by increasing attention to natural resources and environmental issues in research and programming.

The turn of the century period was important in the DR’s policy approach to the environment, as two important steps were taken: First, Law 300 of 1998 incorporated environmental and natural resources into the official school curriculum, in recognition of the then existing lack of public awareness and the necessity to increase awareness and therefore public participation in and demand for better environmental management. Secondly, and importantly, Law 64-00 of the year 2000 created a general framework for implementing public environmental policy, and established the new cabinet-level Secretariat of State for Environment and Natural Resources (SEMARENA; now Ministry of Environment).

Between 2006 and 2008, TNC at the regional level (Central Caribbean Program) completed an in-depth analysis of threats to biodiversity, and identified 39. Among the most critical threats enumerated by study were climate change, and also the following four key biodiversity threats that were selected for priority attention at the outset of USAID-TNC EPP: a) Lack of education and awareness; b) Lack of institutional capacity; c) economic activities; and d) invasive species. Specific sub-components or activities from all operational components of the Program were directed at ameliorating these four threats, and substantial progress was achieved across the board in Phase 1 and throughout the Project's life.

3.2. Structural or Systemic Issues Encountered in the Environmental Sector

Even though substantial progress has been and continues to be made regarding the environmental sector in the DR, a number of general issues has continued to characterize the sector. The Environmental Protection Program was designed to ameliorate some of these issues. These sorts of structural or systemic issues can be loosely grouped into several areas (which are in many ways related):

1. Government and Legal Systems: This category would include the complexities faced by governing bodies at international (*e.g.* DR-CAFTA, CITES), national (hierarchy of laws and regulations, public ministries – especially ME), and local (*e.g.* provincial, municipal) levels. Issues would include possible duplication of responsibilities, definition of legal frame-works, deficient enforcement, turnover among professionals, inadequate budget support, and others.
2. Political Will and Public Apathy: Political will has to do with both shorter-term political realities, and also the relatively low level of public awareness of and interest in environmental protection.
3. Economic Conflict and Funding Issues: Economic and financial issues for the environmental sector are of several types. For both politicians and business managers, dedicating resources to long-term environmental objectives is often anathema to short term goals, since both are interested in short term results. Hence, environmentally sound actions and expenditures have typically been relegated to “back burner” status in public budgets and private business plans alike. Traditionally, another “choice issue” for industry has been the idea that a firm can either invest in the environment, OR in profit-making practices. It is now quite widely accepted that a firm (or a government) can “do well by doing good,” environmentally.
4. Biological Conditions and Technological Limitations: Biological conditions and pressures on ecological systems change, as a result of human actions or inactions, and due to “natural” cycles. To maintain environmental and natural resource based systems, to mitigate the socio-economic impacts of natural events, and to adapt human endeavors to dynamic global and local conditions, technology and the application of technology must keep pace. To plan, we must predict outcomes with a degree of confidence. To do so, we must know the past and also must possess the tools to analyze and project, to react effectively to causes and manipulate effects. Budgets for research, modeling, and analysis are limited, but increasing participation by academic and scientific communities is a necessity for environmental adaptation.

5. **Sustainability:** The fact that these systemic issues overlap is evident. To sustain effective policies and activities, elements of public interest, political will, financial issues, and system dynamics all have critical effects on environmental protection. It is important to nurture and expand interest in environmental issues on the part of the public, government, and business, and to design sound partnerships and investments that are self-supporting. With respect to government actions, national policies and execution are certainly necessary, but the decentralization of many processes, such as micro-watershed or water district management, municipal environmental management units, and community or regional environmental planning functions can be critical to fostering a sense of civil ownership and long-term sustainability.

3.3. Objectives and Strategy

The USAID-TNC EPP was designed “to strengthen institutional capacities, both public and private, to promote a more effective protection of environmental quality and biodiversity.” The Program also specifically emphasized support to the ME to fulfill the nation’s international environmental commitments under Chapter 17 of the Central America – Dominican Republic – United States Free Trade Agreement (DR-CAFTA). Ambitious and complex from the outset, USAID-TNC EPP originally consisted of four major components:

- Institutional Strengthening for Effective Enforcement of Environmental Laws;
- Biodiversity Conservation;
- Market-Based Conservation; and
- Improved Private Sector Environmental Performance.

Much more operationally complex than suggested by these four general components alone, the Program included multiple specific sub-components. Within the continuous management oversight of TNC, the structure of four components guided the implementation of EPP during what is often referred to now as “Phase 1,” of implementation, during which INTEC was a key implementing partner and provided EPP with technical support in several areas, with particular emphasis on the “brown agenda.” Phase 1 essentially pertains to the USAID-TNC EPP cycle from its inception in early 2009, through the end of the US Government (USG) Fiscal Year (FY) 2011, on September 30, 2011. (In actuality, some of the Phase 1 activities continued into early FY 2012, as noted in results sections.)

Threats to Biodiversity and the Emerging Challenge of Climate Change:

In 2011, USAID, TNC, and EPP partners responded to this fluid situation by modifying the objectives and implementation of the Program. A fifth component was added to address ecosystem based adaptation to the threats associated with climate change, and the objective structure was modified.

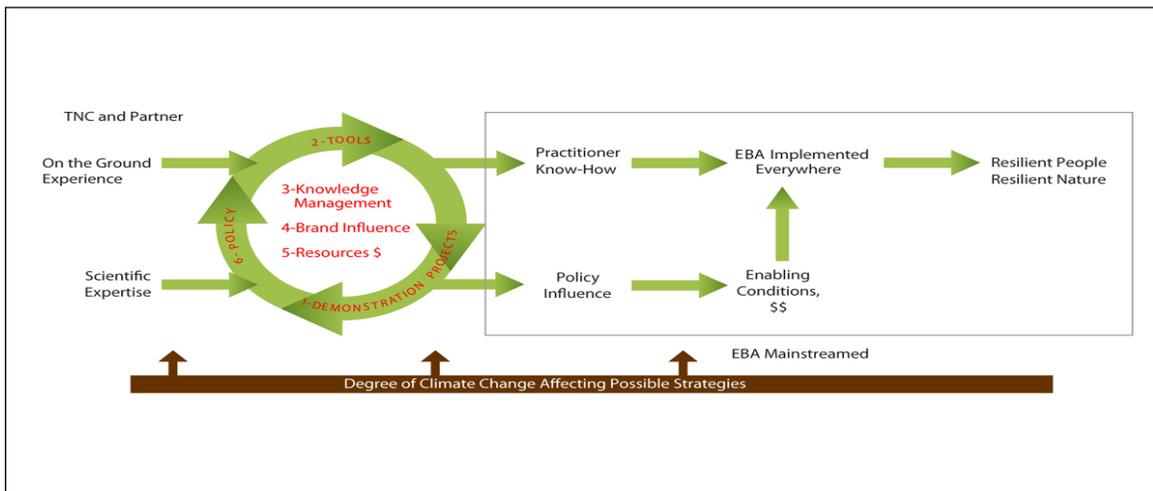
The program in numbers:
5 year program
11.7 million dollars including match.
6 implementing partners
Approximately 4000 people trained in various environmental topics throughout the program.
Delivered equipment and supplies for environmental management with a value over USD1.2 million.

Accordingly, the program’s objectives were amended to reflect the new emphasis, with a revised goal “to support the DR’s ability to adapt to global climate change by integrating stakeholders at the local and national levels into a comprehensive approach that includes ecosystem-based adaptation pilot demonstrations in selected sites” – mainly the Samaná Bay and Bayahibe areas – capacity building, and policy development. With this overall goal in mind, the Program moved forward to meet revised objectives and deliverables.

This “Phase 2” period was characterized by the following set of objectives for implementation over the final two years of the program:

- Demonstrate ecosystem-based adaptation interventions in vulnerable locations, working with local institutions to build their capacity to replicate these experiences;
- Create an enabling environment for adaptation of Dominican climate change by strengthening DR institutions, both public and private, for the interpretation of climate information and the development of policies that enable climate adaptation approaches; and
- Foster public/private partnerships promoting improved governance and sustainability of climate change adaptation strategies.

The thematic components within which USAID-TNC EPP has implemented the program since 2012 to meet its overall goal and three major objectives include: 1) Institutional Strengthening; 2) Biodiversity Conservation; and 3) Ecosystem Based Adaptation. TNC’s global strategy¹ to address climate change includes demonstration projects, visualization and decision support tools, knowledge management, ecosystem based adaptation, identify and secure needed resources and creating lasting institutional, policy and funding support.



Operationally, these components include numerous sub-activities such as strengthening information management, improved governance, educating technical staffers from government and municipal institutions to increase adaptive capacities, raising awareness among the general public, enabling

¹ Lowenstein, F; Wallach-Thomas, A.; and E. Girvetz. The Nature Conservancy. February 2011.

climate change adaptation, and communicating project results and impacts. Surveying the expected impacts of climate change on Dominican society, the project charted its most efficient course as developing place-based demonstrations of climate change adaptation approaches, while building the national enabling environment to promote adoption of those approaches.

The biggest climate threats to Dominican Republic addressed by the program segregate into two situations: coastal hazards of hurricanes, storm surge, and sea-level rise, and mountain hazards of drought, extreme rainfall events and flooding, and changing water balance that imperil mountain populations and water supplies for major cities. The project worked to develop tools and strategies for these two very different situations, to develop and demonstrate adaptation planning with local governments, to introduce climate change adaptation to the Dominican business environment, and to embed climate change in national law and regulation as a means of establishing incentives for ecosystem-based adaptation in economic development.

4. MAJOR OUTPUTS, RESULTS ACHIEVED

4.1. Initial Phase: Start-up Through 2012

During its first two years, the program made such a substantial progress in meeting the objectives established at program inception, that managers were able to revise its trajectory for the final phase of execution.

1. Institutional Strengthening for Effective Enforcement of Environmental Laws:

This component was aimed at improving environmental governance – with a heavy emphasis on implementing actions related to compliance with DR-CAFTA – at every level, and in achieving results that are sustainable as a foundation for effective future environmental protection in the DR. Assistance provided by the program aimed at strengthening capacities through complementary areas: 1) strengthening staffers capacities and technical skills regarding key subjects of environmental management writ large (identified in collaboration with ME); 2) support in the development and revision of instruments and tools for management process (policy instruments and others); 3) revision and creation of technical entities needed for monitoring compliance, and 4) strengthening of analytical instruments and information management tools for decision making.

During this first phase INTEC developed a comprehensive certificate training program on the following areas: environmental impact assessments, environmental monitoring, municipal environmental management, micro-watershed management, protected areas management, cleaner production among others, reaching 487 people, reaching staffers from ME (including its regional dependencies), municipalities, other government entities, private firms and NGO's². This component also targeted a number of regulatory laws, policies, regulations, administrative procedures, and supporting studies completed and submitted to relevant government agencies. Support was provided to develop various policy instruments, including the National Clean Production Policy, the National Biodiversity Strategy, policy instruments for forest fire and forest resources management, the development of the National System of Protected Areas, and a marine zoning proposal for Samaná Bay, among others.

Among policy instruments, environmental permitting is one of the main mechanisms to promote environmental compliance; with program's support, the ME achieved greater effectiveness in authorizing EIAs and benefitted from the development of tools for managing environmental information and for monitoring and tracking the environmental permit processes (NEPAssist and Tracking System, respectively). A "single access window" was created to improve service to the public and provide more efficient routing of permit requests inside the ME). The process has improved through backlog reduction, more efficient information management, enhanced capacities of personnel, and revision of the corresponding regulation and processes. These permits constitute a critical tool for ensuring environmental compliance, and timely and transparent information management facilitates the

² This number does not include other trainings carried out by other partners that are not certified higher education entities.

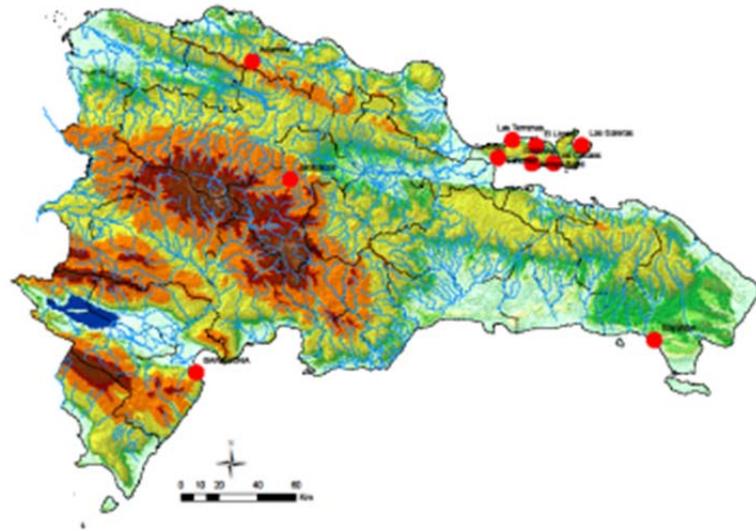
compliance with deadlines and terms in the environmental management process while contributing to transparency. By 2011, the rate of processing environmental permit applications had improved in 105%, reducing time required for processing these in approximately half.

Municipalities are the catalyzers of national policy into concrete plans and actions at the local level. They are also the articulation of government with local population. During phase one, nine municipalities were assisted in their capacities for environmental management and enforcement at local levels, through EPP training, equipment, and technical assistance in designing environmental ordinances and other instruments for municipal environmental management. As a result of program's assistance, nine

Municipalities assisted by the program

Assistance to municipalities in numbers:

33 environmental ordinances developed
Monitoring equipment and motorcycles for inspections donated to 9 municipalities
36 technicians trained in environmental municipal management
2 best practices guides for municipal environmental management and slaughterhouses and public markets management.



local governments have been strengthened to fulfill their mandate at the local territory and complement ME environmental management at a smaller scale. 33 ordinances relating to air and noise contamination, fishing, extraction of aggregates, solid waste management, and water use (domestic and industrial) were completed and issued. Most of these municipalities were also addressed in the second phase of the program to strengthen their capacities to adapt to global climate change.

Support to the ME had to be complemented with a process of enhancing general population understanding and awareness of environmental management and compliance. An informed population is more likely to participate proactively in environmental management related process and demand transparency. Mass media are key means to inform and educate the general population, and the media's comprehension of environmental subjects needs to be strengthened. The communications plan featured activities such as: certificate courses and informational sessions for journalists, promotion of broad participation in EIA and in the ME processing of environmental permits, attention to public participation in official responses to environmental complaints, design and implementation of a national prize for environmental journalism, production and dissemination of environmental communications materials, and various educational and promotional activities.

While media inform the general population regarding environmental topics, academia has a critical role in shaping future professionals and promoting understanding of environmental dynamics through research. The program facilitated the formation of the non-profit environmental educational network RAUDO, involving 13 Dominican Universities³. Its purpose is to mainstream environment and climate change into university work in the Dominican Republic.

2. Biodiversity Conservation:

Within the awareness and regulatory strength provided by the first component, the Program's second component was designed to emphasize effective protection of the country's flora, fauna, and varied ecosystems. One of the challenges in compliance with DR CAFTA has been the control of illegal trade in wildlife, turtles being the "iconic case" for the DR. Major efforts regarding biodiversity conservation included improving management in protected areas, increasing funding for the environment, promoting sustainable fisheries, controlling invasive species, and improving watershed management (including forestry). Accordingly, to ensure proper enforcement, the program provided technical training, direct interventions in specific sites, and community and private sector involvement.

In order to do so, **TNC promoted the institutional strengthening of its conservation partners for the program, by assisting them in strengthening its administrative procedures, internal control mechanisms, regulation compliance, and reporting skills, among others.** As a result of the program's assistance, local conservation partners have enhanced their capacity to work in biodiversity conservation through more effective project management. Two of them were able to attract other funding during the program's lifetime that was used as matching initiatives and to continue and broaden some of the local actions started with the program after its conclusion⁴. Building upon each partner's strength and area of influence, the project's demonstrated interventions can be replicated in different locations.

USAID-TNC EPP, through TNC and partners, contributed materially to the development of a Master Plan for the National Protected Areas System (SINAP), and to a national biodiversity strategy. **Management effectiveness of some key protected areas of the Dominican Republic has improved; public private alliances for their management have been promoted.** The program contributed to the development of monitoring mechanisms of protected areas, as well as assessment and policy instruments such as the National Biodiversity Strategy and the Protected Areas Master Plan, specific management plans, other management instruments and assessments for decision making.

Assistance in Valle Nuevo National Park included the ecological restoration of 276 ha in two micro-watersheds (El Castillo and Nizaíto areas) where agricultural activities have been carried out for decades. Biodiversity conservation is closely tied to participatory governance. Considering the presence of El Castillo – marginal agricultural community settled within the park – PRONATURA incorporated

³ INTEC, IECO, UAPA, APEC, UASD, UCNE, UCATECI, UCE, UNIBE, ISA, UNEV, UNPHU, and UTESA.

⁴ PRONATURA obtained funding from the Critical Ecosystem Partnership Fund (CEPF) to develop a pilot action plan to reduce impacts of agriculture in two selected sectors of Valle Nuevo and Montaña La Humeadora National Parks; FUNDEMAR obtained UN funding to develop the management plan for the Marine Mammal Sanctuary.

community members in the restoration process and put them in charge of monitoring; PRONATURA also improved basic environmental awareness among community members through a training program and contributed to the subsequent work of the area's Action Plan Monitoring Committee⁵.



Drains restoration in Valle Nuevo National Park. Photo: J. Llamacho @PRONATURA

Under the Program, TNC and CEBSE contributed to the regular (and permanent) scientific monitoring of the humpback whale population in the annual reproduction visits which that species makes to Samaná Bay. This was complemented with a marine zoning plan proposal for that important area regulating traffic, spawning grounds and other areas. Also in Samaná, **three fishing cooperatives were created after a comprehensive training program on sustainable fishing and cooperative production. These cooperatives have the capacity to participate in co-management strategies of spawning areas and other important zones within Samaná Bay;** they are also promoting the use of legal fishing gear in the bay, where illegal gear is infiltrating the system with the danger of depleting fish stocks.

