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REGIONAL PROGRAM FOR THE MANAGEMENT OF AQUATIC RESOURCES AND ECONOMIC ALTERNATIVES (MAREA)

FINAL PERFORMANCE EVALUATION

FINAL REPORT

December 17, 2014

This report was produced for review by the United States Agency for International Development (USAID). It was prepared by International Business & Technical Consultants, Inc. (IBTCI) under Contract No.: AID-596-O-14-000006

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ACRONYMS

AGGRA	Atlantic and Gulf Rapid Reef Assessment
ARAP	*Autoridad de los Recursos Acuáticos de Panamá* (Aquatic Resources Authority of Panama)
ASPESCU	*Asociación de Pescadores Artesanales de la Playa El Cuco* (Association of Artisinal Fishermen of El Cuco Beach)
ASPROTOGOLVE	*Asociación para la Protección de la Tortuga Delfina* (Association for the Protection of Turtles and Dolphins)
BCIE	*Banco Centroamericano de Integración Económica* (Central American Bank for Economic Integration)
BFP	Best Fisheries Practices
CAPENIC	*Cámara de la Pesca de Nicaragua* (Chamber of Fisheries of Nicaragua)
CARICOMP	Caribbean Coastal Marine Productivity Program
CCAD	Central America Commission for Environment and Development
CCAW	Conservation of Central American Watersheds
CENDEPESCA	*Dirección General de Desarrollo de la Pesca y Acuicultura* (Directorate General for Development of Fisheries and Aquaculture)
CENPROMYPE	Regional Center for Micro, Small and Medium Businesses
CI	Conservation International
CIF	Cost Insurance and Freight
CONAP	Consejo Nacional de Áreas Protegidas (National Council of Protected Areas)
COP	Chief-of-Party
CPACC	Caribbean Planning for Adaptation to Climate Change
CWIP	Coastal Water Quality Improvement Project
EPA	United States Environmental Protection Agency
FGD	Focus Group Discussion
FUNDAECO	*Fundación para el Ecodesarrollo y La Conservación* (Foundation for Eco-Development and Conservation)
FWS	Fish and Wildlife Service
FY	Fiscal Year
GCRMN	Global Coral Reef Monitoring Network
GEF	Global Environment Fund
ICAPO	Eastern Pacific Hawksbill Initiative
ICT	*Instituto Costarricense de Turismo* (Costa Rica Institute of Tourism)
INCOPESCA	*Instituto Costarricense de Pesca y Acuicultura* (Costa Rica Institute of Fish and Aquaculture)
IRBIO	*Instituto Regional de Biodiversidad* (Institute for Regional Biodiversity)
ITQ	Individual Transferable Quotas
IUCN	International Union for Conservation of Nature

KII	Key Informant Interview
M&E	Monitoring and Evaluation
MACC	Mainstreaming Adaptation to Global Change
MAREA	Management of Aquatic Resources and Economic Alternatives
MARN	*Ministerio de Medio Ambiente y Recursos Naturales* (Ministry of Environment and Natural Resources)
MIDA	*Ministerio de Desarrollo Agropecuario* (Ministry of Agricultural Development)
MINEA	*Ministerio de Ambiente, Energía y Mares* (Ministry of Environment, Energy, and Seas)
NGO	Non-Governmental Organization
NMFS	National Marine Fisheries Service
OSPESCA	*Organización del Sector Pesquero y Acuícola del Istmo Centroamericano* (Organization of Fishing and Aquaculture in Central America)
PHMR	Personal Healthcare Monitoring Report
PI	Performance Indicator
PIRS	Performance Indicator Reference Sheet
PMP	Performance Management Plan
PROARCA	Central American Regional Environmental Program
PRONEGOCIOS	Rural Business Development Program
RENARM	Regional Natural Resources Management Project
SICA	Central American Integration System
SINAC	*Sistema Nacional de Áreas de Conservación* (System of National Conservation Areas)
SO	Strategic Objective
SOW	Scope of Work
STC	The Sea Turtle Conservancy
TNC	The Nature Conservancy
TOR	Terms of Reference
UNDP	United Nations Development Program
UPESABO	*Unión de Pescadores Artesanales Bocatoreños* (Union of Artisan Fishermen of Bocas del Toro)
USAID	United States Agency for International Development
USAID/ECAM	USAID Regional Program for Central America and Mexico
USAID/G-CAP	USAID/Guatemala-Central America Program
WCS	Wildlife Conservation Society
WWF	World Wildlife Fund

EXECUTIVE SUMMARY

Background

The objectives of the evaluation were to: "(i) analyze the quality of the Management of Aquatic Resources and Economic Alternatives (MAREA) program's initial design, especially the validity of its assumptions; (ii) identify and analyze challenges and results, including those related to gender considerations, at the local, national, and regional levels of implementation; and (iii) identify methodological considerations for future regional biodiversity project design" (USAID 2014).