To guarantee sustainability, not only of the monitoring process, but also of the enforcement process related to the whale's presence, CEBSE trained local inspectors of the Ministry of Environment and Natural Resources and the staff of the vessels of the Boat Owners Association (captains and crew) to properly implement the official regulations for whale watching in the Marine Mammal Sanctuary of the Dominican Republic - Samaná Bay⁶. An unplanned result of USAID's support of the whale-monitoring initiative is that the Dominican Republic contributed the decision of the International Whaling Commission during its 64th meeting in 2012, in order to eliminate the whaling permit for Greenland and protect the Atlantic humpback whales that spawn in Samaná Bay⁷.

⁵ After intervention conclusion the committee has continued with reforestation processes in El Castillo as well as the control of the agreed agricultural boundaries.

⁶ Samaná's Boat Owners Association regularly donates monitoring trips, contributing to ongoing monitoring and also to awareness-raising activities such as the Annual Whale Festival.

⁷ The results of the monitoring program was presented as a paper to the scientific committee of the International Whaling Commission, a representative of the Boat Owners Association and a representative of civil society (CEBSE) participated to support the Dominican Government representation before the Commission and the Scientific plenary meeting, which lead to the decision.

One example for the program's contributions to controlling invasive species has been the program to control lion fish, which featured elements of research, education, cooperation, and community action. Dominican Republic authorities with fishermen collaboration have the technical capacities to control the lion fish population in its territorial waters. 127 fishermen of different coastal communities were trained in lionfish capture and handling, and 24 technicians received in-depth training on the species and its control.

3. Market Based Conservation:

To the components of the enabling environment and improved conservation capacity during Phase 1, the third component (in conjunction with the fourth) aimed at finding ways to strengthen the role of the private, for-profit sector of the DR in environmental protection, especially by seeking ways to involve commercial markets and related business opportunities to advance environmental objectives. Along with component 4, the activities under this component emphasized a more effective role for the private sector and private industry in environmental protection. Tourism, forestry, agriculture, transportation, and other industries have been targeted for improved performance with respect to market-based activities. Major activities under this component included promoting sustainable tourism and assessing opportunities for sustainable forestry, and significant results were achieved in both areas at the outset of the Program.

One of main areas of assistance under this component was the strengthening of the forestry sector through the support the national forestry strategy. **Various tools for forestry management were developed and are still being implemented as result of the program's assistance.** The program facilitated the development of a forest inventory methodology, a national forest strategy document and a methodology for evaluating national forests, a calendar for seed collection for forest tree species, a guide to commercially viable lumber trees in the DR, a viable national market for tree seeds with emphasis on native species, and a regulation for the marketing and transport of forest products in the DR. One of the results is that the **Dominican Republic has a functional Native and Endemic Seeds Bank and a seed conservation program.** The seed bank for native and endemic species was established to preserve, conserve, and maintain the genetic patrimony of Dominican forest plants. This will allow production of the genetic material for ecosystem restoration processes in the entire island. The project was instrumental in equipping the bank for the genetic material preservation, as well as training technical staffers, in collaboration with the USFS. Complementarily, 120 brigades in 5 different areas of the country were trained in seed collection methods to provide the bank with the necessary genetic material. As part of the seeds bank concept, a study on seeds' markets was conducted and the basic guidelines for establishing a forest seeds' market in the DR were outlined.

In a complementary discipline, under this component the program developed a comprehensive training program on forest fire control. 612 reforestation brigades were trained in basic fire control in the southwestern and border areas of the Dominican Republic, where forest fires are more frequent. Additional courses on forest fire ecology to higher-level technical staff also took place to complement the work in the field at the planning level. As result, it has been reported that response time to forest

fires has decreased in areas most frequently affected. Prevention of wildfires in the mountains of DR is important to avoid loss of planted forests that could result in economic loss and affect the incipient Dominican forestry industry.

The tourism sector also received assistance under this component. The program provided extensive technical assistance resources to assist the ME, SECTUR (now MITUR), and other entities in a diagnosis of possibilities for funding and implementing sustainable tourism strategies that preserve the nation's biodiversity. Notably, USAID-TNC EPP and TNC coordinated these efforts with other donors (JICA) and the USAID-Dominican Sustainable Tourism Alliance project. Assessments regarding knowledge, attitude and perception of communities surrounding protected areas in Samaná and Bayahibe were carried out, as well as a complementary assessment of touristic visitation to National Park del Este near Bayahibe. These provide not only important information for decision making in terms of protected area management, but the program also proposed plans for tourism visitation management, public signage on important protected areas, as well as training to park rangers and park managers in tourist management.

4. Improved Performance by the Private Sector:

Market driven public-private partnerships can promote sustainability in several areas related to managing natural resources, fostering clean production, and also implementing “brown agenda” activities. This component, as part of the original program focus, was designed to expand and enhance the participation of private firms in environmental management, clean production practices in various industries. Tourism, forestry, agriculture, transportation, and other industries were targeted for improved performance, through promotion of clean production mechanisms and environmental management systems (EMS).

To facilitate ME's environmental quality's enforcement mission, the program provided technical assistance in revising and strengthening the environmental audit system. This is one of the ME's mechanisms of interaction with the private productive sector. Other mechanisms developed with the program's support are based on a proactive approach, such as the cleaner production policy, and the creation and establishment of the National Cleaner Production Award. To promote participation in these initiatives, the Cleaner Production certificate course trained 36 ME technicians, corporate environmental managers and consultants, and academic staff in Cleaner Production, enabling the necessary skilled labor to enforce EMS.



ASIEHaina voluntary sustainable production agreement signing. Photo: ME.

The private sector currently participates proactively in environmental management strategies and cleaner production initiatives. Governance driven by economics can facilitate sustainability of the so-

called “brown agenda,” consequently reducing threats to biodiversity and potential damage to local ecosystems. To date, the ME has created alliances with the private sector to improve environmental management through the signing of 4 sustainable production voluntary agreements with four productive associations (BANELINO, ASIEHaina, CONFENAGRO and ADOGRANJA). The latest three were signed after conclusion of direct technical assistance on the subject to ME; this indicates its enhanced capability to carry forward with public-private alliances without project assistance. Further agreements are currently being pursued. The agreements are complemented by the National Cleaner Production Award as part of a program-supported strategy being implemented by the ME to promote voluntary improvements in private sector environmental performance. Other related highlights of the program include the assistance and accompaniment to ECORED – the entrepreneurial network for environment protection. ECORED is currently a leader of the private sector in environmental protection matters, and participates proactively in initiatives such as the TNC – IDB/GEF Water Funds project.

4.2. Second Phase: from 2011 to end of the project

As discussed earlier, the project description was amended at the end of FY 2011 - beginning of FY 2012, and the major objective of USAID-EPP was modified to emphasize the enabling of the Dominican Republic to adapt effectively to climate change. Many activities of the third and fourth component were completed and phased out, and a fifth component was added for ecosystem-based adaptation.

1. Institutional Strengthening:

The mainstreaming of climate change responsiveness throughout government was a top priority during Phase 2, and the enabling and strengthening of government capabilities at all levels was a major part of program's achievements during the period. Part of this process was the consolidation of an agenda of



SEA process. Photo: @TNC

climate change and its potential effects as important issues from the points of view of the public, private and NGO sectors, and all of civil society. As result of program's assistance, **Dominican Republic has information for decision-making and strategy development related to CCA.** The first national assessment of vulnerability to climate change, as well as a survey of public perceptions of climate change were developed. Dominicans recognize climate change impacts and are concerned with observed effects, but only 55.9% identified its anthropogenic origin, and only 22% recognize the gases that cause the greenhouse effect.

Both analyses provide key information for the development of policies and strategies, as well as the identification of channels for education and awareness raising.

The central government has important tools to mainstream climate change adaptation into its activities and plans. These instruments are key for the mainstreaming of environmental and climate change considerations in development planning. During early FY13, the country embarked on a participatory process to draft the first National Climate Change Policy. Program partners participated on this UNDP / CNCCMDL lead initiative through participation in the drafting process. They provided special inputs on adaptation sections of the proposed bill, including a working session on climate change and gender, to develop indicators reflecting the intersection of both these development aspects. Official issuance of the policy is still pending.

With direct assistance from the program, two of the most important planning and enforcement tools made available to the GoDR through this component were (1) the new guidelines adopted for preparing Environmental Impact Assessments (EIA), and the inclusion of the Strategic Environmental Assessment (SEA) in the National Land Use Plan, in both cases explicitly incorporating CCA considerations into these crucial decision making processes. Together, these formally introduce climate change adaptation into economic development and land-use planning for Dominican Republic.

Since **environmental permitting represents a key policy instrument for the incorporation of CCA elements into public and private development nationwide**, the program assisted the ME in incorporating climate change considerations into guidelines for environmental evaluations of key productive sectors: housing, tourism, mining, and agriculture. Part of this process was the organization of a series of workshops for public and private stakeholders and decision makers for these four sectors of the economy, as well as training for the technicians participating in the evaluation process. The official resolution issuing the new guidelines was signed on February 6th, 2014. Now, ME has the tools to assure that to be approved, new development projects in the DR will not possibly exacerbate future climate risks and degradation of protective green infrastructure, but instead will be a part of the country's adaptation to the climate changes that are to come.

In parallel, the Program provided critical technical assistance to carry out the **Strategic Environmental Assessment (SEA) of the National Land Use Plan (PNOT)**, involving the Ministry of Economy, Planning, through its Directorate of Land Use Planning (DGODT), the ME and the CNCCMDL. **The PNOT is the ideal mechanism to mainstream environmental and climate change considerations into long term decisions on sustainable natural resource management on public and private lands.**

Leveraging on a UNEP initiative, the program carried out a **barriers to climate finance assessment**. The study generated a critical route that could potentially increase access to climate change adaptation funding for Dominican institutions. Since in many cases, funding will depend on prioritizing climate change initiatives at the national level, some institutions, such as the Ministry of Women and INAPA, have undertaken the task of including climate change in their institutional strategic and operational plans⁸. Additionally, the CNCCMDL has vouched to work with the Ministry of Finance and its dependencies on adapting the national finance architecture to better support increase in funding.

The international community drives and/or manages some of the current climate change funding, and it effectively directs it toward different initiatives at the local and national level, but the study concluded that some of this funding does not align with national priorities, so there should be more communication between donor agencies and the government. For this reason, the critical route suggested that during the climate change Cooperation Roundtables, the dialogue should focus on the country's priorities and differentiating climate change funding from Official Development Assistance. Since the results of the EPP-UNEP study on barriers to financing CCA indicated that a lack of general knowledge on the subject was a major issue, the Program organized a workshop for staff members of the General Directorate of Public Credit (PCDG).

⁸ And the program has provided basic induction on climate change to these and other Dominican Government Institutions, in order to facilitate their appropriation on the subject as well as their participation in related policies.



Alumni of the certificate course climate change and local level adaptation for municipal staffers. Photo: @IDDI

Local governments have capacities and tools to incorporate adaptation to climate change in the management of their territories. Building upon the assistance provided to local governments during phase one, the program emphasized the strengthening of local governments' capacities to carry out local plans and mainstream environmental and climate change considerations into municipal management. This integrated approach to strengthen assisted municipalities included training for municipal technical staffers and decision makers. Two certificate courses – one on climate change adaptation and terrestrial zoning and the other on climate change and local

level adaptation for municipal planners, municipal environmental officers, mayors, urban planners and others were carried out reaching 100 people from municipalities, but also from central government entities whose responsibilities intersect those of local governments. Other informational sessions and shorter trainings on climate change, vulnerability and climate change adaptation were provided to municipalities (in Samaná, Jarabacoa, Constanza, National District and others), Environmental Provincial Directorates, and community based organizations.

The municipality of Jarabacoa – the center of an important tropical rainforest and upper watershed ecosystem – officially issued a resolution rendering CCA one of the community's development planning priorities and has included climate change adaptation plan in its 5 year municipal development plan as result of program's assistance and leveraging support from other projects. With program assistance, Bayahibe developed a strategic plan for adaptation in their community using participatory 3D mapping and consultation with different stakeholders from the community.

A Land Use Plan with climate change considerations was developed for Samaná province. It is the first zoning proposal including climate change considerations and represents an opportunity for its municipal governments of the province to manage their territory with adaptation to climate change as an important factor. Samaná's municipalities are including climate change into ordinances and are preparing to draft local development plans based on the zoning proposal aforementioned. CEBSE, in collaboration with FEDOMU, provided them with a digital platform, GIS training and other accompaniment to be able to translate the zoning plan into concrete projects and actions in the territory.

Dominican civil society participates in adaptation strategies. Acknowledging that an informed society is more likely to appreciate and support government policies addressing climate change vulnerabilities – whether they be at local or national levels – the Program carried out numerous activities to increase public awareness, and to generate broad support for effective adaptation. Activities were carried out that enhanced institutional capacities in public and private sectors, including mass media campaigns,

information interchanges, staff training, interactive workshops and conferences, the generation of studies, policy development, the provision of technical assistance, and other cooperative initiatives.



IDDI / Climacción, a network of both public and private institutions that discuss climate change issues to promote action, launched a mass media campaign for climate change adaptation awareness at the national level under the USAID/TNC Environmental Protection Program. During the latter part of the program and to complement this initiative, IDDI developed a more specific informational campaign for municipalities, using simpler language to be able to reach a less educated population in municipalities across the country and promote locally based adaptation strategies. Climacción's webpage reported a significant increase in their webpage visitation after mass media campaign placement in Santo Domingo's billboards. In parallel, IDDI has strengthened the members of their Climacción platform to develop leadership skills necessary to raise awareness about climate change adaptation in the different sectors in which they operate. Conferences have been held periodically with different stakeholders from the private sector to raise awareness on the topic. The objective is to motivate the different stakeholders to investigate further about the impacts that climate change will have on their respective sectors and to take actions about it.

Local communities of the Dominican Republic organize to adapt to climate change. Inclusive and participatory governance is promoted to ensure the sustainability of initiatives. Awareness raising and education have more direct impacts in decision making when actors take action. The program has supported the creation of three local networks for adaptation to climate change in three communities: a) Jarabacoa b) Bayahibe and c) Community Organizations of Greater Santo Domingo⁹. These three networks have identified areas of work specific to their communities (in which disaster preparedness is an important component) and have set working priorities. These initiatives promote enhanced governance of plans related to adaptation, as well as public-private alliances, since it's acknowledged that all sectors must participate in comprehensive adaptation strategies. These also involved close work and collaboration with corresponding municipalities, some of which have already explicitly included climate change as one of their priorities.

⁹ The first community-based climate change adaptation network was established with 32 different entities representing neighborhoods in Santo Domingo.

The private sector participates in roundtable to discuss adaptation strategies. The program has facilitated the signing of two protocols creating inter-sectoral strategic alliances to identify climate change adaptation strategies in the tourism and the water sectors. Partner IDDI continues –after project completion – pursuing similar agreements with other key economic sectors, such as Energy. The approach seeks to establish a permanent discussion platform from where key climate related topics for each sector can be discussed and solutions proposed.

2. Biodiversity Conservation:

During Phase 2, the program’s efforts in biodiversity conservation focused on maintaining the health of ecosystems, many of which buffer society against climate change, including rehabilitation of important watersheds, continued enhancement of protected areas management, promotion of sustainable plans for other biologically important areas, monitoring and restoring coral reefs, monitoring migrating whales, and collaborating on research and methodologies for establishing water quality indicators.

Valle Nuevo National Park has improved management mechanisms. During this period PRONATURA completed re-vegetation work in watersheds of Aguas Blancas and Nizaíto by providing assistance to the follow-up commission of the Annual Operative Plan (POA, Spanish acronym)¹⁰. As stated in the plan, these areas are gradually re-vegetated, expanding the USAID/TNC - EPP’s reach to all areas previously affected by agriculture. A milestone achieved during FY12 was the signing of a co-management agreement between the Ministry of Environment and the Propagás Foundation (a Dominican NGO) for approximately 80 km² (8000 ha) for the central area and road access of Valle Nuevo National Park, where most visitation and impact concentrates. The Nature Conservancy and other Dominican institutions such as the Botanical Garden and the Fundación Moscoso Puello are part of the co-management council, promoting sustainability of the program’s achievements in improving management of this critically important conservation area. The co-management actions will also be based on the POA developed with USAID-TNC’s EPP support.

Through the CEPF funded initiative carried out in Montaña la Humeadora National Park (PNMH), PRONATURA drafted the operative annual plan for PNMH. Freshwater protection interventions in Duey are part of the plan, and PRONATURA pursues its replication in other areas surrounding the park. Valle Nuevo and Montaña La Humeadora National Parks contribute to more than 65% of the water Santo Domingo receives for its population. **These interventions in both parks strengthen the natural hydrological function of nationally-important watersheds where climate change projects warming and drying, contributing to freshwater availability for over 3 million people.**

CEBSE maintains and updates the whale monitoring database and system. CEBSE has guaranteed private support for whale monitoring that will allow them to continue with this initiative in future years. This is strategically important in terms of complementing official capabilities for whale monitoring and

¹⁰ The commission has undertaken reforestation on its own after PRONATURA’s intervention and following up with agreements in the annual operative plan.

ensuring one important income flow to Samaná province, which in turn provides a source of income diversification (whale-watching and other related tourism) in a region facing climate uncertainty. Accordingly, information about whales is useful and important for local and international authorities, as well for research and decision making at the international level. This assistance supports the Ministry of Environment in complying with its Multi-Year Plan, and specifically to its goals for management and conservation of species and ecosystems. The assistance is also part of CEBSE's commitment in the memorandum of understanding for the sustainable management of the population of humpback whales in the National Marine Mammal Sanctuary and in Samaná Bay. Also, technical assistance to fishermen cooperative continued during this phase, in order to consolidate their capacity to promote sustainable fishing in the area and to pursue alternative livelihood sources as a means to reduce pressure on local fishing resources.

The Lion Fish Derby is a regular Bayahibe event. The activity is organized by FUNDEMAR in collaboration with the Romana-Bayahibe Hotels Association, the Eco-tourism Cluster, local private sector and Bayahibe municipality. The purpose was to create awareness through a sport competition regarding the negative impacts of this invasive species. FUNDEMAR initiatives in Bayahibe include alliances with the touristic sector for reef monitoring and biodiversity conservation to maintain natural protections and tourism, the drafting of and adaptation action plan for hotels in the area, the strengthening of local fishermen to participate in sustainable initiatives, and an education program about climate change in schools. These elements are part of an integral effort based on the participation of stakeholders and community leaders to improve environmental information, sustain a fishing industry in the face of climate change, and educate youth on the subject.