MAREA's development hypothesis is: "If USAID invests in sound coastal and marine management practices and market solutions in the region that are tailored to guarantee sustainability at the local level, then coastal communities will have alternative income opportunities that can lead to greater food security and marine biodiversity" (USAID 2014).

The MAREA program started in January 2010 and was originally scheduled to end in September 30, 2014, but was extended to March 31, 2015. Its total budget is US$13,888,734, of which US$819,083 comes from a Congressional earmark for labor activities and US$13,069,651 from an earmark for biodiversity. USAID's Biodiversity Code requires that funds earmarked for biodiversity conservation: (i) have an explicit biodiversity objective; (ii) be used for activities that have been identified based on an analysis of threats to biodiversity; (iii) monitor associated biodiversity conservation indicators; and (iv) implement site-based projects in biologically significant areas to positively impact biodiversity.

MAREA has implemented projects in four coastal areas: 1) the Gulf of Fonseca in El Salvador, Honduras and Nicaragua; 2) the Miskito Coast along the Honduras and Nicaragua Caribbean coasts; 3) the Gulf of Honduras in Belize, Guatemala and Honduras; and 4) the Cahuita-Bocas del Toro area on the Caribbean coasts of Costa Rica and Panama.

USAID's evaluation statement of work set forth the following evaluation questions:

- To what extent did MAREA's design and resources help or hinder the Program's ability to achieve its objectives and measurable results within the proposed scope and established time-frame?
- To what extent did the assumptions of the Program hold true during implementation, influencing the achievement of MAREA's objectives, and should be considered for future programs?
- What implementation challenges faced MAREA at regional, national, local and transnational levels of the Program?
- Which activities showed the fewest results and should be discontinued or approached differently? Explain why. What activities and methodologies have the potential to be sustainable by the end of MAREA? What tangible, sustainable benefits have resulted from MAREA?
- Based on USAID's experience with the Central American Commission for Environment and Development (CCAD), the Conservation of Central American Watersheds Program (CCAW) and MAREA, as well as current regional biodiversity challenges, where should USAID invest biodiversity resources/funding in the future?
- How could MAREA have improved its integration of gender equality in the production, processing and marketing/sales phases of the fishery and coastal/marine value chain so as to maximize the impact of women in those areas?

Evaluation Methodology

A team of four professionals in the conservation of natural resources gathered quantitative and qualitative data from September through October 2014. The Team Leader, with professional experience in the evaluation of natural resource management and conservation projects, provided overall direction to the team and was the principal writer of the report. The Fisheries Expert examined the feasibility of using market forces to increase the conservation of marine and coastal biodiversity. The Environmental Economist conducted key informant interviews in Costa Rica and validation workshops in Panama and Costa Rica. The Technical Logistic Coordinator made appointments with key informants, organized focus group discussions, and coordinated and analyzed the results of six quantitative surveys.

Qualitative data about MAREA came from over 60 documents, interviews with 85 key informants (KI), discussions with eight focus groups (FG), field observations (FO) at 11 field sites, and comments at seven validation workshops (VW). Six surveys provided quantitative data. The qualitative data were used to identify patterns, themes and categories that were relevant to the formulation of findings related to the evaluation questions.

Findings, Conclusions and Recommendations

Question 1 - Design and Resources

MAREA's design and resources in some ways helped it to achieve its objectives and measurable results. Rapid, widespread degradation and destruction of marine and coastal biodiversity severely threatens the economic welfare of the Central American countries. The focus of MAREA's design on its management and conservation was thus well justified. MAREA's design of concentrating its activities in four coastal areas that contain lagoons, mangroves and reefs, with high importance for the conservation of marine and coastal biodiversity, also helped it to achieve its objectives and measurable results. Finally, the emphasis that MAREA's design put on introducing best management practices and improved technologies for commercially valuable marine and coastal species helped MAREA to achieve its objectives and measurable results.