Support to Del Este National Park included the development of key assessment and proposals. The program carried out a Knowledge, Attitudes, and Perceptions (KAP) Assessment of the protected area as well as a Visitation Assessment and Visitor Management/Monitoring Plan proposal.

The program has set the basis to establish biological indicators for water quality. The Ministry of Environment now has a one year long macroinvertebrates' database (monthly samplings) in seven rivers in the Cordillera Central and the Samaná Peninsula, yielding a total of 175 representative samples of the macro-invertebrate fauna (33 families identified). This information is the basis to establish a methodology that facilitates the use of biological indicators – based on the presence and type of aquatic macroinvertebrates – for the implementation of water quality standards. TNC, PRONATURA and the Environment Ministry are currently collaborating to set up a methodology – based on this research – to monitor biological water quality indicators. The purpose of developing the biological gradient is to promote the use of biological monitoring as a quality control measurement for rivers in the Dominican Republic. This is an economic, effective monitoring tool that can be used at the local level with the participation of rural communities, which could help not only the ME in water monitoring but other entities as well. This information can contribute greatly to community lead freshwater protection initiatives, and can be the basis for future payment-for ecosystem services mechanisms to protect and manage watersheds for improved water quality.

3. Ecosystem Based Adaptation:

A major change in the operational structure of the Program for Phase 2 was the refined emphasis on working toward climate change adaptation in an integrated way (with respect to various entities and resources) but within the parameters of distinct ecosystems, such as Samaná Bay, the coral reefs of the Southeast, tropical rainforests, or a specific watershed or national park. This ecosystem based approach also lends itself to the organization of community-based initiatives involving a variety of public and private entities that may share common interests with respect to environmental concerns and resource use.

Information regarding reef health and water temperature has set the basis for reef restoration in Bayahibe. Monitoring results to date have allowed FUNDEMAR to obtain an important volume of data on the impact of temperature on reefs near Bayahibe, without precedent in the Dominican Republic. The database can support the Ministry of Environment in decision making and in the management of economic activities that represent stressors to the ecosystem. Information is currently used by FUNDEMAR: a) To increase awareness among local divers of climate change and direct interaction¹¹; b) It has identified the Dominicus reef as the most vulnerable to the temperature increase; c) It has identified coral species that so far have tolerated temperatures as high as 30 degrees Celsius, and take this into consideration in restoration projects planning.



“Planting” a coral fragment. Photo @FUNDEMAR

In July 2012 the restoration initiative started with the setting of coral nurseries, which are important in developing national capacity to manage and re-seed damaged coral reefs after extreme temperatures and hurricanes. The first year was intensive in management and monitoring of coral nursery structures, and despite the occurrence of tropical storms Isaac and Sandy in 2012, to date there are 3 nurseries stations with 16 different structures combined. Genetic material used is *Acropora cervicornis*, which has reported an annual normalized growth rate between 1.3 and 5.4 cm¹². FUNDEMAR’s

alliance with Fundación Ecológica Punta Cana and local stakeholders such as diving schools, will allow ongoing reef health monitoring and coral nursery maintenance. Also, permanent temperature-monitoring equipment provided by the program (small thermographs installed directly and permanently on the reef) will register temperature in the three permanent monitoring stations set up by FUNDEMAR.

¹¹ Local divers and dive centers actively and voluntarily collaborate with temperature monitoring and with the conservation of coral reefs of this area in general.

¹² Considering tropical storms incidence and relatively short time of coral nurseries, this growth rate has exceeded FUNDEMAR’s expectations.

In parallel, training provided to divers of local diving centers has been key for maintaining the flow of information into the database, providing 993 temperature registers in 23 different spots on the reef, at 5 different depths. Indirectly, data provided by divers can provide indications of the pressure posed by recreational diving in most visited spots (compared to less visited ones), which could be useful in the future for carrying-capacity determinations and in monitoring highly localized effects of extreme climate events. FUNDEMAR also developed an action plan proposal for the coral reefs in Bayahibe based on a brief analysis of the current condition of reefs in shallow areas from Catalina to Saona Islands, identifying main threats and summarizing actions proposed and agreed upon by divers, fishermen and officials from Del Este National and Catalina Island National Monument. **FUNDEMAR has become the champion for reef restoration and the promotion of local alliances in Bayahibe - Del Este National Park area.** This intervention is important both for its relevance to controlling climate change impacts in the low coastal area of Bayahibe, and for restoring the coastal protections afforded by now-degraded coral reefs anywhere in the country.

As per request from MITUR, the program also developed a Tourism Carrying Capacity Study for the Municipal District of Bayahibe: Evaluation of Environmental and Management Conditions considering Climate Change as a step towards sustainable tourism development. Recently, the Ministry of Tourism has developed tourism zoning plans for several areas, and this study will be an input to the plan that is currently being developed for the M.D. of Bayahibe. This kind of guidance enables protected areas managers to plan eco-tourism impacts based on actual absorptive capacities of the resources, rather than reacting after the fact to environmental damage by overuse.

Local communities organize and promote participatory governance of freshwater protection initiatives and coastal protection initiatives.

Guaranteeing freshwater supply is one of the main challenges identified for human settlements in the vulnerability assessment carried out by the program. The projected warming and drying trend threaten national water supplies by altering hydrological function in mountain watersheds that serve national agriculture and the nation's largest cities. Accordingly, three freshwater protection initiatives were developed by the program, in key work areas. These initiatives focused on creating social infrastructure locally to govern resource protection while acknowledging social needs present in selected micro-watersheds. Effective governance mechanisms combined with sustainable productive strategies can guarantee the sustainability of initiatives beyond the Environmental Protection Program closure.

Duey River (Haina watershed) feeds into Santo Domingo aqueduct. 22 ha restored.

San Juan River, main water source of Samaná's aqueduct. 16.1 ha restored.

Arroyo el Cercado, main source of Jarabacoa's aqueduct. 18.85 ha restored.

The project focused on obtaining critical information on climate change impacts for watersheds and establishing pilot activities to demonstrate land-use management for climate resilience. Activities carried out include: riparian restoration, soil conservation, agroforestry, actions to reduce water velocity in areas of high erosion, environmental education on adaptation to climate change at the community

level; analysis of the watershed communities with emphasis on adaptation to climate change; participatory planning; assessment and capacity building from the measures applied to the recovery of the watershed ecosystem and the incorporation of communities in the process. In conjunction with the hydrological modeling conducted for the watersheds of Santo Domingo and Santiago, and the development of the water funds for these two cities, the results provides information necessary for managing land-use change for protection of hydrological services, conservation of biological diversity, and continued human uses in the watershed.

Program partners in these three micro-watersheds have achieved locally based public-private alliances to protect the resource and to enforce agreements, as a means to guarantee freshwater availability in Samaná, Jarabacoa and Santo Domingo. More importantly, appropriation of restoration and adaptation initiatives has been promoted. Local actors understand how climate change can affect their livelihoods. PRONATURA led the signing of a Partnership Agreement for the Governance and Conservation of National Park Montaña la Humeadora and its water resources (Duey micro-watershed). 24 public and private institutions agreed to participate as allies to improve park governance, and to jointly develop projects and plans based on the park's annual operational plan. These include government institutions such as the Environment Ministry, and the Industrial Association of Haina Entrepreneurs - ASIEHAINA, as well research and academic institutions such as UNPHU and CEDAF.

As result of program's support the Dominican Republic has established its first two Water Funds, for Santo Doming and Yaque del Norte respectively. The Water Funds regional initiative is a matching project to the Environmental Protection Program, and is part of the Latin-American water funds alliance. Water Funds are one financial mechanism to provide the funding needed to implement medium and long term ecosystems conservation strategies to ensure watershed conservation and freshwater availability. TNC's purpose is to ensure a permanent investment mechanism for watershed conservation in the DR. The Program supported the hydrological modeling with climate change projects for four important watersheds (Haina, Nizao and Ozama, feeding the great Santo Domingo area; and Yaque del Norte). With this information, decision-makers have accurate scientific information regarding climate change projections, allowing them to implement the policies and actions that manage upstream water quality and quantity for resilience to climate change for the benefit of downstream users and upstream inhabitants. Funds will be operational in 2015. Through the funds the private sector participates in freshwater conservation proactively.

4.3. General Observations and Follow-on Recommendations

1. Selected Observations from Partners and Participants

Attention to the impressions and perceptions of participants is a critical element of reporting on the impact of a program such as USAID/TNC-EPP. This Project was a large, complex, and dynamic undertaking, and many interesting comments and observations have been made in partner reports and also during preparation of this report. Some of these thoughtful and instructive comments are

presented below, some translated as direct quotes from individuals, and some – especially those that were similar but expressed in different ways by multiple respondents – are translated and paraphrased. The sources for these observations include individuals that have participated in or closely observed the Program from INTEC, IDDI, PRONATURA, CEBSE, FUNDEMAR, ME, and TNC.

Partner Observations Regarding Important USAID-EPP Results and Impacts

- In its final phase, one of the most important and lasting impacts of project assistance to ME was in the process of incorporating climate change into terms of reference for EIA. This accomplishment makes climate change adaptation a fundamental part of environmental regulation in Dominican Republic.
- The EPP was a significant contribution to the fundamental objective of creating capacity in the DR to comply with environmental commitments under DR-CAFTA.
- The implementation of ecosystem rehabilitation in watersheds such as the Nizaito and Aguas Blancas of the Valle Nuevo National Park established a documented and invaluable baseline reference for similar interventions in other protected areas.
- The City Council of Jarabacoa, as well as the local Board of Governance, in their Municipal Development Plan for the area approved the project “Formulation, Popularization, and Execution of the Municipal Plan for Adaptation to Climate Change.” This is an innovative step for an important secondary city, and is part of the overall progressive stance that the municipality has taken in recent years.
- One of the most important EPP successes is that the Municipal Council of Santa Bárbara of Samaná elaborated and approved two environmental ordinances addressing climate change as it relates to solid waste management and the fishing sector.
- Another unplanned result to which the Program contributed is that, after USAID-EPP training and TA interventions, **the Council of the National District proposed creation of a Climate Change Unit within the Environmental Secretariat of the District** (home to the capitol city of Santo Domingo). Also related to water for Santo Domingo, the participatory development and execution of a micro-watershed plan including CCA for the Haina-Duey headwaters constitutes a high priority impact.
- Partners expressed a high degree of satisfaction in the development of systems for monitoring the impact of climate change on coral reefs, and in establishment of coral nurseries, especially those in the area of Bayahibe. It is expected that these initiatives will contribute to the long term viability of these spectacular ecosystems that are so important to tourism and maintaining fish populations and diversity.
- The empowerment of local communities with respect to climate change has been integral to the program’s success. A powerful example involves the communities of Jarabacoa in the central highlands, and Bayahibe, on the southeastern coast, where both locales created Community Climate Change Networks, and where both communities officially declared the theme of climate change as a local priority.

2. Selected Lessons Learned and/or Concerns Expressed by Partners and Participants of USAID-EPP

- The Program was excellent, and taking into account that the overall objective was to strengthen capacities for adapting to climate change in the DR, we have learned that this objective can be met in the contexts of geography (from the mountains to the reefs), theme (agriculture, forestry, watershed protection, environmental management, policy and regulation, education, training, research), and society (youth, fishermen, farmers, artisans, hotel keepers, etc.).
- One of the challenges for the prime implementer is to coordinate the working strategies of each partner to avoid duplication of efforts and maximize donated resources. With so many components and partners, it can be difficult for the lead agency to spend adequate field time on observation and oversight and a proper planning and coordination is key to avoid implementation issues; at least one staffer should be dedicated to facilitate planning and coordination activities.
- Considering the cumbersome procedures for procurement, project acquisition plans need to be well planned to avoid delays due to delivery of equipment and field supplies, especially when additional customs procedures are necessary. (It is useful to observe that delivering specialized equipment to a project site typically implies superimposing complicated procurement processes for domestic and international suppliers, which is not to say that the procedure could not be more streamlined in the future).
- Several individuals mentioned the problems caused by the hurricanes of 2012, which, of course, represent issues that are beyond the ability of project management or donor groups to control. Nevertheless, consideration of ways to mitigate the impacts of weather events is an integral part of preparing for and adapting to climate change.
- The matter of an excess of time dedicated to meetings was mentioned, in the context of a perceived need to dedicate less resources to meetings and more to field activities. This is a matter that cannot be objectively quantified, since it varies by institution, and varies in importance by individual. “The design of the Project corresponded very closely with national needs for realizing better management in environmental terms.”

3. Implementing partners’ strengths

Besides programmatic objectives, the program pursued the strengthening and consolidation of local implementing partners as a means to enhance local capacity to a) implement projects (both donor-funded or by other means) and to b) give continuity to actions and initiatives undertaken by the program as well as the pursuance of common conservation and enforcement objectives. EPP implementing partners participated in program implementation based on their programmatic expertise and geographical reach. Most of the support provided was in terms of consolidating internal administrative process and enhance internal control mechanisms.

These Dominican institutions provided a variety of strengths that combined addressed key topics for environmental protection and adaptation: from ecological restoration and scientific based capacity, to process facilitation, education and creation of social capital for transformation of processes and behaviors as well as enhanced governance. Some of them have already access to additional funding

from donor community and other sources to continue with their mission, and are prepared to manage projects directly. In parallel, program implementation created a network of information and technical exchange (between implementing partners, as well as third parties such as civil society and the private sector), as well action coordination of high value for Dominican conservation and adaptation initiatives.

 <p>The Nature Conservancy Conservando la naturaleza. Protegiendo la vida.</p>	<p>The Nature Conservancy</p> <ul style="list-style-type: none"> • Leading conservation organization. Scientific and technical capacity; knowledge in ecosystem based adaptation • Water funds development as a tool for sustainability • Policy and capacity development for governing institutions.
	<p>CEBSE</p> <ul style="list-style-type: none"> • Key stakeholder in Samaná. Strong social capital and credibility. • Integrated approach for intervention in Samaná province (social and ecological dimensions). • Has important alliances in the territory (ecotourims cluster, boat association, fishermen)
 <p>FUNDEMAR FUNDACION DOMINICANA DE ESTUDIOS MARINOS. INC</p>	<p>FUNDEMAR</p> <ul style="list-style-type: none"> • Leading Dominican marine research entity. Reef health monitoring and restoration. • Key stakeholder in Bayahibe with strong social capital built. Alliances with private sector and local stakeholders. • Capacity to intervene in pilot projects, multiply and replicate.
	<p>IDDI</p> <ul style="list-style-type: none"> • Leader in participatory processes, and grassroots organizations involvement. Process facilitator, participation promoter, strong municipal assistance capacity. • Strong social capital built in Santo Domingo, where decision makers are. • Education and awareness raising.
	<p>PRONATURA</p> <ul style="list-style-type: none"> • Strength in mountain ecosystems conservation and management. Watershed restoration and participatory governance of processes. • Research capacity • Capacity to intervene in pilot projects, multiply and replicate
 <p>intec INSTITUTO TECNOLÓGICO</p>	<p>INTEC university</p> <ul style="list-style-type: none"> • Leading higher education entity, natural multiplier and capacity builder • Research capacity. Environmental quality monitoring capability. • Currently coordinating the first Environmental Network of Dominican Universities.

5. CONCLUSIONS AND RECOMMENDATIONS

Looking back at the two overall objectives that this Project articulated (1) at its inception, and (2) for its mid-life adjustment, it is time to consider performance.

- The original objective of USAID-EPP was “to strengthen institutional capacities in the Dominican Republic (public and private) to promote more effective protection of environmental quality and conservation of biodiversity.”
- The revised objective was “Enabling the Dominican Republic’s adaptation to global climate change.”

In terms of the results produced via implementation of the five thematic project components, the exhaustive list of activities accomplished as planned, the performance indicators met or exceeded for expected outputs and outcomes, and based on general observations by key partners and others, USAID-EPP has met the expectations set for it initially, and the revised expectations identified for its final implementation phase. In spite of being an organizationally complex undertaking that involved coordination of several partners, USAID-EPP-TNC met the internal and external challenges it encountered, and was very successfully implemented throughout its five-year life.

In addition to contributing to addressing the more general set of systemic environmental protection issues discussed above, externalities were not the only challenges to the implementation team. Execution of a program with as many activities and as many partners as USAID-EPP typically introduces a series of internal issues with respect to inter-institutional coordination, technical continuity, potential for duplicative efforts or organizational sensitivities, timely availability of funds and other resources, minimization of audit vulnerabilities, compliance with a complex range of regulations and requirements, and myriad other potential obstacles to effective implementation requiring management attention by TNC, USAID, and others. USAID-TNC-EPP has been remarkably efficient in dealing with internal issues, as evidenced by the results noted in historical project reporting and the informed observations of individuals in key roles among major program partners. For example, mid-course changes in the USAID-EPP structure were contemplated from the outset, and in 2011, significant changes were considered and adopted with respect to the remainder of USAID-EPP’s implementation trajectory.

The importance of continuity is easily overlooked. It is evident that a lot of success regarding this project is due to the unusually long inter-institutional relationships developed between USAID, TNC, and ME, for example. In addition, many of the same institutions from civil society and the NGO sectors have “appeared” continuously or repeatedly in the contexts of USAID/GoDR environmental initiatives.

Professional continuity in government partners is an important aspect of the success of this project. While it is often very difficult to maintain technical, political, or personal continuity within government entities that are subject to periodic changes in government leadership at numerous levels, in the ME in the DR, over the preceding six or seven years, several key professional partners have been maintained by government. This has provided a notable boon to results achievement in USAID-EPP.

Selected Recommendations Regarding Future Endeavors and Sustainability

- Due to the relevance and importance of the subject for the future of the country and its municipalities, a strong focus on adaptation to climate change should be continued, to expand upon the successful base generated under this Project. (This strong recommendation to keep working on CCA was expressed by multiple respondents and observers, and should be considered the highest priority among recommendations.)
- Finding ways to sustain financing for environmental initiatives continues to be a critical need for future success in adapting to climate change, and should be part of the ongoing CCA strategy. TNC and partners in USAID-EPP are obviously taking this recommendation seriously. For example, IDDI has created the “Climate Change and Sustainable Development Center” to help sustain and expand work carried out under USAID-TNC-EPP during the past five years in the areas of integrating and coordinating CCA strategies with various partners, and PRONATURA has obtained resource commitments from the Critical Ecosystems Partnership Fund (CEPF), allowing continued integrated execution of important protected areas and watershed management initiatives. TNC and INDHRI have signed an MOU for future cooperation in water resources. Future IDB/GEF funding has been secured for management of important watersheds, and the system of payment for ecosystem services developing in the water funds specifically addresses technical and financial sustainability.
- While USAID-EPP has undoubtedly provided a strong base for moving forward, and the overarching recommendation arising from this project’s success and from the varied input to this report is to continue a strong focus on adaptation to climate change as a general programming direction, specific operational elements in a number of areas should be expanded within the overall CCA context. A few examples include bolstering ME policy capabilities, continued efforts to strengthen environmental management at municipal and community levels, expanded efforts to generate and empower public interest in environmental issues and potential CC vulnerabilities – school children, exposure of officials from other government agencies to CCA concepts, ecosystem based management of more upper watersheds and protected areas, and increasing emphasis on financing and bringing more private sector participation into the CCA process are all of high importance in any future interventions.
- Specific opportunities to install a national capacity for climate change adaptation include supporting implementation of the climate adaptation aspects in the national regulation for Environmental Impact Assessments. The regulation is there, and the pieces necessary for compliance are present in DR. Effective implementation of the regulation would benefit from a focused program or a national incentive system to help businesses or municipalities adopt mixed green/grey development strategies to affirm the regulation and begin to point the way for future economic development – and secure fidelity to the national policy by repetition of its successful implementation in actual cases. Within this framework, adoption by early-adopter coastal communities of management strategies for ecosystems offering low-cost protections from the damages of hurricanes, storm

surge, and flooding should be promoted; the national policy now exists, and its implementation needs to be made “automatic” through additional, closely-monitored applications. In terms of managing the nation’s water supply, monitoring the benefits of land management sponsored by the water funds in terms of helping watershed inhabitants adapt to climate change impacts on crops and water, and in terms of water quality and quantity delivered to downstream consumers will be critical. This information can be used to adapt management strategies to the changing climate, to build popular support for household payments to the water funds in the future, and to sensitize Dominicans to the manageable aspects of climate change. Only by returning real information on the benefits of watershed management to “buyers” in cities and the agricultural landscape can we cement the feedback loop of payment for ecosystem services.

6. ANNEXES

Annex A. References (Documents, Interviews)

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- d. Lamelas, Patricia, CEBSE
- e. Lancho, Patricia, FUNDEMAR
- f. Otero, Rosa, ME
- g. Perez, Evaydee, IDDI
- h. Taveras, Maria Antonia, IDDI (formerly INTEC)

ANNEX B: Description of activities carried out by the program

	Components	Phase one: general description of activities
1	Institutional Strengthening for Effective Enforcement of Environmental Laws	
1.1	Coordinating national and regional environmental agendas	<ul style="list-style-type: none"> • Coordinate the national and regional environmental agendas for DR-CAFTA • Develop and implement procurement plan to strengthen Environment Ministry and municipalities. • Develop a training program on environmental laws, multilateral environmental agreements and DR-CAFTA commitments for Public Ministry and Environment Ministry legal and technical staff. • Promote Regulations on Inspection, Surveillance and Monitoring • Support the development of the provincial environmental agenda for Samaná
1.2	Improving environmental impact assessments (EIAs) and audits	<ul style="list-style-type: none"> • Conduct assessment of Environment Ministry's EIA procedure and make recommendations for its improvement to reduce the backlog in environmental permit requests. • Develop and deliver a training program on EIAs for Environment Ministry staffers, consultants and environmental managers and university professors • Strengthening follow up and monitoring process. • Support the organization and strengthening of the "single access window" service at Environment Ministry • Support institutional capacity for water quality management
1.3.	Improving municipal environmental management	<ul style="list-style-type: none"> • Develop and deliver a training program on municipal environmental management for representatives from select municipalities. • Develop and deliver a training program on micro-watershed management including fire detection and suppression for representatives from selected municipalities and Environment Ministry. • Provide technical support to selected municipalities to participate in the municipal environmental management training program. • Strengthen the Municipal Environmental Fora (FAM). • Disseminate the forthcoming "Guide for Municipal Management." • Develop micro watershed pilot projects • Provide technical support to develop and implement pilot solid waste management programs in selected municipalities.
1.4	Enhancing citizen awareness and participation	<ul style="list-style-type: none"> • Draft and submit regulations on Public Participation that harmonize all related instruments established by the Environment Law 64-00 into one. • Draft and submit regulations on Public Participation in the EIA process • Support Environment Ministry in drafting regulations for its information requests and complaints management system related to DR-CAFTA. • Support the Environment Ministry in drafting regulations on reports, complaints and claims presented by the public to the Ministry; assess and propose improvements to the operations of the unit that handles those reports and complaints • Develop and implement a communications plan on DR-CAFTA and the environment. • Support Environment Ministry in developing educational material and curricular content.
1.5	Strengthening information management	<ul style="list-style-type: none"> • Assess current situation of the National Environmental Information System (NEIS) to propose necessary modifications. • Design procedures of the NEIS to support and improve the EIA review process. • Assess needs for GIS database to identify the geographical distribution of permits,

	Components	Phase one: general description of activities
		aquaculture activities, climate change, etc.
2	Biodiversity Conservation	
2.1.	Combating illegal wildlife trade	<ul style="list-style-type: none"> Finalize and print “red list” of endangered species of the Dominican Republic and design mechanism for updating the national lists of endangered species. Develop national sea turtle management plan. Evaluate the need for a CITES enforcement training program.
2.2	Improving protected areas management	<ul style="list-style-type: none"> Develop a training program on environmental executive leadership and institutional strengthening for civil society (120 hours). Strengthen conservation partners using TNC’s Institutional Self-Assessment tool as guide. Develop and deliver a training program on protected areas management for park guards and protected area managers to facilitate in situ biodiversity conservation. Improve site level management effectiveness in at least two priority protected areas through targeted technical and financial assistance. Humpback whale's monitoring in Samaná Assess the possibility of creating regulations to apply the Public Servant Law to protected area staff in order to create stability in the national protected area system. Support the implementation of the Protected Areas System Master Plan Design and implement an invasive species management plan for a priority site. Support the design and implementation of a national environmental services program. Develop a needs assessment for fire surveillance towers in Cordillera Central.
2.3	Increasing environmental funding	<ul style="list-style-type: none"> Promoting sustainable finance mechanisms for conservation: Assess viable conservation finance mechanisms for the national system of protected areas Support the development of the regulatory framework for payment for environmental services program, with particular focus on the development of water funds. Support the institutional strengthening of FONDOMARENA Support the development of viable payment for environmental services schemes, including water funds.
2.4.	Promoting sustainable fisheries	<ul style="list-style-type: none"> Support CODOPESCA institutional strengthening. Continue Sustainable Fishing Strategy for Samaná Bay to promote sustainable fisheries in the area. Promote income sources diversification for fishermen.
2.6.	Watershed management for biodiversity conservation	<ul style="list-style-type: none"> Support the implementation of a Native and Endemic plant species conservation program. Support activities related to sustainable forestry
3	Market-based Conservation	
3.1.	Promoting sustainable tourism	<ul style="list-style-type: none"> Draft protected areas trust fund capitalization strategy based on an assessment of tourists’ willingness to pay. Develop a joint strategy between SECTUR and Environment Ministry to promote sustainable tourism that protects biodiversity.
3.2.	Assessing opportunities in sustainable forestry	<ul style="list-style-type: none"> Assess the challenges faced by Environment Ministry (SUREF) and registered Dominican forestry companies to identify next steps for the industry to organize the commercialization and transport of the timber in the country. Support the implementation of the national forestry strategy. Support Environment Ministry in the implementation of the national strategy to

	Components	Phase one: general description of activities
		manage forest fires.
4.	Improved private sector environmental performance	
4.1.	Promoting clean production mechanisms	<ul style="list-style-type: none"> • Draft a proposal for a strategy for the National Policy on Clean Production and its implementation. • Support the implementation of a national cleaner production award • Facilitate the signing of voluntary clean production agreements between Environment Ministry and Dominican firms. Coordinate with RENAEPa the implementation of cleaner production initiatives. • Develop and implement a training program on cleaner production for the public and private sectors
4.2	Promoting environmental management systems (EMS)	<ul style="list-style-type: none"> • Design a national environmental audit system including mechanisms for accreditation of external auditors and environmental managers.

NO.	COMPONENT	Phase 2: Description of activities
I.	Institutional strengthening for adaptation	
1.1.	Improving institutional capacities	<ul style="list-style-type: none"> • Develop and implement procurement plan to strengthen target institutions • Support the institutional strengthening of the National Council on Climate Change and other relevant institutions, including the Ministries of Environment and Natural Resources, Tourism, Agriculture, Development and Planning • Develop university certificate level training and promote incorporation of CCA into university curricula
1.5	Strengthening information management	<ul style="list-style-type: none"> • Assess means to incorporate CCA considerations into environmental permitting process. Revise current environmental permitting process and support information systems to incorporate CCA layers into the decision making process. • Use of the WWW as a tool for information management, accessibility and dissemination Assistance for the development of an information system and CNCCMDL web page and maintenance. Dissemination of information and exchange through social networks, websites and promotional materials of various partners. Support strengthening of Climacción web portal for information and awareness.
1.6.	Improved governance and adaptive capacities at national and local levels	<ul style="list-style-type: none"> • Work with communities, local authorities, private sector and other stakeholders at the local level to develop and implement governance mechanisms to increase resilience and adaptive capacity. • Policy development for climate change adaptation. (Support the NCCCCDM and UNDP in the process of developing the national policy on climate change. Conduct civil society consultations and socialization of results) • Review legal framework for climate change adaptation. Development of alternatives and proposals for an appropriate regulatory framework. Proposal document socialization. • Development of community networks for climate change adaptation • Support initiatives to inform and involve private sector in adaptation activities.
1.7.	Community outreach and	<ul style="list-style-type: none"> • Public education and awareness for climate change adaptation: Short Courses on issues related to climate change on climate change adaptation, validated, endorsed

NO.	COMPONENT	Phase 2: Description of activities
	public awareness	<p>and certified by a national academic institution. One directed to communities and local governments and other targets specialists, technical staffers and public sector, private and NGOs.</p> <ul style="list-style-type: none"> • On the social / mass media: design an education and awareness campaign targeted to different community sectors, which integrates the concepts of empowerment and planning to address the phenomenon efficiently. Produce and print materials for the dissemination of information. • Engaging communities in climate change adaptation thru education, awareness and participation. Social communication strategy on marine coastal environmental resilience and adaptation responses to climate change in coastal communities.
II	Biodiversity conservation	
2.2.4	Improve site level management effectiveness	<ul style="list-style-type: none"> • Humpback whale's monitoring in Samaná • Monitoring of SINAP management effectiveness using RAPPAM Continue support to address critical threats to biodiversity conservation and a improve site level management in selected sites, particularly Parque Nacional Los Haitises and Parque Nacional Valle Nuevo. Evaluate EPP impacts on vegetation coverage and land recovery from agricultural uses in Valle Nuevo National Park. • Improve the management of PNE and assure long time ecosystem services by implementing strategies derived from the VMMP (Visitor Management and Monitoring Plan for PNE). • Support the DR Gov. in the development of financial mechanisms to promote sustainable conservation of biodiversity and adaptation to climate change, including water funds. • Sustainable fisheries: (Equip and train selected cooperatives for proper handling and marketing of fish product). • Continue work to support capacity development for managing Lion fish in the DR. Trainings for fishermen in techniques for capturing and handling of Lion fish; promote public awareness. • Evaluation of biological health indicators for aquatic ecosystems Methodology development, sampling, taxonomic classification and manual design and printing. Provide training to students at the National Environmental School. • Support the implementation of pilot project of micro-watershed management and restoration • Conduct feasibility studies to identify investors for a water fund
V.	Climate change adaptation	
5.1.	Increase public awareness	<ul style="list-style-type: none"> • Conduct a survey on public awareness regarding climate change
5.2.	Ecosystem Based Adaptation	<ul style="list-style-type: none"> • Promoting freshwater security in a changing climate with community participation, gender awareness and sustainable financing: Modeling climate change impacts on water availability and sediment loads in selected watersheds, in order to assess the impact of climate change for water users and adaptation options in mountain ecosystems. Work closely with ONAMET and INDRHI to promote national capacities. Develop complementary studies to support the establishment of sustainable financing mechanisms for water conservation in the watersheds that provide water to Santo Domingo and Santiago. Develop and implement demonstration projects for microwatersheds within priority watersheds (Yaque del Norte, Haina and Nizao) and in Samaná. Proposed activities would include: riparian

NO.	COMPONENT	Phase 2: Description of activities
		<p>restoration, soil conservation, agroforestry, actions to reduce water velocity in areas of high erosion, environmental education on adaptation to climate change at the community level; socioeconomic analysis of the watershed communities with emphasis on adaptation to climate change and gender; participatory planning; assessment and capacity building from the measures applied to the recovery of the watershed ecosystem and the incorporation of communities in the process.</p> <ul style="list-style-type: none"> • Identification and promotion of resilient plant species that provide protection of freshwater sources, resistance to hurricanes and storms and erosion control, and that can also generate income, to support management initiatives for climate change adaptation in priority sites. • Climate Change Adaptation in coastal and marine areas: Bayahibe/Southeastern reefs: Evaluation of the effect of climate change in the physic-chemical conditions in the shallow waters of the Southeast, development of pilot reef restoration by establishing coral nurseries for resilient and vulnerable species, action plan for adapting the use of coral reefs in a changing climate • Increase adaptive capacity of community in Bayahibe by developing actionable strategies and elaborate a strategic plan to adapt to CC at the community level, using modeling data and participatory scenario development. • Samaná: Elaboration of local adaptation strategies to CC for identified communities and implementation of pilot adaptation measures, using Cristal methodology. Pilot restoration of coastal ecosystems critical to climate change adaptation with community involvement. Pilot coral reef nursery building on Bayahibe's experience.

Annex C: Program Products and Deliverables

Authoring Partner	Products and Deliverables
The Nature Conservancy	<ul style="list-style-type: none"> • Report: Implementation of Technical and legal mechanisms for the operation of the National Fund for the Environment and Protected Areas Trust • Strengthening of the Single Window mechanism. Procedures and regulation proposal • Master Plan of the National Protected Areas System of the Dominican Republic (proposal) from 2010 to 2030. • Consultancy report: Gender mainstreaming monitoring in the Environmental Protection Program • Administration Procedures proposal for monitoring equipment bailed to SEMARENA • Assessment of the current wildfire detection towers system in Madre de las Aguas region (Dominican Republic) • Most commonly used concepts and definitions in the environmental permitting process in the DR • Environmental Permits Regulation and Procedures proposal • Environmental permits system: user guide (proposal) • Proposed marine zoning for Samaná Bay (includes corresponding assessment for proposal) • National Biodiversity Strategy: Action Plan • Proposal for the creation of the Technical Institute of Higher Education In Environment • Most commonly used concepts and definitions in the environmental permitting process in the DR • Red list of threatened and endangered species of the Dominican Republic • Knowledge, Attitude and Perception Assessment of National Park Del Este • Knowledge, Attitude and Perception Assessment of Protected Areas of Samaná Province • Survey report: knowledge and perception of Dominican population on climate change • Signage in public use areas at Salto El Limon • Swat Hydrological Modeling and the Impact of Climate And Land Use Change on Yaque Del Norte, Ozama, Haina, and Nizao Watersheds • Assessment of current tourism management in National Park del Este • Action plan for tourism management in National Park del Este • Socioeconomic Study of Santo Domingo Water Fund Basins: Rivers

Authoring Partner	Products and Deliverables
	<p>Nizao, Haina and Ozama</p> <ul style="list-style-type: none"> • Socio-economic Study on Yaque del Norte Water Fund • Strategic plan proposal for Bayahibe's adaptation to climate change • Carrying capacity assessment of Bayahibe Municipal District: analysis of current environmental and management conditions considering climate change implications for sustainability. • Final report: incorporation of climate change considerations into environmental impact assessment guidelines of the Environment Ministry (four specific sectors) • Final report: Environmental Strategic Assessment of the proposed national zoning plan of the Dominican Republic • Final report: coral reefs assessment in Samaná Bay
INTEC	<ul style="list-style-type: none"> • Proposal: Institutional strengthening of the National Entrepreneurial Network for Environmental Protection • Documentary: Progress in Environmental Protection • Proposed Regulation for social participation in MARENA's environmental evaluation system • Pilot projects proposal for five micro - watersheds' restoration: Rio Mijo, Arroyo Ancho, Rio San Juan, Arroyo Cruz de Cuaba and Rio Coson • Proposed management plan for sea turtles – in collaboration with WIDECAS. (DRAFT) • National Policy on Sustainable Consumption and Production in the Dominican Republic • Comic book for municipal inhabitants: Municipal Environmental Management • Proposal: Technical solution for solid waste final disposal in Samaná Province • Guidelines for Municipal Environmental Management • Guidelines on best environmental practices in local markets and slaughterhouses • Documentary: Managing for environmental Protection • Training guidelines: Certificate program on Protected Areas Management • Training guidelines: Certificate program on Environmental Impact Assessment • Guidelines for Sustainable Production Agreements drafting • Informational Brochure on Cleaner Production • Training guidelines: Certificate program on Environmental Monitoring

Authoring Partner	Products and Deliverables
	<ul style="list-style-type: none"> • Poster / informational material of the Endangered Species of the Dominican Republic • Protected Areas of the Dominican Republic Poster • Brochure: Practices for Protection of the Environment within Businesses • Carey Extinction Awareness Poster
PRONATURA	<ul style="list-style-type: none"> • National Forest Strategy • Strategy for the Creation of the National Forest Species Seed Program • Regularization of transport and commerce of Forest Products in the DR: Proposal to Strengthen the Control System • Proposal: Monitoring and Control Pilot Plan for forest products trade and transportation in Restauración Municipality, province of Dajabón • Forest Species Seed Collection Schedule (Dominican Republic) • Methodology proposal for National Forest evaluation • Methodology proposal for Quisqueya Verde National Plan Evaluation • Action Plan for Valle Nuevo National Park • Biophysical Assessment for microwatersheds: Aguas Blancas, Pinar Parejo, Nizaíto y Las Espinas; National Park JB Perez Rancier and Ecological Restoration Pilot Program • Dominican Forestry Sector Documentary • Public signage in Valle Nuevo National Park • Public signage in Los Saltos de Jima National Monument • The timber seeds market in the Dominican Republic, (emphasizing on native and endemic species) • Calender for forest species seeds's collection Vol II • Catalog of Timber Trees of the DR • Documenting The Ecological Restoration experience in Valle Nuevo National Park • Water Balance and Ecological Flow of Haina-Duey watershed, in the Dominican Republic • Economic and reproductive potential of forestry species that are part of resilient ecosystems to climate change in the buffer area of Montaña La Humeadora National Park, Dominican Republic • Final report macroinvertebrates samples as water quality biological indicators
CEBSE	<ul style="list-style-type: none"> • Directory of Civil Society Organizations of the Samana Bay and its surroundings. • Final Report: Humpback whale population study. Season 2011 • Final Report: Humpback whale population study. Season 2012

Authoring Partner	Products and Deliverables
	<ul style="list-style-type: none"> • Final Report: Humpback whale population study. Season 2013 • Samaná Province Environmental Assessment • Samaná province environmental agenda • Zoning Plan proposal for the province of Samaná, with climate change adaptation considerations
IDDI	<ul style="list-style-type: none"> • Mass Media campaign on climate change: The climate is changing, are you? • Final Report on critical points for the Vulnerability to Climate Variability and Change in the Dominican Republic and its Adaptation • Municipal Level Media Campaign: I adapt to climate change, and you? • Multitemporal Analysis of Land use and effectiveness of regional policies in Los Dajaos watersheds emphasizing on Climate Change adaptation and vulnerability reduction • Educational pamphlet: local governments and climate change • Educational pamphlet: usefulness of territorial zoning for climate change adaptation
FUNDEMAR	<ul style="list-style-type: none"> • Database: water temperature monitoring and reef health monitoring results in Bayahibe 2012-2013 • Action Plan for southeastern reefs and surrounding areas • Guidelines for climate change adaptation for hotels in the Romana-Bayahibe destination • Educational game on climate change for primary schools “the earth is changing”.