In several ways, however, MAREA's design hindered the achievement of its objectives and results. First, the results framework and development hypotheses that underlie MAREA's design have not clearly indicated the cause-and-effect between MAREA's actions and the achievement of its two strategic objectives. The wording of the original, two strategic objectives were weakly articulated from the outset, and proved difficult to measure. The SOs were articulated not as outcomes, but as processes. Similarly, MAREA's development hypothesis does not clearly establish a link between market forces and increased conservation of biodiversity. The evaluation team found no evidence that MAREA was able to increase the conservation of biodiversity sustainably and on a significant scale through the use of market forces. Second, MAREA's Monitoring and Evaluation (M&E) Plan, considered as part of MAREA's design, does not provide a sufficiently clear mechanism for continuous monitoring of MAREA's effectiveness in achieving increased conservation of biodiversity and thereby the basis for adjusting its activities so that they could become increasingly more effective. Third, MAREA's implementation mechanisms were often cumbersome, costly, and time-consuming and thus sometimes interfered with the efficient and effective flow of its field activities. Specifically, the contract mechanism under which MAREA was implemented put excessive emphasis on meeting those quantitative targets that had been defined as formal Performance Indicators, tending to make the meeting of these quantitative targets a principal preoccupation of MAREA's management, rather than the results which the quantitative targets were established to measure. Fourth, the process by which MAREA was designed was insufficiently participatory to stimulate the level of support during its implementation from institutions whose increased collaboration could have increased the effectiveness and sustainability of its actions. Fifth, MAREA's budget was small relative to any opportunity to scale up or achieve trans-national results and this budget limit pulled the program into adapting to other programs rather than fully concentrating on bringing its own conservation goals to scale. Sixth, MAREA's timeframe was shorter than needed to

establish the sustainability of its results and to achieve its strategic objectives at a significant scale. Seventh, MAREA's design did not fully exploit the potential for combining the actions required to conserve marine and coastal biodiversity with those required to strengthen resilience and adaptation to climate change. Finally, the geographic areas upon which MAREA focused were too large to establish the strong, long-term alliances between local government, private sector, NGOs and research institutions that are required to formulate and implement actions that combine conservation of biodiversity with sustainable economic development.

Based on these findings and conclusions, this evaluation recommends that a future regional biodiversity conservation program: (1) focus on the conservation of marine and coastal biodiversity within the same four geographic areas where MAREA has implemented its activities; (2) establish a results framework for the program that defines a clear strategic objective for the conservation of marine and coastal biodiversity to which other objectives, such as gender equity or economic development, contribute and which clearly indicates the cause-and-effect relationships between proposed actions and the achievement of that strategic objective; (3) concentrate its attention on the introduction and wide-spread adoption of improved management practices for the use of coastal and marine natural resources; (4) establish useful, systematic monitoring and evaluation processes that can be used for adaptive management of the program; (5) implement the program through a flexible, simple implementation mechanism that does not give excessive emphasis to meeting quantitative targets; (6) make the design process fully participatory by supporting the formation of local coalitions that can formulate and implement long-term plans that encompass both conservation and development; (7) combine activities to conserve marine and coastal biodiversity with those to increase adaptation and resilience to climate change; (8) match the available budget and time frame with the scale of the proposed activities so that sufficient funding and time is available to achieve the proposed results and strategic objective; and (9) maintain the regional character of the biodiversity conservation program by systematically sharing local experiences within Central America and Mexico.

Question 2 – Assumptions

Of MAREA's nine design assumptions, as articulated by Chemonics in its 2010 *Performance Monitoring Plan* (see page 2 and Appendix 8) one proved to be largely true, six proved to be partially true, and the remaining two were seen to be largely untrue. Assumption 8, although not really an assumption since it was an output of MAREA itself, proved *true* -- a regional common agenda of fisheries and environmental issues and a regional research agenda were produced and approved, although it was not possible to determine the extent to which the agenda has led to implementation follow-up. Assumptions 1, 2, 4, 6, 7 and 9 were seen to be *partially true*. Although El Salvador and Honduras have high rates of violent crime, and the other countries are not completely socio-economically stable, generally there was an absence of an unstable socio-political environment in Central America as a whole during the time MAREA has been implemented. Fiscal and monetary policies were generally stable in most of the Central American countries, although never entirely so and more in some countries than others. Some regional binding agreements were reached under Central American Integration System (SICA), although they were not always fully implemented. There was an absence of internationally imposed measures, although a ban of U.S. aid to Nicaraguan central government institutions did somewhat restrict MAREA activities in Nicaragua. Assumptions 3, and 5 were primarily untrue. National governments, although perhaps not unwilling, were rarely able fully to effect much change and reform to establish rights based mechanisms. The regional structure of such institutions as the Organization of Fishing and Aquaculture in Central America (OSPESCA) and the Central American Commission for Environment and Development (CCAD) made it unlikely that they would be able to participate fully in a USAID project which sought relatively rapid results rather than full consensus between the countries. Shocks did occur in supply and demand, although it was not possible for the evaluation team to study them in detail. Rises in fuel costs, for example, probably affected fishing practices and the prices for seafood are always subject to fluctuations. National public institutions that are responsible for the planning, management

and regulation of marine and coastal resources generally lacked sufficient staff and budget to carry out fully their responsibilities.

These assumptions did influence MAREA's design and therefore its implementation. If, for example, the feasibility of establishing rights-based mechanisms had not been an assumption, then perhaps MAREA's design would have included more effective and feasible actions to establish such rights-based mechanisms. Similarly, if MAREA's design had not assumed the full support of regional organizations it might have incorporated specific measures to obtain such support. Had MAREA's design assumed that there would be increases in the price of the fuel fishermen use, perhaps it would have factored such increases into its design and been more helpful to fishermen for adopting sustainable fishing practices.

Based on these findings and conclusions about the assumptions, the evaluation team recommends that in its future programming for regional biodiversity conservation USAID: (1) consider the eight assumptions (eliminating Assumption 8) in future programing for a USAID regional biodiversity conservation program; (2) be fully realistic about the current situation of each of these assumptions; (3) not expect that the situation with respect to these assumption will improve and be prepared that their situation may worsen; (4) clearly differentiate the situation of these assumptions in the different Central American countries, and design the program to take into account and respond to these differences; (5) substitute commitments for assumptions by using a process for designing the program that achieves commitments of local organizations and institutions to implement the specific actions that are required in specific sites to reconcile sustainable economic growth and conservation of marine and coastal biodiversity.

Question 3 -- Implementation Challenges

At the regional level, MAREA's main implementation challenges involved the lack of full collaboration with the regional institutions CCAD and OSPESCA and territorial disputes between Central American countries that share marine areas. At the national level, the principal implementation challenges involved budgetary and institutional weaknesses in national and local public institutions, lack of funds for investments in improved equipment for capturing commercial marine species, and the remoteness of some field sites. At the local level, the main implementation challenges were corruption and violence in some geographic areas, lack of adequate scientific data and inequitable control over and sharing of the benefits from coastal and marine resources.

To respond to these implementation challenges in a future regional biodiversity conservation program, the evaluation team recommends that USAID (1) design the program with the full participation of CCAD and OSPESCA; (2) confine its field activities to sites that do not involve international boundaries but that encompass specific, circumscribed areas that contain the reef-sea grass-beach continuums where biodiversity is both most concentrated and most threatened; (3) include an activity that is specifically designed to demonstrate to banks the financial feasibility of investing in improved equipment for the capture of commercial marine and coastal species; (4) choose field sites where operations are not excessively expensive and time-consuming; (5) avoid geographic areas and institutions where corruption and violence are likely to affect program implementation; (6) finance the applied scientific research that is required to develop and adapt best management practices for specific marine and costal natural resources; (7) emphasize equity in the use of coastal and marine resources among different social groups and between men and women.

Question 4 -- Results, Benefits and Sustainability

MAREA implemented five categories of activities: (i) policies and laws; (ii) fishing; (iii) economic alternatives; (iv) species and ecosystems; and (v) communications. Interventions associated with alternative economic opportunities for coastal workers provided the least tangible results for marine biodiversity. Although the activities involving policies and laws were necessary and useful at one time, probably by now sufficient policies and laws have been drafted or approved, and they now need to be implemented effectively and consistently, a responsibility not of USAID but of national and local governments. The categories of activities that showed the greatest, most sustainable and most beneficial

results for the conservation of biodiversity were those that have or could lead to improved management of marine and coastal natural commercially valuable resources. The introduction and adoption of fishing gear that prevents the capture and death of under-size marine organisms and the establishment of exclusion zones where commercial marine organisms can reproduce successfully are examples of the type of improved management practices for that are required to achieve conservation of marine and coastal biodiversity. The categories of applied scientific research and communication were minor in MAREA. Scientific research, however, provides the essential base of knowledge for developing and applying improved management practices. Likewise, an effective, targeted communication program permits successful management experiences to expand in scale to make a significant improvement in the conservation of marine and coastal biodiversity and increase understanding and support for the policies, laws and regulations the implementation of which are required to achieve such conservation.