ENVIRONMENTAL PROTECTION PROGRAM

Annex D: PROGRAM MONITORING (March 9, 2009 – FEBRUARY 28th, 2014):

Program's original indicators were:

- 1.1. Improvement in the rate of processing on the national level of Environmental Impact Assessments. Outcome
- 1.2 Number of people, including staff of central and municipal government offices, trained in critical areas necessary to support DR-CAFTA implementation.
- 1.3. Number of laws, policies, regulations, administrative procedures, and supporting studies related to environmental management completed and submitted to relevant government agencies. Output
- 1.4. DR Private sector is more environmentally responsible. Outcome
- 1.5. Number of hectares (terrestrial and marine) under improved natural resource management. Outcome
- 1.6. Improved management in areas of importance for biodiversity conservation. Outcome
- 1.7. Number of laws, policies, regulations, administrative procedures, and supporting studies related to biodiversity conservation completed and submitted to relevant government agencies. Output
- 1.8. Number of policies, laws, agreements or regulations promoting sustainable natural resource management and conservation that are implemented with project support. Outcome.

As previously stated, some of the original indicators included in the Environmental Protection Program PMP were not measured as of FY12 due to line of assistance conclusion. These include numbers one, three and eight above. Three new indicators to measure climate change adaptation related assistance were drafted. Original number seven was merged with one of the new indicators proposed (CC1). New indicators included in this PMP as of FY12, are:

- CC1: Number of laws, policies, strategies, plans, agreements or regulations addressing climate change and/or biodiversity conservation officially proposed, adopted or implemented, as a result of USG assistance (output).
- CC2: Number of stakeholders with increased capacity to adapt to the impacts of climate variability and change. Outcome
- CC3: Number of assessments and studies related to climate change carried out with USG support. (Custom indicator). Output.

Also, indicator 1.2 definition changed to "Number of people, including staff of central and municipal government offices, trained in critical areas necessary to promote climate change adaptation and biodiversity conservation" as a means to include all training and capacity building into one indicator and facilitate tracking.

Performance Summary Table, (March 9, 2009 – FEBRUARY 28th, 2014)

INDICATORS	FY9 New	FY10 Target	FY10 Actual	FY11 Target	FY11 Actual	FY12 Target	FY12 Actual	FY13 Target	FY13 Actual	FY14 Target	FY14 Actual
Indicator CC1: Number of laws, policies, agreements or regulations addressing climate change and biodiversity conservation officially issued, as a result of USG assistance. (output)						3	3	2	3	--	2
Indicator CC2: Number of stakeholders with improved capacity to address climate change issues as a result of USG assistance (outcome)						5	2	3	3	--	4
Indicator CC3: Number of assessments and studies related to climate change carried out with USG assistance (custom indicator - output)						3	3	2	3	1	1
Indicator 1.1: Improvement in the rate of processing on the national level of Environmental Impact Assessments	Establish baseline	20%	63.9%	50%	105.2%						
Indicator 1.2¹: Number of people, including staff of central and municipal government offices, trained in critical areas necessary to promote climate change adaptation and biodiversity conservation. (output)	0	240	437	397	1069	225	582	140	1830	--	78
Indicator 1.3: Number of regulatory laws, policies, regulations, administrative procedures, and supporting studies completed and submitted to relevant government agencies	5	20	18	25	33						
Indicator 1.4: DR Private Sector is more environmentally responsible (# of voluntary agreements with private sector firms. (outcome)	0	2	0	3	0	5	3			--	1
Indicator 1.5: Number of hectares (terrestrial) under improved natural resource management. (number of hectares) – outcome	0	0	0	800	276	900	8275				
Indicator 1.6: Improved management in areas of importance for biodiversity conservation- outcome		Establish Baseline	Establish Baseline	23%	65.3%	55.17% ²	35.18%	---	53.6%		
Indicator 1.7: Number of biodiversity laws, policies, regulations, administrative procedures, and supporting studies completed and submitted to relevant government agencies	1	4	2	5	5						
Indicator 1.8: Number of policies, laws, agreements or regulations promoting sustainable natural resource management and conservation that are implemented with project support		2	3	0	0						

¹ Please note, Indicator 1.2 name and definition changed as of FY12 to properly reflect new project focus and objectives.

² Please note that proposed composite target for this indicator changed due to the inclusion of a new protected area.

CC1: Number of laws, policies, strategies, plans, agreements or regulations addressing climate change and/or biodiversity conservation officially proposed, adopted or implemented, as a result of USG assistance (output).
(USAID Ref. 4.8.2-28)³

This indicator besides including policy instruments related to climate change adaptation that were proposed as result of USG assistance also includes former indicator 1.7. : “Number of laws, policies, regulations, administrative procedures, and supporting studies related to biodiversity conservation completed and submitted to relevant government agencies” therefore combining policy instruments related to GCCA and biodiversity conservation. The purpose of measuring and presenting both types of instruments combined is simplifying the presentation of this PMP and facilitating the comprehension of methodological approach and project goal.

Indicator CC1: Number of laws, policies, strategies, plans, agreements or regulations addressing climate change and/or biodiversity conservation officially proposed, adopted or implemented, as a result of USG assistance (output).												
	FY09 target	FY09 actual	FY10 Target	FY10 Actual	FY11 Target	FY11 Actual	FY12 target	FY12 Actual	FY13 Target	FY13 Actual	FY14 Target	FY14 Actual
Terrestrial Zoning proposal for Samaná Province							--	--				
National policy for climate change adaptation (in collaboration with UNDP)							--	--				
Other GCCA instruments										2		2
Marine zoning plan completed for Samaná Bay.					--							
Analysis and recommendations for a nat'l mgt plan for sea turtles recovery.				0								
Analysis and recommendations for regulation of timber industry in DR.					--							
Analysis leading to recommendations for linking ecosystem services to payment regimes						0						
Fondo Marena and Protected Areas Trust Fund Operating Procedures												
Update Red List of endangered species				⁴								

³ Taken from GCC Indicator Handbook, Definition Sheets, updated on November 3rd, 2011.

⁴ The Update Red List of endangered species for Dominican Republic was published and formally issued through administrative decree on October 2011; however, please note that technical assistance for the development of the list was provided in FY10.

Indicator CCI: Number of laws, policies, strategies, plans, agreements or regulations addressing climate change and/or biodiversity conservation officially proposed, adopted or implemented, as a result of USG assistance (output).												
	FY09 target	FY09 actual	FY10 Target	FY10 Actual	FY11 Target	FY11 Actual	FY12 target	FY12 Actual	FY13 Target	FY13 Actual	FY14 Target	FY14 Actual
for Dom. Rep.												
Management plan for Cabo Cabron National Park							1	0 ⁵				
KAP analysis for protected areas of Samaná Province							1	1				
KAP analysis for Del Este National Park							1	1				
Tourism Management and Monitoring Action Plan (TMMAP) for PNE									--	1		
Annual Total	1	1	4	3	2	1	4	3	3	4	--	2

The GCCA instrument issued with program's support during FY12 was the agreement drafted and signed to formalize the creation of the first community network for adaptation to climate change. Thirty two different community based organizations from Santo Domingo, following a series of educational workshops regarding climate change and climate change adaptation (facilitated by IDDI) signed the protocol. The GCCA instruments issued with program's support during FY13 are the agreements drafted and signed to formalize the creation two additional community networks for adaptation to climate change: in Bayahibe and Jarabacoa. These are examples of community led governance that the USAID-TNC EPP promoted, in order to guarantee sustainability and capacity transfer.

During FY13, the program provided technical accompaniment to a UNDP lead initiative in coordination with the CNCCMDL, to draft the national policy on climate change. The process concluded on December 2012 and policy instrument is pending official issuance. The two GCCA instruments reported for FY14 are related to environmental permitting and the national zoning plan proposal for the Dominican Republic. Since Q2FY13 TNC provided assistance to the Environment Ministry to incorporate climate change adaptation (CCA) considerations into the environmental permitting process. This work includes reviewing the current environmental permitting process and support information systems to incorporate CCA layers into the decision making process. Environmental permits are the main policy instrument currently in implementation that would allow for the rapid incorporation of CCA consideration into public and private development decisions country wide. The process concluded in Q2FY14 with the official issuance of guidelines for the incorporation of CCA considerations for four priority productive sectors: housing, tourism, mines and agriculture. Guidelines were enacted by ministerial resolution on February 2014.

In parallel, the program assisted GoDR in carrying out the strategic environmental assessment of the National Zoning Plan Proposal (PNOT, Spanish acronym) currently under development by the Ministry of Economy, Planning and Development (MEPyD). Besides establishing critical environmental and climate related aspects to take into consideration in planning, the assistance concluded with an agreement between the MEPyD and the

⁵ The management plan for Cabo Cabrón was indefinitely postponed due to a confusion regarding the actual boundaries of the protected area, which have caused some social turmoil in the area.

Ministry of Environment to create a permanent working group to further carry out the necessary discussions and analysis related to territorial planning all across the country. The PNOT is expected to be officially issued during 2014. Both these policy instruments represent ideal vehicles for the mainstreaming of climate change considerations in development planning for the DR.

CC2: Number of stakeholders with increased capacity to adapt to the impacts of climate variability and change as a result of USG assistance. Outcome. (USAID Ref. 4.8.2 - 26)

Improved policy instruments are of no use if enforcers do not have the necessary knowledge, attitudes and practices to guarantee its purposes. It is necessary to promote proper understanding of the vulnerability of an island state, such as the DR, to climate change and to discuss science based options to address it. Several different initiatives will need to involve all sectors of the Dominican society, in order to assess and promote their knowledge regarding climate change and its impacts, and to share information, and help them implement whatever adaptation measures correspond to each. The impact of the assistance provided should translate into concrete actions and plans by beneficiary stakeholders. This indicator complements the previous two, and consistently carries on the goal of institutional strengthening originally set up for the project.

	FY11 Actual	FY12 Target	FY12 Actual	FY13 Target	FY13 Actual	FY14 Target	FY14 Actual
Indicator CC2: Number of stakeholders with increased capacity to adapt to impacts of climate variability and change as a result of USG assistance. Outcome.							
Ministry of Environment		1	1	1		1	1
National Council for Climate Change and Clean Development Mechanism		1	1	1		1	1
Municipalities- local governments		3	--	1	1	--	2
Communities' network			1	--	2	--	--
Other		--					
Annual Total		5	3	3	3	2	4
Cumulative total							8

Note: Work with the Ministry of Environment and the NCCCCDM was ongoing work, carried out until the end of project, that is why is reported annually.

During early 2012, a baseline survey was delivered to the National Council for Climate Change and Clean Development Mechanism, the Ministry of Environment and Natural Resources, and the Environment Ministry, and municipalities to identify main areas – regarding climate change adaptation – where assistance was needed. Follow up questionnaires have been applied periodically to inquire regarding pertinence and usefulness of assistance provided and if they understand such assistance has increased the institutions' capacity to adapt or promote adaptation.

On a scale from 1 to 5, where 1 is the least valued and 5 is the most valued, both the ME and the NCCC&CDM valued assistance received over 4 points, in terms of pertinence and usefulness. They acknowledged that their capacity has increased as result of assistance received, highlighting the assistance related to the creation of policy instruments. The Environment Ministry emphasized the pertinence of incorporating climate change considerations in guidelines for environmental impact assessment (EIA) of key sector and the parallel training received. As pending challenges, the Council pointed out the need to mainstream climate change adaptation at the local government level and to incorporate more actively the academic and scientific communities in the

decision making process. The Environment Ministry indicated that main challenges are the use of EIA to make the private sector more aware of the usefulness of prevention and the use of strategic environmental evaluation as a planning tool at the central level.

During last months of program implementation, over 20 different municipalities received program's assistance to increase their capacity to adapt through certificate courses and other types of training. Measurement of this indicator however is focusing in those municipalities where additional assistance has been provided by the program: Jarabacoa, Bayahibe, and Samaná's municipalities. Although final measurement of the indicator of municipalities assisted generally indicated high usefulness and pertinence of training and assistance received, the adaptation capacity was measured in terms of having undertaken concrete actions to address climate change, as of February 2014.

Jarabacoa's Municipality indicated of a high relevance the creation of the community network for climate change adaptation. This municipality recently issued its Municipal Development Plan (2013-2016) in which is included the implementation of a municipal climate change adaptation plan⁶. Santa Bárbara Municipality issued two ordinances regarding solid waste management and coastal resources management that include climate change considerations. Arroyo Barril Municipal District have continued the mangrove reforestation initiative on its own, They report having carried out three more reforestation interventions and are currently negotiating with community members means to control coal production in the area. These are the three municipalities that are reported with this indicator. Although all other evaluated municipalities currently are planning concrete actions, these have not occurred yet during indicator measurement. Summarizing, 5 government stakeholders have increased capacity to adapt as result of program's assistance and three communities network for climate change adaptation.

CC3: Number of assessments and studies related to climate change carried out with USG assistance. (Output / Custom).

Indicator	FY12 Target	FY12 Actual	FY13 Target	FY13 Actual	FY14 Target	FY14 Actual
Indicator CC3: Number of assessments and studies related to climate change carried out with USG assistance						
Critical points for the vulnerability to climate change and variability and its adaptation in the Dominican Republic (Vulnerability Assessment)					--	
Survey on public perception and knowledge levels of the Dominican people on climate change					--	
Hydrological modeling for 4 watersheds of the Dominican Republic					--	
Reef Monitoring in Arrecifes del Sureste National Park and water temperature monitoring					--	
Multi-temporal analysis of land use and regional policy effectiveness in Los Dajaos watershed with focus on ACC and vulnerability reduction for Jarabacoa municipality						
Bayahibe's touristic carrying capacity assessment. (Assessment of environmental and management conditions considering climate change as a step towards achieving sustainability of tourism development)						
Total	3	3	2	3	 	

⁶ This number was reported during FY13, and corresponding annual report and PMP. The other municipalities reported concrete actions during FY14.

In total, 7 different types of assessment and studies related to climate change were carried out by the program, all of them with the intention to contributing to specific actions / interventions or the development of policy and planning instruments and/or adaptation and conservation mechanisms. Bayahibe's touristic carrying capacity assessment completed in FY14 was developed as per request of the Ministry of Tourism, in order to feed environmental and climate change related information into their planning process for the tourism development in this area. It is the first tourism zoning plan with such an analysis as basis in the Dominican Republic.

I.1 Environmental Impact Assessment process streamlined (Outcome)

Environmental Impact Assessment (EIA) represents the first tier of environmental compliance. A responsive, credible EIA procedure, implemented effectively, creates an environment in which regulators can quickly communicate environmental concerns to the business and development community.

The backlog of EIAs awaiting regulatory review signals the presence of an existing problem in the process; the

Indicator:	FY09 Baseline	FY10 Target	FY10 Actual	FY11 Target	FY11 Actual	FY12 Target	FY12 Actual	FY13 Target	FY13 Actual	FY14 Target	FY14 Actual
Improvement in the rate of processing on the national level of Environmental Impact Assessments (% improvement in the rate # EIAs processed per [x time]/#EIAs submitted per [x time]). Percentages in table are actual improvement in rate compared to baseline.											
Measures:	Establish Baseline	20%	63.98%	50%	105.19						

USAID-EPP focused on establishing an efficient process for ongoing review as the measure of success. During the first year, USAID-EPP established a baseline rate, and measured by EIAs processed per a unit of time established as the desirable period of review. This indicator has not been measured after FY11, given the focus shift of project activities and the finalization of activities regarding directly this matter. Recently the Ministry of Environment has been reporting the number of permits issued annually through its webpage and twitter account as a means to inform general population about processes in a permanent way.