Based on these findings and conclusions, this evaluation recommends that a future USAID biodiversity conservation project focus on (1) the introduction and widespread adoption of effective management and conservation practices for marine and coastal biodiversity, in particular species that have commercial value; (2) support to applied scientific research that will provide a sound basis for effective management and protection of marine and coastal biodiversity; (3) finance of systematic, targeted communication of improved management practices and conservation policies, laws and regulations.

Question 5 -- Experiences in Regional Biodiversity Conservation

Since the late 1980's USAID has financed and implemented the Regional Natural Resources Management Project (RENARM), the Central American Regional Environment Program (PROARCA), the Conservation of Central America Watersheds Program (CCAW), and MAREA itself. During the implementation of these projects it has supported the Central American Integration System (SICA), and its implementing institutions, such as CCAD and OSPESCA. Each of the prior programs has been evaluated and important lessons that have been learned from them have been noted. The principal lessons learned were that a regional biodiversity program should (1) focus on synergies for common objectives by using participation to build inter-organizational coalitions at the local level; (2) concentrate policy on mitigating threats to defined geographic areas; (3) ensure research is directly pertinent to problems; (4) emphasize environmentally sound productive activities using best practices; (5) create precedents with wide-spread application throughout Central America; (6) incorporate markets for commercial products from marine and coastal natural resources into program design and implementation; and (7) work closely with SICA in the design and implementation of the program to support its principal purpose of furthering the integration of the Central American countries. This evaluation recommends that USAID incorporate a number of these valuable lessons learned into a future regional biodiversity conservation program.

Question 6 -- Women's Participation

MAREA implemented many activities that benefited women and increased their role in the conservation of coastal and marine resources. It did not, however, base its activities on a systematic analysis of women's roles and how to give women a greater role in decision making about the use and conservation of coastal and marine resources. The evidence from MAREA's experiences confirms that in order to achieve the conservation of marine and coastal biodiversity women must have a role equal to that of men in their use and management.

Consequently, this evaluation recommends that in a future program to conserve Central America's marine and coastal biodiversity USAID: (1) establish specific objectives for including women in the design of the program; (2) establish specific objectives in the program itself for empowering women in the decision-making processes for the management and conservation of marine and coastal resources; (3) include systematic measurement of women's participation in program activities, especially in relation to decision-making processes; (4) provide for adjustment of program activities on the basis of the results of such systematic measurement so as to achieve the objective of involving women fully in decision-making related to the use and management of marine and coastal natural resources.

EVALUATION PURPOSE AND QUESTIONS

Objectives of the Evaluation

The objectives of the evaluation, as stated in its Statement of Work (SOW), were to: (i) analyze the quality of the Management of Aquatic Resources and Economic Alternatives (MAREA) program's initial design, including the validity of its assumptions; (ii) identify and analyze challenges and results, including those related to gender considerations, at the local, national and regional levels of implementation; and (iii) identify methodological considerations for future regional biodiversity project design (USAID 2014[1]). The main audience for the evaluation is USAID's Regional Program for Central America and Mexico (USAID/ECAM) and other USAID offices that may use its recommendations in their design of future biodiversity activities (see Appendix 2 SOW MAREA Evaluation).

Evaluation Questions

Based on its Statement of Work (SOW) this evaluation explored answers to the following questions:

1. To what extent did MAREA's design and resources help or hinder the Program's ability to achieve its objectives and measurable results within the proposed scope and established time-frame?
2. To what extent did the assumptions identified by USAID hold true during implementation, influencing the achievement (or non-achievement) of MAREA's objectives, and should be considered for potential future programming?
3. What implementation challenges did MAREA face at each level of the Program (regional, national, local, and transnational)?
4. Which activities showed the fewest results and should be discontinued or approached differently? Explain why. What activities and methodologies have the potential to be sustainable by the end of MAREA? What tangible, sustainable benefits have resulted from MAREA?
5. Based on USAID's experience with the Central American Commission for Environment and Development (CCAD), CCAW and MAREA, as well as current regional biodiversity challenges, where should USAID invest biodiversity funding in the future?
6. How could MAREA have improved its integration of gender equality in the production, processing and marketing/sales phases of the fishery and coastal/marine value chain so as to maximize the impact of women in those areas?