I.2: Improved capacity for environmental management and compliance (Output)

Effective implementation of environmental regulations and laws depends on a) identification of staff responsible for enforcement and oversight, b) knowledge, attitude, skills among those staff relating to processes in which they must engage for enforcement and oversight, and c) implementation of those responsibilities. Implementation of an efficient environmental management and compliance structure by trained staff decreases threats to the environment and provides necessary data for adaptive management of biodiversity.

The following table refers exclusively to formal certificate training provided by INTEC in the first stage of the program, focusing on strengthening capacities to comply with DR-CAFTA requirements in terms of environmental management and enforcement. These are presented separately due to proposed measurement of pre and post knowledge and skills.

Indicator:	FY09 Target	FY09 Actual	FY10 Target	FY10 Actual	FY11 Target	FY11 Actual	FY12 Target	FY12 Actual
I.2.: Number of people, including staff of central and municipal government offices, trained in critical areas necessary to support DR-CAFTA demonstrating improved knowledge/attitude/skills based on pre-/post- surveys.								
Environmental Law			25	--				
EIA certificate diploma			40	70	35			
EIA new procedure workshops for ME					ND	96		

Indicator:	FY09 Target	FY09 Actual	FY10 Target	FY10 Actual	FY11 Target	FY11 Actual	FY12 Target	FY12 Actual
1.2.: Number of people, including staff of central and municipal government offices, trained in critical areas necessary to support DR-CAFTA demonstrating improved knowledge/attitude/skills based on pre-/post- surveys.								
personnel								
Follow up and monitoring process			30	0	60	40	30	43
Municipal environmental management					68	36		
Micro-watershed management			70	0	33	32		
CITES				0	70 ⁷	-		
Environmental executive leadership			25	0	25	31		
Protected areas management			25	69				
Cleaner Production					36	35		
Environmental Journalism					ND		30	35
Totals	0	0	215	139	327	270	60	78
Cumulative Totals	0	0	215	139	466	409	469	487

Parallel during the program's lifespan other training courses have also taken place, responding to different institutional strengthening needs. These usually are more *in situ* or specific technical courses where subject matter expertise has corresponded to partners working directly in implementation. Several courses have taken place, in close coordination with Environment Ministry and other entities from the central and municipal governments. Pre and post surveys have not been carried out since this is a methodology set up by INTEC for its university certificate courses. These are listed separately below.

Indicator:	FY10 Target	FY10 Actual	FY11 Target	FY11 Actual	FY12 Target	FY12 Actual	FY13 Target	FY13 Actual	FY14 Target	FY14 Actual
Indicator 1.2. Number of people, including staff of central and municipal government offices, trained in critical areas necessary to promote climate change adaptation and biodiversity conservation										
Basic Forest Fire control techniques		112	-	383	60	117				
Ecological zoning	ND	13	-	-						
Sustainable tourism in prot. Areas				20						
Laboratory techniques for water quality	ND	19	-	-						
Training on forest seed's collection			ND	51						
Cooperative production for fishermen			ND	84						

⁷ An assessment on CITES related training in the DR was made in order to properly establish the need for further training. Results pointed out that over 500 persons have been trained in CITES related topics, under different cooperation initiatives. It was decided accordingly, not to carry out the training.

Indicator:	FY10 Target	FY10 Actual	FY11 Target	FY11 Actual	FY12 Target	FY12 Actual	FY13 Target	FY13 Actual	FY14 Target	FY14 Actual
Indicator 1.2. Number of people, including staff of central and municipal government offices, trained in critical areas necessary to promote climate change adaptation and biodiversity conservation										
Municipal env. management	25	154	ND	64						
Responsibility of city councils in municipal env. mgt.			ND	39						
Regional Seminars on Environmental Journalism			ND	55						
Environmental Flows			ND	100						
Freshwater Ecosystem restoration – Ecosystem restoration			ND	36	20	24				
ArcGIS Server training			ND	12						
Seed Bank management training (3 modules, 2 overseas, 1 <i>in situ</i>)						6				
Training of Trainers course in Protected Areas Management						30				
Training course for trainers on management and control of lionfish						24				
Training on Marine Invasive Species Management: Focus on lionfish.						127				
Community Environmental Education in Valle Nuevo						9				
Fire Ecology and its relation to climate change						26				
Training for coastal marine park rangers						20				
Certificate course on land management for climate change adaptation						39				
Strategic planning for climate change adaptation. University of Washington online training course						6				
Diverse training courses on basic cartography, the use of GPS and GIS						60		35		
Thematic interpretation for Touristic guides of Aguas Blancas						16				
AGGRA training for reef monitoring						11				

Indicator:	FY10 Target	FY10 Actual	FY11 Target	FY11 Actual	FY12 Target	FY12 Actual	FY13 Target	FY13 Actual	FY14 Target	FY14 Actual
Indicator 1.2. Number of people, including staff of central and municipal government offices, trained in critical areas necessary to promote climate change adaptation and biodiversity conservation										
Oyster reef training ⁸							20	0		
Certificate course on Climate change adaptation and terrestrial zoning							30	34		
Certificate course on Climate change and local level adaptation strategies							30	66		
Incorporation of CC considerations into the environmental permitting process							20	27		
Training on the Soil Water Assessment Tool - SWAT								15		
Analog forestry for freshwater sources protection								52		
Agronomical package for efficient cocoa production (freshwater sources protection)								33		
Organic agriculture and pest control (freshwater sources protection)								30		
Training of local youth communicators on climate change adaptation								11		
Basic introductory workshop on climate change for municipal management and planning								38		
Training on Micro-watershed governance and better adaptation practices								33		
Training course on basic cartography, the use of GPS and GIS (students of the National Environmental								35		

⁸ This training was not carried out for the following reasons: In May 2013, TNC staff members discussed the technical aspects of the oyster reef project and the proposed site within Samaná Bay, to receive feedback and recommendations from technical staff from our Louisiana chapter currently leading such efforts in the southern coast of the United States. During this discussion several observations were set forward: a) the proposed site has a rate of sedimentation that does not favor the settlement of oyster larvae as oppose to originally thoughts of being an ideal environment. b) It was observed that even the simplest base structure for the oyster (e.g. oyster mats) have the tendency to sink in the ocean floor; in order to establish the base structure at the estuarine zone of Samaná Bay an initial artificial soil would have to be created by dredging and constructing over muddy bottoms. The operational costs associated to this procedure fall outside the estimated budget. c) Other proposed sites within Samaná bay are located further away from the stakeholders we originally wished to empower with the project, making it unfeasible for them to undertake management and maintenance operations necessary for the artificial reef.

Indicator:	FY10 Target	FY10 Actual	FY11 Target	FY11 Actual	FY12 Target	FY12 Actual	FY13 Target	FY13 Actual	FY14 Target	FY14 Actual
Indicator 1.2. Number of people, including staff of central and municipal government offices, trained in critical areas necessary to promote climate change adaptation and biodiversity conservation										
School)										
Basic induction on climate change and climate change adaptation at the municipal level (AND)								21		
Learning the Dominican Republic's Vulnerability to Climate Change and CC and zoning as a tool for Adaptation - (Provincial Directorates and Municipalities in the Southern, Eastern, and North Regions.)								266		
Capacity-building for climate change and local-level adaptation (11 sessions in different communities)								426		
Community based networks for climate change adaptation - basic induction								18		
Participatory drafting of environmental ordinances								8		
Basic induction on climate change for teachers from Samaná								25		
Accounting training for fisherfolk cooperative administrators								15		
Normative for processing and manipulation of fishing products								38		
Educational pilot training program on climate change for schools of coastal communities							40	604		
Training course on basic cartography, the use of GPS and GIS - facilitating the use of proposed zoning plan for Samaná Province									--	23
Basic induction to climate change and gender and climate change for Ministry of Woman personnel									--	19
Basic induction on climate change, CCA and climate finance, for Public Credit									--	10

Indicator:	FY10 Target	FY10 Actual	FY11 Target	FY11 Actual	FY12 Target	FY12 Actual	FY13 Target	FY13 Actual	FY14 Target	FY14 Actual
Indicator 1.2. Number of people, including staff of central and municipal government offices, trained in critical areas necessary to promote climate change adaptation and biodiversity conservation										
Bureau personnel										
Training in coral nurseries construction and management in Samaná (FEPC)										7 ⁹
Technical Training on river and creeks monitoring and micro-watershed governance										19
Totals	--	298		864		515	140	1830		78
Cum. Totals	--	298		1162		1677		3507		3585

In total, during the project lifespan 4072 persons were trained in different topics related technical assistance provided. In addition to these courses, several informational and awareness raising sessions on diverse topics related to climate change and climate change adaptation took place during implementation (e.g. several presentations of the vulnerability assessment were carried out by partner IDDI aimed at increasing awareness regarding Dominican Republic's vulnerability to climate change). Around 400 people from public and private sector, and civil society participated during 2013 and 334 during FY12.

I.3 Laws, policies, regulations, administrative procedures, and studies supporting an improved regulatory environment (Output)

Effective operation within the regulatory environment depends on a legislative framework supported by efficient regulations and procedures, and based on reliable information. An efficient regulatory structure decreases threats to human health and biodiversity. This indicator captures the subject areas in which the regulatory environment required review and/or revision, and documents the number of changes developed and proposed by the project.

Indicator:	FY09 Target	FY09 Actual	FY10 Target	FY10 Actual	FY11 Target	FY11 Actual	FY12 Target	FY12 Actual	FY13 Target	FY13 Actual
I.3.: Number of environmental management laws, policies, regulations, administrative procedures, and supporting studies completed and submitted to relevant government agencies (# documents submitted). Table features ANNUAL values, not cumulative.										
"Single window" procedure			1	2						
General Terms of Reference (TOR) for selected sectors			5	0		3 ¹⁰				

⁹ 26 people participated in the theoretical component of the training course, however, only 7 had the certification to dive and participate in all component of the training course.

¹⁰ Three drafts were submitted to Environment Ministry during FY11. Shortly afterwards, changes in tenure occurred and assistance line within EPP concluded. The ME continued working the guidelines at the regional level.

Indicator:	FY09 Target	FY09 Actual	FY10 Target	FY10 Actual	FY11 Target	FY11 Actual	FY12 Target	FY12 Actual	FY13 Target	FY13 Actual
I.3.: Number of environmental management laws, policies, regulations, administrative procedures, and supporting studies completed and submitted to relevant government agencies (# documents submitted). Table features ANNUAL values, not cumulative.										
EIA review guides for priority sectors			3	0						
Monitoring procedure			1	0						
Municipal environmental ordinances	5		8	8	8	20				
Public participation regulation			1	0	1	1				
DR-CAFTA communication process			1	1	1	1				
National Environmental Information System					1	0				
Clean Production manuals					4	0				
National env. audit system					1	1				
Municipal environmental diagnostics				5	5	4 ¹¹				
Guide for the performance of municipal environmental diagnostics			ND	1						
Environmental authorization system regulation and procedures			ND	1	1	1				
Study for the development of a native and endemic seeds market					1	1				
Proposal of management Plan for five (5) micro-watersheds					ND	1				
Guide for Municipal Slaughterhouse and markets Management					ND	1				
Annual Total	5	0	20	18	23	34				
Cumulative Total	5	0	20	18	41	52				

¹¹ One of these products was the revision and updating of a previous environmental diagnostic.

I.4 Number of public-private environmental protection partnerships in place (Outcome)

Dominican law provides for incentives to stimulate voluntary improvements in environmentally responsible production among private sector companies. “Dirty” production practices threaten human health directly and, through the influence of pollution on ecosystems, ultimately threaten the environmental services that ecological communities need for survival. EPP worked within this framework to assist willing companies to develop voluntary agreements to increase clean production and decrease the environmental impacts of their productive processes. Figures in table are annual figures.

Indicator	FY10 Target	FY10 Actual	FY11 Target	FY11 Actual	FY12 Target	FY12 Actual	FY13 Target	FY13 Actual	FY14 target	FY14 Actual
DR Private sector is more environmentally responsible: # of voluntary agreements with private sector firms for cleaner production or environmental management systems										
Agreement BANELINO	1	--	1	0	1	1				
Agreement ADOGRANJA	1	--	1	0	1	1				
Agreement ASIEHaina			1	0	1	1				
Agreement CONFENAGRO										1
Agreement (TBD)										
Annual Total	2	0	3	0	3	3	--	0	--	1
Cumulative Total	2	0	5	0	3	3	--	3	--	4

Originally, agreements were foreseen to be pursued with independent firms. Instead, these have been signed with four producers association:

- BANELINO groups 392 small banana producers (80% of production is organic).
- ADOGRANJA groups 32 suine farmers. The suine industry is one of the most criticized productive activities in the Dominican Republic due to its significant impact on water bodies and other types of pollution that traditionally causes.
- ASIEHaina groups 70 industries, mid-size and small producers of several different activities, including oil refinement, energy production and plastic production.
- CONFENAGRO: a federation of agricultural producers association with presence all across the territory.

In spite of the fact that this indicator is below original target proposed by the project- # of agreements - the agreements signed are actually reaching over 490 entrepreneurs and their activity, instead of the 10 individual firms targeted at the beginning of the project. The last three agreements have been signed by the Ministry of Environment without direct assistance from the program, due to conclusion of line of assistance. Reportedly, the Environment Ministry is currently preparing a similar agreement with one hotels association of the northern region. The institutional aim is to continue promoting these agreements.

I.5 Number of hectares under improved natural resource management (Outcome).

Improved natural resource management results from a favorable regulatory framework, and management within that framework using tools that focus management actions on critical conservation targets and threats to those targets. Pilot projects demonstrate the application of the regulatory framework and serve as replicable examples for other biologically important areas.

Indicator:	FY09 Target	FY09 Actual	FY10 Target	FY10 Actual	FY11 Target	FY11 Actual	FY12 Target	FY12 Actual	FY13 Target	FY13 Actual
I.5.: Number of hectares (terrestrial and marine) under improved natural resource management. (Number of hectares).										
Measures:										
<i>Micro-watersheds within Valle Nuevo National park Aguas Blancas</i>				Baseline		216		216		
<i>Micro-watersheds within Valle Nuevo National park - Nizaíto</i>						60		58.85		
<i>Central area of Valle Nuevo – Pyramid visitor center, and other areas of significant visitor traffic</i>								8000		
Annual Total	0	0	0	0	800	276	900	8274.85	1100	--
Cumulative Total	0	0	0	0	800	276		8274.85	--	8274.8

During FY11 work started in Aguas Blanca and Nizaíto micro-watershed. Direct interventions in Aguas Blancas prioritized riverbanks and areas with slopes higher than 32% where intensive agriculture had taken place. During FY12 42.01 ha were revegetated by PRONATURA, and 62.39 that were used as agricultural lands were released from its use, by local settlers. Accompaniment to the Environment Ministry was key to prevent that agriculture re-start in the 219 ha area that represent this segment of the Aguas Blancas micro-watershed. No agricultural activity has resumed in the 219 ha included in el Castillo area, and currently the Environment Ministry is mapping the areas where agriculture could be resumed by settlers. The settlers also agreed to a series of preventive actions to complement the agricultural limits.

In Nizaíto micro-watershed 58.85 ha were directly restored and re-vegetated, natural drainages were restored and irrigation pipes were removed from the area. Additionally to Aguas Blancas and Nizaíto micro-watersheds TNC participates of the co-management agreement signed during FY12, for the central section of the Park – approximately 80 Km² around the visitor center and the pyramid – and other areas of high visitation in the central plain of the park. The co-management agreement was signed on May 2012, between the Environment Ministry and the Propagas Foundation. No targets were set for this indicator after FY12.

1.6 Areas of importance for biodiversity conservation under improved management (Outcome)

The EPP carried out activities to improve ME and NGO's capacities to manage natural protected areas and other areas of importance for biodiversity conservation. The project focused in the Samaná bay area, Del Este National Park and in Valle Nuevo. Improved management was measured using a methodology adapted from the WWF Rapid Assessment and Prioritization of Protected Area Management (RAPPAM) Methodology¹². Baseline was established during FY 09 and the first quarter of FY10.

Indicator:	FY09 Target	FY09 Actual	FY10 Target	FY10 Actual	FY11 Target	FY11 Actual	FY12 Target	FY12 Actual	FY13 Target	FY13 Actual
1.6.: Improved management in areas of importance for biodiversity conservation (% increase in overall score using adapted methodology) Figures in table are change rates based on baseline score.										
<i>Samaná Bay Area</i>	Establish baseline	Establish baseline*	TBD	Baseline (score:300)	34%	60.7% ¹³	74%	44,98%		68.56%
<i>Valle Nuevo Area</i>	Establish baseline	Establish baseline	TBD	Baseline (score:45)	12%	70% ¹⁴	87%	72,50%		92.5%
<i>Del Este National Park</i>							4%	-11,94%		0%
Percent of LOP target, composite score.	Establish baseline	Establish baseline*		0.0%	23%	65.3%	55.17%	35,18%		53.69%

In spite of fluctuations reported, there is a generalized improvement compared to baseline in 2009, of management effectiveness of protected areas evaluated. Values estimated for Del Este National Park are the same as baseline year's, which however is an improvement compared to FY12. Throughout the timeframe of the RAPPAM assessment the variations reported for this protected area derived from two specific categories: planning and inputs. Reportedly, in regards to planning, this park has sustained lack of personnel and financial resources for critical enforcement activities; in addition to variations in the level of comprehension of annual staff members in regards to parks objectives and policies.

In the inputs category, the protected area also showed a lack of financial stability; while the component if basic equipment and infrastructure fluctuated each year. This we conclude that in the future, the overall effective management of PNE could improve on the basis of securing annual financial resources to supply equipment, infrastructure and communication needs as well as necessary personnel to address critical management areas. Assessment carried by the program indicates the urgent need to strongly regulate park visitation and accordingly proposed a visitation management plan. During FY13¹⁵ improvement continued for Valle Nuevo area, attributable to management planning, decision making, and local communities supporting the general objectives of the protected area. In Samaná the indicator also improved, especially to improvement in management factors assessed for the Marine Mammals Sanctuary, and Manglares del Bajo Yuna.