PROGRAM BACKGROUND

Overview of the MAREA Program

The MAREA program started in January 2010 and was originally scheduled to end in September 30, 2014, but was extended to March 31, 2015. Its total budget is US$13,888,734 of which US$819,083 comes from a Congressional earmark for labor activities and US$13,069,651 from an earmark for biodiversity.

USAID's Biodiversity Code requires that funds earmarked for biodiversity conservation: (i) have an explicit biodiversity objective; (ii) be used for activities that have been identified based on an analysis of threats to biodiversity; (iii) monitor associated biodiversity conservation indicators; and (iv) implement site-based projects in biologically significant areas to positively impact biodiversity.

MAREA has implemented field activities in four marine and coastal areas, shown on Figure 1. The area of the Gulf of Fonseca includes parts of El Salvador, Honduras, and Nicaragua, extending from Jiquilisco Bay, El Salvador, across the Honduras Pacific Coast to Padre Ramos, Nicaragua. The Miskito Coast area

extends along the Honduras and Nicaragua Caribbean Coasts. The Gulf of Honduras area extends from Placencia, in mid-Belize through coastal Guatemala almost to La Ceiba on and the Bay Islands off the northern coast of Honduras. The Cahuita-Bocas del Toro area extends from the outlet of the River La Estrella, in Costa Rica, to the outlet of the River Calovebora, in Panama and a sector of the Barra del Colorado in northern Costa Rica.

Figure 1. MAREA Intervention Areas

Key Assumptions in MAREA's Original Design

MAREA's design was based on the following assumptions:

1. Absence of an unstable socio-political environment such as armed or violent regional and/or local conflicts;
2. Generally stable fiscal and monetary policies and macro-economic environments;
3. Willingness of local and national governments to effect change and reform, in particular to rights based mechanisms;
4. Full support of regional organizations, Central American Integration System (SICA), Organization of Fishing and Aquaculture in Central America (OSPESCA), and the Central American Commission for Environment and Development (CCAD);
5. Absence of any sudden supply or demand shocks such as energy price shocks that would interrupt coastal and marine activities;

6. Accomplishment and enforcement of regional binding agreements under SICA;
7. Absence of internationally imposed measures that would have detrimental effect on the general political and economic stability in Central American countries such as internationally imposed sanctions;
8. That the Program will encourage shared agendas by adding to existing regional processes; and
9. The Ministries of Environment and Agriculture in the region support the Program and provide required information (USAID 2014).

Levels of Coordination

MAREA interacted with regional, national and local institutions in the Central American Countries. The principal organizations at the regional level were the SICA and two of its operational institutions, the CCAD and the OSPESCA. At the national level MAREA interacted with national ministries for environment, natural resources, fishing, tourism and foreign relations and with national environmental non-governmental organizations (NGOs). At the local level, MAREA interacted with local governments, cooperatives and associations. MAREA had sub-contacts with five NGOs: the Nature Conservancy (TNC), the World Wildlife Fund (WWF), the Wildlife Conservation Society (WCS), Solimar International and Sea Turtle Conservancy (STC).

METHODOLOGY AND LIMITATIONS

The methodology (detailed in Appendices) followed USAID's SOW (Appendix 2) and benefited enormously from support from the MAREA implementing agencies and from the regional USAID staff who provided key guidance at every step.

Evaluation Schedule

The Performance Evaluation was conducted in the field in September-October 2014 by a team of two U.S. (a Team Leader and a Fisheries Expert) and two Regional Specialists (an Environmental Market Economist and a Technical Logistics Coordinator), with the support of IBTCI home office staff, and evaluated the effectiveness of the MAREA Program from its start in January 2010 through September 2014. The four-person evaluation team split into groups to cover all Central American countries and MAREA sites. The field implementation schedule can be found in Appendix 11.