¹² Ervin, J. 2003. WWF: Rapid Assessment and Prioritization of Protected Area Management (RAPPAM) Methodology WWF. Gland, Switzerland

¹³ In PMP submitted for FY11 Annual Report, progress reported for Samaná protected areas was 68.7% instead of 60.7%. due to typos.

¹⁴ In PMP submitted for FY11 Annual Report, progress reported for Valle Nuevo was 72.5% instead of 70%.

¹⁵ This indicator is measured annually, latest measure was carried out during late 2013.

1.7 Laws, policies, regulations, administrative procedures, and studies supporting biodiversity conservation. (Output)

EPP was able to support improvement of national policies on natural resource management through a) conducting analysis leading to recommended improvements, and b) supporting a dialogue with relevant agencies to make them receptive to the process of improvement. This component focused on natural resource management, especially biodiversity, and especially on the completion of analyses and recommendations that the Government of Dominican Republic can use to improve management. By working at the Policy level, the program contributed to institutional changes in Dominican Republic that contribute to reduced threats to biodiversity throughout the country.

Indicator:	FY09 Target	FY09 Actual	FY10 Target	FY10 Actual	FY11 Target	FY11 Actual	FY12 Target	FY12 Actual	FY13 Target	FY13 Actual
1.7. Number of biodiversity laws, policies, regulations, administrative procedures, and supporting studies completed and submitted to relevant government agencies (# documents submitted).										
Subject Area and Measures:										
Zoning plan completed for Samaná Bay.			1	1						
Analysis and recommendations for a national management plan for recovery of sea turtles,			1	0		1				
Analysis leading to recommendations for better regulation of DR's timber industry			1	1						
Analysis leading to recommendations for linking ecosystem services (such as freshwater, fisheries) to payment regimes that generate funding for conservation of ecosystem services.					1	0				
Fondo Marena and Protected Areas Trust Fund Operating Procedures	1	1								
Analysis and recommendations for the national Public Servant Law to support longer tenure of public servants holding positions critical to long-term management of natural resources.					1	0				

Indicator:	FY09 Target	FY09 Actual	FY10 Target	FY10 Actual	FY11 Target	FY11 Actual	FY12 Target	FY12 Actual	FY13 Target	FY13 Actual
1.7. Number of biodiversity laws, policies, regulations, administrative procedures, and supporting studies completed and submitted to relevant government agencies (# documents submitted).										
Subject Area and Measures:										
Update Red List of endangered species for Dominican Rep. and recommendations for keeping updated.			1			1				
Analysis and recommendations for the legislative context that can provide incentives and a regulatory framework for conservation by private land owners						1 ¹⁶				
Whale population Study – Samaná Bay					1	1				
Calendar for seeds collection and three identification guide.					1	1				
Annual Total	1	1	4	2	5	5				
Cumulative Total	1	0	5	3	8	8				

1.8: Improved institutional capacities for the implementation of policies, laws, agreements or regulations promoting sustainable natural resource management (Outcome)

USAID-EPP main original objective was to improve institutional capacities for the implementation of environmental legislation in the DR. Most of the project’s activities are oriented to this goal. Policies, laws, agreements and regulations include those formed and formally endorsed by government, non-government, civil society, and/or private sector stakeholders with the intent to strengthen sustainable natural resource management. Implementation is demonstrated by institutional structure, capacity, and investment necessary to carry out changes. USAID-EPP supported the effective implementation of the following policies and policy instruments:

- Environmental Impact Assessment
- Cleaner Production
- National Protected Areas System

The project deliverables that contributed to the implementation of these policy instruments are: training, provision of equipment, development and implementation of procedures, support of participatory processes, base studies and drafted regulations.

¹⁶ Regulation has been approved by ME as part of a proposal submitted by the Re-engineering project funded by GEF.

Indicator:	FY10 Target	FY10 Actual	FY11 Target	FY11 Actual	FY12 Target	FY12 Actual	FY13 Target	FY13 Actual
Number of policies, laws, agreements or regulations promoting sustainable natural resource management and conservation that are implemented with project support.								
Subject Area and Measures:								
<i>Environmental Impact Assessment</i>			--		--		--	
<i>Cleaner Production</i>	--		--		--		--	
<i>National Protected Areas System</i>			--		--		--	
Totals	2	0						



ENVIRONMENTAL PROTECTION PROGRAM

Annex E: Success Stories (FY09 –FY14)

SUCCESS STORY

New Fund for Protected Areas

USAID aids in strengthening environmental efforts in the Dominican Republic



Photo by María Antonia Taveras

FONDOMARENA consists of a special fund for protected areas which will be divided up into five million U.S. dollars between The Nature Conservancy, the United Nations Development Program and the German Bank KfW. At the same time the fund also ensures continuous funding for protected areas as well as supporting initiatives for natural resources and biodiversity in the region.

With the help of the USAID, the Dominican Republic now has successfully secured financing for environmental projects. Over 30% of funds will now be used to support the Dominican Ministry for the Environment and Natural Resources as well as local environmental groups.

The USAID Environmental Protection Program (USAID-EPP) has played a key role in the introduction of a general fund known as FONDOMARENA to support the financing of environmental policies, programs, projects and activities. The fund was originally created in 2000 with the ratification of Dominican Environmental Law 64-00 to collect resources for the environmental sector.

The success of the new fund means that financing for initiatives that are vital to ensure the protection of natural resources and biodiversity in the country will now be more easily accessible and will not be affected by changes in economic and political events. This is because the capital of the fund will remain intact as the interest generated will be used to cover costs.

Over the course of the next two years, the fund will be used to designate over 30% of funds to the Dominican Ministry for the Environment and Natural Resources (SEMARENA). Part of the support agreed includes an Environmental Services Fund which is used for initiatives that are aimed principally at small organizations within communities as well as local non-governmental organizations.

As well as fulfilling agreements laid out at the Biological Diversity Convention, the fund also consists of a Marine Fund Advisory Board with members from international cooperation groups and also the Secretary of State for Tourism (SECTUR), several local universities and environmental NGOs who will help to increase the capital fund. The Nature Conservancy and the German Bank KfW are also acting as representatives on the Consulting Board to ensure additional transparency. For added security, those responsible for the administration of the fund are well-known personalities in the Dominican Republic who do not belong to the government, nor are they associated with any official political party.

The fund includes direct support to help maintain protected areas. This is particularly relevant as the Dominican President recently signed a decree to introduce thirty-two new protected areas into the current system based on recommendations by documents produced by The Nature Conservancy.



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The Nature Conservancy
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Protegiendo la vida.



SUCCESS STORY

Positive Environmental Protection results from the implementation of EIA

A more Efficient Evaluation Impact Assessment Process in the Dominican Republic results in the protection of the environment and the biodiversity.



Cenovi River viewed 50 meters from building project @ Ministry of Environment

The Ministry of Environment and Natural Resources of the Dominican Republic, working in collaboration with regional and bilateral programs of USAID, has taken important steps toward improving the efficiency and effectiveness of the EIA process. It has been reported an increase of over 400%, on average, of the

number of permits issued so far this year, compared to those issued in 2008. In addition to greater efficiency, there has been greater transparency and technical quality in the process, resulting in greater effectiveness in achieving the objectives of protecting environmental quality and biodiversity.

“A good example of the positive impact in the protection of the environment by the implementation of the new EIA processes and systems is the preservation of Cenovi River in Tenares Municipality”. Explained Lina Beriguet, Director of the Environmental Assessment Department from the Ministry of Environment.

The Cenoví River springs in the Cordillera Septentrional, in the community of Los Jobos Tenares Township, Hermanas Mirabal Province, and empties into the River Camu.

It has been identified as an urgent need for Tenares the provision of potable water, stable in quality and quantity according to their current and future human growth demand, this will be solved with the establishment of an aqueduct using the river Cenoví, with its clean, cool and steady water.

In July 2007, a construction firm requested a permit for the building of a residential complex in La Jaguita, section El Corozal in Tenares. The project was called **“Cenovi Residential”**.

The project went through the Evaluation Impact Assessment Process having the first technical visit from the Ministry of Environment on July 7th 2009, the final study report was delivered on January 2010 and the project was evaluated by the Technical Evaluation Team (TET) on March 2010. Once the report was reviewed, it was decided by the team that

the area needed to be evaluated in terms of the use of the land where the project was to be built. In April 2010 the permit was denied as the ground was considered to be reserved for agricultural use.

In September 2009, the project manager requested the Ministry to reconsider its decision, which resulted in a second evaluation visit by the Directors, members of the TET, together with a representative from the Agriculture Ministry to re-evaluate the area. The findings in this second visit concluded that even though the area was not necessarily reserved for agricultural use, some of the building lots were located too close to the Cenovi River representing an environmental hazard for the river, therefore, the Ministry decided that the master plan was to be modified to locate the houses further away and to include the green zone in the river proximity, keeping also the protection strip established by law 64-00 art. 129. As a result from this decision, the Cenovi River has been preserved and protected in its natural clean and beautiful state.

“The efficiency gained through the implementation of the new EIA processes developed with the support of the USAID Environmental Protection Program, has engaged the evaluation team to raise its performance to a whole new level: the process is faster, more transparent and integrates all technical areas making the permit issuing decision much quicker and more effective”. Said Ms.Lina Beriguet.

SUCCESS STORY

Environmental Rulings Prove Positive

USAID improves quality of life for local people with support for new regulations



Photo by María Antonia Taveras

Rafael Bello, mayor of Las Galeras, expressed his satisfaction stating that, "With the support from USAID-EPP, we have been successful in reducing fishing activities that have in the past been harmful to marine wildlife and have also contributed to polluting the coastline." Local communities and groups are now working together to agree on solutions to improve and protect their local environment and communities.

The USAID Environmental Protection Program (USAID-EPP) is working closely with local municipalities and community groups to introduce new regulations that reduce the effects of pollution and educate people of the benefits of protecting the environment.

In the community of Las Galeras on the northern coast of the Dominican Republic, local people depend greatly on fishing, agriculture and tourism as a steady source of income. Natural resources in this Caribbean town are essential not only to ensure a livelihood for the local people but have also been admired by international visitors who have been coming to this region for many years to enjoy the tranquility of the town's beaches and marvel at the beauty of the area.

Thanks to continuous efforts of the USAID Environmental Protection Program (USAID-EPP), agreements have now been reached with municipal and community leaders in Las Galeras that include banning the spillage of raw sewage near water, controlling the dumping of non-harmful residuals, managing noise pollution, banning any fishing that poses a threat to coastal marine wildlife and finally monitoring pollution caused by the burning of trees and non-harmful solid waste.

Together with support from other local groups, the municipality has been successful in eliminating a practice known as *el chinchorro* which involves throwing a net into the sea and hauling with it everything in its path. This method of fishing has proven to be very damaging to sea life. Another practice to be eliminated among fishermen is the act of throwing empty oil containers into the sea which very often contributed to coastal pollution.

The municipality, with support from the program, also decided to take action to prevent the construction of a new landfill which would have posed a substantial health risk to the local community in an area home to three churches and a local elementary school.

The USAID-EPP has been working with local governments to raise awareness about the importance of preserving natural resources and to aid towns in improving the way in which they manage the environment.



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SUCCESS STORY

Environmental Forum of Samaná

Protecting the Environment is a matter that concerns us all



*Forum member cleans a beach in the Municipality of Samana
Picture by: Maria Antonia Taveras*

The environmental Forum of Santa Barbara, Samana, was successfully incorporated thanks to the Support of the USAID Environmental Protection Program. This is a great achievement for Santa Barbara, as now it has acquired legal personality, enough to legally integrate itself in public participation to demand the application and compliance of environmental laws and regulations.

The main purpose of environmental forums, based on the Dominican Environment law, is to ensure civil

participation in municipal environmental management, explained by Maria Antonia Taveras, municipal environmental management coordinator for the USAID Environmental Protection Program.

Wilfredo Benjamín, president of the Environmental Forum of Santa Barabara Samaná, indicates that all forum's members felt the need to create an entity that would allow them to execute actions towards the protection of the environment within the municipality.

“This is why we asked the Environmental Protection Program for their support in order to start the conformation of the Samaná Environmental forum”.

Since its incorporation, the forum has implemented many actions towards the protection of the environment, such as the cleaning of the municipality, placement of garbage cans throughout the Malecon of Samaná avoiding the contamination by solid waste of the streets and the sea.

The forum members are also implementing an environmental media campaign through local media in order to educate and create awareness among

the people of Samaná on the importance of keeping the municipality clean and the protection of the environment.

Currently, the Forum is working alongside the Ministry of Environment and the Ministry of Agriculture, in the development of project targeting the rescue of Samaná Endemic fruit trees, “some of this endemic trees are the Mamey, the Guanábana, the Cajuil and the Mamón, all of them are almost nonexistent within the municipality” Expressed Mr. Wilfredo Benjamin.

The forum chose as its slogan the following phrase: “Protecting the Environment is a matter of all of us”



*Municipality beach before and after the clean up activity
Picture by Maria Antonia Taveras*

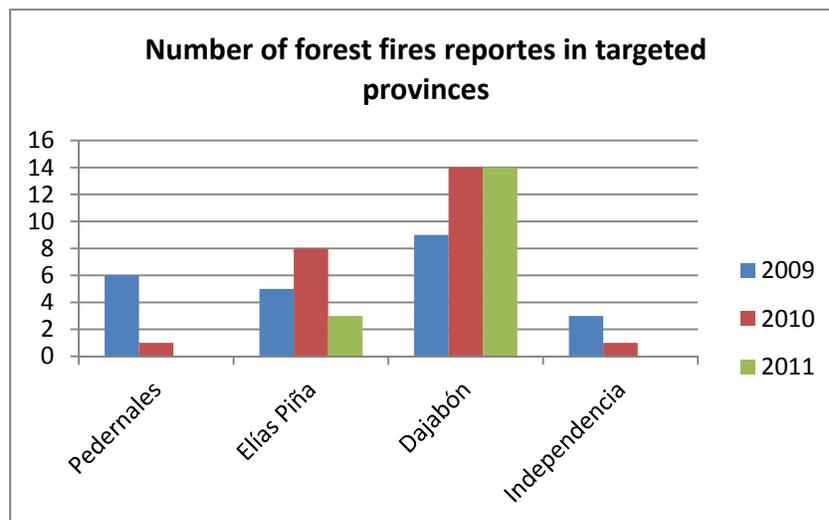
ENVIRONMENTAL PROTECTION PROGRAM

Forest fires control improves

Average reduction in forest fires reported in provinces where training has been provided

Since September 2009, Environmental Protection Program’s partner PRONATURA has carried out a training program on Basic Forest Fire Control Techniques. As per Ministry of Environment request, main target population has been the Quisqueya Verde Program brigades, although some courses have also included fire fighters and park rangers. Quisqueya Verde program is an initiative of the Environment ministry to protect and enhance forest coverage through reforestation in the entire national territory. Brigades are formed at the local level with community members as a means to encourage local ownership of the initiative and to promote local economy.

By the end of FY11, almost 500 persons had been trained, of which 14.5% are women, in spite the fact that forest fire management is a traditional male activity in the Dominican Republic. This strengthening initiative has focused in the border provinces of the country, where forest fires are one of the main environmental issues to address. Provinces targeted are Dajabón, Elías Piña, Independencia and Pedernales.



According to statistics reports of the Environment Ministry, there has been in general a reduction in number of forest fires reported compared to 2009, when the training started. According to Gerónimo Abreu, Head of the National Program for Management and control of Forest Fires, response capacity at the community level has visibly improved. He stated:

ENVIRONMENTAL PROTECTION PROGRAM



Photo by PRONATURA

“With the completion of basic techniques for forest fire control courses, funded by USAID ... through Environmental Protection Program’s work with PRONATURA, it is evident that the communities not only acquire knowledge that increase their skills and abilities in fighting forest fires, but also an enthusiasm in fulfilling their duty as responsible for preserving the natural forests and plantations is awoken, and they especially feel no longer indifferent to the problems of forest fires that affect their communities.”

Pronatura intends to continue this training program during FY2012, and combine it with other more in depth training courses aimed to technical staffers of the Environment Ministry, as a means to leave installed capacity to replicate courses if needed.

Place of training	# of trainees	# of women
Sabana Real, La Descubierta	29	3
Capotillo, Dajabon	40	5
Sabana Clara, Restauracion	43	10
Sabana Clara, Restauracion	37	2
Rinconcito, Elias Pina	19	1
Macacias	22	5
Hondo Valle	22	4
Guayajayuco y Calabacié,	37	3
Zapoten	22	5
Los Arroyos	41	4
La Romana	25	1
El Dajao, La Pionia, Naranjito, Santiago Rodriguez	32	6
Capotillo y Cerro Juan Calvo	25	4
Rio Limpio	27	3
Las Lagunas, Elias Piña	27	8
Rancho La Guardia, Elias Piña	30	6
Pedro Santana, Elias Piña	17	2
TOTAL PEOPLE TRAINED	495	72

ENVIRONMENTAL PROTECTION PROGRAM

Strengthening local environmental capacities

USAID/TNC's Environmental Protection Program partner INTEC developed a custom made program of university certificated courses to enhance local environmental enforcement capacities.

Since March 2009 the USAID – TNC Environmental Protection Program has sought to improve the protection of biodiversity and environmental quality in the Dominican Republic, while increasing public and private sector participation and institutional capacity for the application of environmental legislation. To this end the implementing partner University INTEC has prepared and delivered 7 different certificate courses aimed to strengthen local capacities in various areas related to environmental management and enforcement of environmental regulation. The main purpose of this tailored program has been to address training need of the Ministry of Environment and other institutions necessary to fulfill commitments made under Chapter 17 of the Free Trade Agreement between the U.S., the Central American countries and the Dominican Republic.

Special emphasis was made by the program in topics related to the environmental evaluation process in order to improve the Ministry of Environment capacity to process requests and issue environmental permits.

Course	# of rounds	# of attendees
EIA certificate diploma	3	105
Municipal environmental management	1	36
Watershed management	1	32
Cleaner Production	1	35
Environmental executive leadership	1	31
Protected areas management	2	69
Environmental Journalism	1	35
TOTALS	10	345

Of attendees, women counted for the 32 percent. According to post evaluations, 71% of trainees reported having assumed new responsibilities in their professional duties after the courses. 65% of trainees considers to pursue further training to enhance their capabilities.