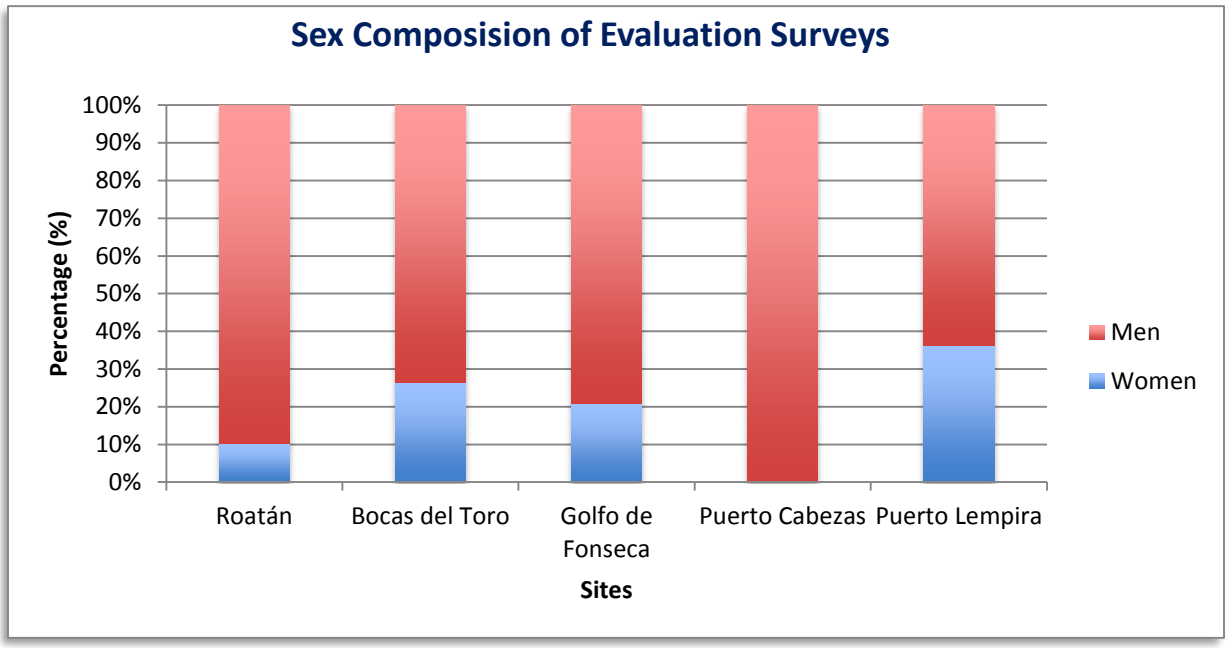
Data Sources

The evaluation is based on a sample of qualitative and quantitative data. Qualitative data were collected from five categories of sources: (i) documents; (ii) key informant interviews (KIIs); (iii) focus group discussions (FGDs); (iv) field observations (FOs); and (v) validation workshops (VWs).

Because time limitations did not permit the review of every available document, documents that appeared to be more likely to have more significant and representative data were selected. The bibliography (Appendix 1) lists the documents that were reviewed. Potential key informants were selected from a list of contacts and participants provided by MAREA, and those who were available when team members were able to meet with them. Invitations to participant in focus group discussions were extended, mostly by telephone, to a wide range of local people, including political and business leaders, who had participated directly or tangentially in a MAREA activity, but generally those who actually attended the discussions were those who had participated directly. Field observations were made in all the seven Central American countries where MAREA operated, except Guatemala, where time limitations prevented travel to field sites, but only at a few of the many sites where MAREA carried out activities. Invitations to the validation workshops were extended to a wide range of people in government, NGO and private sector organizations and were conducted with those few who decided to participate. In sum, the selection of qualitative data sources was largely random.

Quantitative data were obtained by administering surveys to 243 beneficiaries of MAREA activities who are members of fishing cooperatives. The actually interviewees were randomly chosen from those people who were available when the surveys were being administered. As depicted in Figure 2 below, the majority of respondents were male, though in some cases the percentage of females rose to 35%.

Figure 2. Sex composition of local surveys carried out in evaluation.



Appendix 10 indicates the number of KIs, FG, FO, VW and surveys by country. Seventy-seven interviews were conducted with 85 key informants. Female participation was included wherever possible, including focus groups, validation workshops and the surveys implemented in coastal communities. Fifty-five, or 65% of the key informants were men, and 30, or 35% of the key informants, were women. Eight focus group discussions were held. Although the participants in the focus group discussions were generally a mixture of project beneficiaries and project administrators, and therefore not too different from most of the key informants, the dynamics of the focus group discussion were different from an interview and thus permitted additional insights into MAREA's operations. Field observations were made at 11 sites where MAREA had implemented some type of activity. Seven validation workshops were held, with the limitations described in the limitations section. Six field surveys were conducted in the four areas with 243 direct beneficiaries of MAREA, mostly members of fishing cooperatives that MAREA has supported in some way. Appendix 4 contains the protocols and templates for collecting these data.