ENVIRONMENTAL PROTECTION PROGRAM



Photo: @INTEC

One of the most innovative areas covered by this tailored program was the Environmental Journalism certificate course, which was designed considering the importance of press and media in informing and creating public opinion regarding environment writ large. Public opinion can eventually become policy and well informed journalists can play a key role in awareness raising. One of the trained journalists said:

"The impact (of the course) has been significant, because although I usually cover environmental issues in the newspaper, experience gained during these

days has given me a much broader view of issues affecting the sector. In addition, I have enriched my ideas about important topics such as legislation, for example, fundamental for sustaining any complaint, and that many times, because of the rush of everyday life, it is not in depth treated. Today I feel much more ownership to report any situation that harms the environment and more aware of its consequences. "

Key topics have been covered in more than one round due to the relevance for proper enforcement of local Environmental legislation; such is the case of the environmental impact assessment certificate course, which has complemented other efforts (such as technical assistance) of the Environmental Protection Program. By the end of September 2011, an improvement of over 100% in the processing rate of projects submitted to the Environment Ministry had been achieved, compared to 2009 when the project started.

Curricula developed for these courses will be available for further replication if needed and requested by Dominican stakeholders, guaranteeing continued education and capacity building on environmental issues for the Dominican public.

Success story

Creating awareness on climate change: mass media campaign



Above: Three of the most compelling images of the campaign on climate change. Images: @IDDI.

The “Knowledge and Perception Levels of the Dominican Population related to Climate Change” survey elaborated by Gallup with USAID-TNC’s Environmental Protection Program support revealed that among environmental topics, climate change is the third in importance, and that general knowledge regarding this phenomenon, its causes and effects is limited.

It was also identified that most Dominicans obtain climate change information from television, radio, and newspapers. For that reason, Climacción, a network of individuals from both public and private institutions that discuss climate change issues to promote action; organized by IDDI, has launched a mass media campaign for climate change adaptation awareness at the national level under the USAID/TNC Environmental Protection Program.

The campaign is titled “El clima sigue cambiando, no podemos seguir esperando” (The climate continues to change, we cannot continue to wait). Its goal is to create more conscience among the Dominican population on the importance of climate change and its economic, social, and environmental implications. The campaign is also a call for action to implement climate change adaptation activities considering the country’s high vulnerability.

SUCCESS STORY

Community Based Climate Change Adaptation

Thanks to the support of the USAID – TNC Environmental Protection Program, a community network for climate change adaptation has been created in popular neighborhoods of northern Santo Domingo.



Dominican Republic is one of the countries more likely to be affected by climate change, due to its geographical location and its insular condition. About 70% of the Dominican population lives and works in the coastal area. Santo Domingo has more than 2 million people, and much of the poorest people reside on the banks of the rivers Ozama, Isabela and Haina. These populations were chosen by the Environmental Protection Program of USAID and The Nature Conservancy (TNC) to carry out an awareness program on adaptation to climate change

Training workshops were held with community leaders and members of community organizations such as schools, neighborhood associations, environmental sanitation councils and community committees for prevention, mitigation and response. Participants were instructed on the basics of climate change, how they affect their country and their communities, and adaptation options



Following this the participating organizations decided to create a community network for adaptation to climate change, to stay updated and informed about climate change and its impacts, and disseminate this information in their communities.

The Community Network for Climate Change Adaptation was formally constituted on March 14th, 2012 with the participation of 32 community based organizations, of Northern Santo Domingo.

Above: formal signing of protocol for the Community Network for Climate change Adaptation. Below: the audience attends one of the training workshops. Photos: @IDDI.

Success story

Changing habits: making sustainable fishing profitable in Samaná Bay



Before: Illegal fishing arts (called the blenders) were used, they degrade marine ecosystems.



Now: Fishermen associated are changing their fishing arts and promoting change amongst other fishermen.
Photos: @CEBSE.

Fishermen of Samaná Bay in the Dominican Republic have been facing many difficulties and problems due to over exploitation of marine resources, leading to the extinction of more than 30 species.

Since 2010, the USAID- TNC Environmental Protection Program partner CEBSE promotes sustainable fishing practices in close collaboration with national authority CODOPESCA. CEBSE has worked in the organizational strengthening of three fisheries organizations and their shifting to sustainable fishing practices.

To date, three fishing cooperatives that work for the replacement of illegal fishing gear have been constituted and only await presidential decree. One of these cooperatives is La Union; its fishermen have changed their fishing habits, are better organized, have twenty-one partners. La Union was initially capitalized with an amount of DOP 21,000.00 and after barely two months of starting operations they report a capital of DOP 59,367.00. They have already radically changed their fishing style and are preparing to negotiate with CODOPESCA a fishing co-management agreement that guarantees the resource's availability for future generations.

SUCCESS STORY

Environmental Network of Dominican Universities - RAUDO

Thanks to the support of the USAID – TNC Environmental Protection Program, a network of Dominican Universities has been created to promote sustainability from the *academia* through research and *currícula*.

In February 2012 as an unplanned result of the assistance provided by USAID and TNC's Environmental Protection Program through partner INTEC, was formally launched the first Environmental Network of Dominican Universities- RAUDO.

RAUDO pursues the articulation of Dominican higher education institutions for the dissemination of topics related to environmental sustainability in general through education, research and extension. It creates an unprecedented platform for the mainstreaming of climate change consideration in the *currícula*.

To date, seventeen Dominican universities are active part of the network, internal statutes and regulations for operations and a steering committee have been created. RAUDO has already established direct coordination with the National Council on Climate Change and Clean Development Mechanism, and is actively participating in the drafting process of the National Policy on Climate Change.

At the international level, RAUDO has integrated to the Alliance of Ibero-american Universities Network for Sustainability and the Environment, and will be participating in the launching of UNEP's World Alliance of Universities for Environment and Sustainability in Colombia.



Above: formal launching of RAUDO on February 2012.
Below: Formal pledge of RAUDO's steering committee.

SUCCESS STORY: native and endemic plants for restoration processes

In the Dominican Republic a seed bank of native and endemic has been created to support ecological restoration programs.

Sponsored by the United States Agency for International Development (USAID), the Environmental Protection Program implemented by The Nature Conservancy (TNC) has supported the development of a native and endemic plants' seed bank to enable the Ministry of Environment and Natural Resources of the Dominican Republic using native species in ecological restoration programs.

This initiative has been possible with the concurrence and support from the U.S. Forest Service, through assistance in the installation design, identification of equipment necessary for operation and training to the bank's personnel. Training took place at the USFS National Seed Laboratory located in Dry Branch, Macon, Georgia.

During training, Dominican technicians learned techniques used for seed classification, processing, quality assurance, storage, and germination. Complementarily, an evaluation of procedures used in the DR for handling the seeds was carried out, and protocols to maintain operation within international standards and ensure greater purity of seeds in storage were discussed. The training concluded with the development of a joint work plan between the U.S. Forest Service and the Environment Ministry of the Dominican Republic, on which further technical assistance will be based. Additional training is scheduled for upcoming months, until the bank is fully operational.

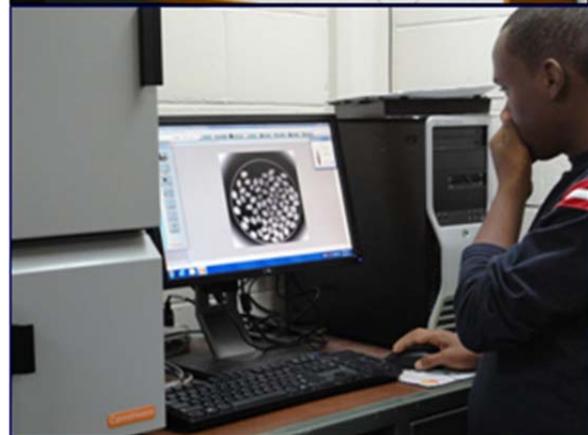


Photo: @Ministry of Environment and Natural Resources of the Dominican Republic.

Success story

Dominican private sector pursuing improved environmental performance



The signature of ASIEHaina, Adogranja and BANELINO's voluntary sustainable production agreements.

Photos: @Environment Ministry

Since the beginning of the program, assistance was provided to the Environment Ministry to promote and foster an improved environmental performance of the private sector in general. Assistance was provided to develop the necessary procedures and regulations to promote voluntary sustainable production agreements and to carry out assessments of environmental management performance of selected companies- among others.

As it was intended since the inception, the Environment Ministry took ownership of the initiative and during the last year has achieved three voluntary sustainable agreements with three productive associations: the Association of ecological banana producers in the Northwest (BANELINO) the Dominican Association of Suine farms (ADOGRANJA), and the Association of Industries and Businesses of Haina and the South Region (AIEHAINA—Spanish Acronym).

The agreements have the purpose of increasing competitiveness and environmental performance. The parties committed to plan and implement actions that increase productivity, prevent and minimize negative environmental impacts and reduce health risks. The Environment Ministry's intention is to pursue further agreements with other private stakeholder across the national territory.

Success story

Samaná's youth communicators on climate change



In Samaná community youth volunteer to promote awareness about climate change. Photos @CEBSE.

In Samaná province, CEBSE developed a climate change induction program directed to youth multipliers, (the so called Local Communicators for Climate Change Adaptation). These were trained in basic climate change concepts, its causes and consequences and the potential impacts it could have in their province. The communicators helped multiplying their knowledge, reaching population that otherwise would not be informed regarding climate change.

The initiative is part of the climate change awareness raising efforts that the U.S. Agency for International Development (USAID) supports in the DR through the Environmental Protection Program. The program is implemented by The Nature Conservancy in collaboration with local partners such as CEBSE.

By late FY13, these local communicators had conducted 33 different workshops on climate change adaptation in 14 schools (10 public and 4 private schools) with the participation of 969 local students.

When the terrestrial zoning with climate change considerations drafted with program's support will be ready for implementation, more people are likely to understand and participate in the corresponding planning for specific interventions.

Success story

Alliance for the governance and sustainability of National Park Montaña La Humeadora



Ramona Ureña (Quina), campesino leader from Duey, signs the agreement. Photo: @PRONATURA



Haina River Watershed. Photo: @PRONATURA

24 organizations from the public and private sector, community and business associations, local governments and NGOs came together to preserve the protected area and protect an important water source for the Greater Santo Domingo: the Duey (Haina River) basin. This initiative is part of the freshwater protection and adaptation to climate change efforts that the U.S. Agency for International Development (USAID) supports in the DR through the Environmental Protection Program. The program is implemented by The Nature Conservancy in collaboration with local partners such as PRONATURA, which facilitated the process for governance and sustainability of the Park.

Freshwater availability will be one of the biggest climate change related challenges the Dominican Republic might face. The agreement establish coordination and planning of conservation actions in the National Park Montaña La Humeadora, as major supplier of fresh water to Santo Domingo and its biodiversity, while acknowledging the role of local communities in the process.

This public-private alliance ensures the sustainability of freshwater protection interventions undertaken by the Environmental Protection Program in coordination four key stakeholders: (1) Ministry of Environment (at the central, provincial and municipal levels), (2) local governments, (3) private sector (4) communities, and farmers of the Haina - Duey watershed.

Dominican Republic mainstreams climate change into planning



Both policy tools represent an unprecedented opportunity for development planning in the Dominican Republic. Above: SEA consultation process; below: EIA's new guidelines induction workshops. Photos: @TNC.

The Dominican Republic's central government has tools to mainstream climate change adaptation into its planning strategy. The USAID-TNC Environmental Protection Program provided assistance in enhancing two of the most important planning policy tools that exist: (1) the new guidelines adopted for preparing Environmental Impact Assessments (EIA), and the inclusion of the Strategic Environmental Assessment (SEA) in the National Land Use Plan.

Assistance in incorporating climate change considerations into the environmental permitting process resulted in new guidelines for four priority sectors: housing, mining tourism and agriculture. Drafting process was based in a broad consultation with stakeholders from all mentioned sectors. Guidelines were official issued by Ministerial resolution on February 6th, 2014.

The program also assisted carrying out the strategic environmental assessment (SEA) for the national zoning plan proposal (PNOT, Spanish acronym), as per request of the Directorate of Land Use Planning (DGODT), as a means to contribute to the sustainable development and climate change adaptation of future development throughout the territory. From the Ministry of Environment's perspective, the SEA has been the key process to ensure the incorporation of environmental considerations as a central subject matter in the PNOT.

Both these policy instruments represent ideal vehicles for the mainstreaming of climate change considerations in development planning for the DR. The SEA is the vehicle for incorporating environmental considerations into policies, plans and programs and complements the EIA, which scope is focused on individual project impact.

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SUCCESS STORY

Dominican municipalities adapt to climate change

The USAID-TNC Environmental Protection Program emphasized the strengthening of local governments' capacities to mainstream environmental and climate change considerations into municipal management.



Above: MoU signing in Jarabacoa for water protection. Center: Bayahibe participatory 3D mapping. Below: A view of Samaná. Photos: @TNC.

Program efforts have concentrated in Jarabacoa, Samaná province and Bayahibe.

Jarabacoa, cooperating fully with USAID-TNC EPP the city's municipal council unanimously approved inclusion of the "formulation, dissemination, and execution of the municipal plan for adaptation to climate change" as a component of its official Municipal Development Plan. A community based network for climate change adaptation was also created and an inter-institutional committee to protect the main freshwater source of its aqueduct has been created, as a means to ensure water availability.

In Bayahibe, program's assistance allowed the drafting of a strategic plan for climate change adaptation, the creation of a community based network for climate change and the drafting of the first municipal ordinances considering climate change. Parallel, FUNDEMAR's work restoring local reefs with the collaboration of local tourism firms provide coastal protection for this small municipal district.

In Samaná, the first zoning plan with climate change considerations was drafted with the participation of local governments and communities. Trainings to municipal staffers in local adaptation strategies and tool to manipulate the zoning maps into concrete municipal plans were carried out reaching over 60 people in the province. Two of the sin municipalities already have municipal ordinances addressing climate change adaptation in their territories. Local youth communicators have raised awareness about climate change in local schools reaching over 960 students of all ages.

These results are directly related to USAID - EPP initiatives in training and technical assistance, and promoting local participation in adaptation initiatives. The materialization of abstract concepts such as climate change adaptation into concrete plans and actions – directly related with people's wellbeing – are key to ensure sustainability and ownership of processes.



SUCCESS STORY

Coral Nurseries for Reef Restoration in Bayahibe

The USAID-TNC Environmental Protection Program facilitated reef restoration in Bayahibe as a means to promote coastal protection for the community.



Above: FUNDEMAR team transplanting genetic material from nurseries onto the reef. Photos: @FUNDEMAR.

Climate change poses threats to various species and ecosystems, one of which is reefs. These are threatened by human activities, such as pollution and sedimentation, as well as climate change exacerbated occurrences, such as increase in ocean temperatures and ocean acidification. Coral reefs have been proven to be very helpful in adapting to climate change, since they attenuate the impacts of waves, reduce beach erosion, and provide food and livelihoods to communities.

For these reasons, FUNDEMAR has embarked on building reef nurseries of *Acropora cervicornis* in several sites near the community of Bayahibe. The selected species is endangered according to

the latest information by IUCN, is a coral that can be fragmented easily, and has a quick growth rate. Currently, FUNDEMAR has three nursery sites made of rope and/or frames with about 16 structures and about 12068cm of tissue, for a growth rate of about 1.36 to 5.66 cm/year.

FUNDEMAR successfully paired up with key stakeholders in the community and experts in the topic, such as local divers, the Ministry of Environment and the Fundacion Ecologica de Punta Cana. Through these interactions, FUNDEMAR obtained genetic material for transplantation and accompaniment from divers to the point where the latter voluntarily gathered sea temperatures at various diving points serving FUNDEMAR's temperature database.

In addition to nurseries, there are four areas of transplantation, in which over 5000 cm coral tissue grown in nurseries have been "planted". FUNDEMAR is working to incorporate new species in the nursery, based on the results of research and monitoring of coral reefs of the past three years, in order to continue with restoration.

FUNDEMAR's objectives for 2014, aim to strengthen existing relationships with local institutions such as the administration of the National Park of the East, Cluster and Tourist Hotels Association Romana-Bayahibe, the fishermen's association (created through the EPP project), diving centers and other community groups, in order to continue working for the conservation of these ecosystems and the adaptation of this coastal community.

SUCCESS STORY

Protecting freshwater sources in the Dominican Republic



DUEY RIVER BEFORE THE AQUEDUCT INTAKE. PHOTO:
@PRONATURA

Acknowledging the potential vulnerability in terms of freshwater availability that climate change poses, USAID-TNC-EPP successfully worked in several very important watersheds in an effort to provide solutions to watershed degradation processes in the DR. The program based its approach on two complementary levels: 1) contributing to the development of financial mechanisms to finance conservation initiatives in upper watersheds, with contribution from the productive private sector; and 2) demonstration intervention at the local level to promote understanding and appropriation from small farmers living in upper watersheds systems and local municipal and environmental authorities.

The Program supported the hydrological modeling of four important watershed (Haina, Nizao and Ozama, feeding the great Santo Domingo area; and Yaque del Norte) that provide water for Santo Domingo and other cities. The information has been the basis for the creation of two Water Funds, (for Santo

Domingo and Yaque del Norte respectively). The Water Funds regional initiative is a matching project to the Environmental Protection Program, and is part of the Latin-American water funds alliance. TNC's purpose is to ensure a permanent investment mechanism for watershed conservation in the DR.

At the local level, restoration interventions took place in three micro-watersheds: Duey River (Haina watershed) feeds into Santo Domingo aqueduct (22 ha restored); San Juan River, main water source of Samaná's aqueduct (16.1ha restored); and Arroyo el Cercado, main source of Jarabacoa's aqueduct (18.85 ha restored). Activities carried out include: riparian restoration, agroforestry, actions to reduce erosion, education on climate change adaptation and especially communities' ownership and empowerment.

These initiatives focused on creating social infrastructure locally to govern resource protection while acknowledging social needs present in selected micro-watershed; these provide a powerful demonstration effect and are very easily replicable anywhere in the DR. Effective and participatory governance mechanisms combined with sustainable productive strategies will guarantee sustainability of initiatives beyond the program's closure.