Data Analysis

Qualitative analysis was used to identify patterns, themes and categories that emerged from the qualitative data relevant to the six evaluation questions.[2] Deductive analyses were then used to test and affirm the authenticity and appropriateness of these findings to the evaluation question. Qualitative data were not consolidated and quantified. There was no attempt, for example, to calculate the number or percentage of key informants who responded similarly to the same questions; rather, the comments of key informants were considered individually for their value in providing responding useful answers to the evaluation questions. Quantitative analysis was used to analyze the survey data. Each team member was involved in collecting data to be used to address the evaluation questions. Findings were also compared against international lessons in marine conservation, drawing on scientific and programmatic literature as recommended by experts.

Limitations

The time available to analyze the large-sample size datasets that the evaluation team collected as the basis for formulating evidence-based answers to the evaluation questions was severely limited.

As the evaluation team operated under a short time-frame, the team made the decision to devote more time to interviewing key informants, holding focus group discussions and making observations at MAREA field sites than to interview government officials in the country capitals, thereby somewhat limiting the evaluation's inclusion of official government viewpoints. The team's final itinerary was in flux for much of the period of the field research. The purpose of the Validation Workshops (VW) was to check the evaluation team's preliminary conclusions and recommendations with knowledgeable people. However, it was not fully possible to invite people to the VWs with sufficient lead time and it was not possible to present preliminary conclusions and recommendations immediately after collecting data, because the data were not yet analyzed. Consequently, participation at these VWs was limited and the discussions were not informed by all the findings that would be eventually drawn during the analysis of the data.

Sufficient quantitative data were not available on the budgets of national public and private institutions to permit an analysis of the effect that the budget levels of national ministries may have had on MAREA's ability to achieve its intended objectives.

FINDINGS

Question 1 - Design and Resources

To what extent did MAREA's design and resources help or hinder the Program's ability to achieve its objectives and measurable results within the proposed scope and established time-frame?

Biodiversity in the Four MAREA Field Sites Helped MAREA

Each of the four project site areas where MAREA financed activities has a concentration of biodiversity, at the levels of genes, species and ecosystems, and they provide habitats for important phases of the life cycles of numerous species of marine organisms. The 2006 USAID report, which underlay MAREA's design, identified these areas as particularly important for the conservation of marine and coastal biodiversity (USAID 2006). Prior USAID's initiative, other regional projects had also identified these areas as particularly important for the conservation of marine and coastal biodiversity.

MAREA's Results Framework

According to USAID, a Results Framework (RF) represents a strategy to achieve specific objectives. It makes clear the cause-and-effect logic about how intended change will occur. Taken as a group the achievement of the lower level results should result in the achievement of the next higher objective (Strategic Objectives - SOs). It is expected that results are necessary and sufficient to achieve the SO. The RF should, moreover, help a program manager to design an effective monitoring and evaluation system and to focus on key objectives within a complex development environment (USAID TIPS).

MAREA's RF, shown in Appendix 5, shows how MAREA was intended to contribute to the achievement of the USAID SO for Central America and Mexico of "economic freedom: open, diversified, expanding economies" through the achievement of two SOs: (1) "promote effective monitoring and enforcement of coastal and marine resources policies and legislation with an emphasis on compliance;" and (2) "foster rights-based and market-based mechanisms and management incentives for the conservation and sustainable use of coastal and marine fisheries resources and ecosystems, with an emphasis on ecosystem-based approaches to management." Two of MAREA's 11 results are intended to achieve SO 1 and nine are intended to achieve SO 2.

Several aspects of MAREA's RF have hindered its usefulness. Their use of the words "promote" and "foster" convert SOs 1 and 2 into statements of processes rather than of objectives.[3] It is confusing that Results 1 and 6 both refer to "harmonized policies", although the first contributes to SO 1 while the second contributes to SO 2. It is unclear how Result 3[4] can contribute to the achievement of SO 2.[5] Result 6 refers to policies so it fits better under SO 1 than SO 2. Result 8 states several results rather than only one. Direct causal links are difficult to discern between the two SOs and the USAID/ECAM SO, or between the 11 results and the two SOs. Results 2, 3, 7, 8, 9, 10, and 11 set quantitative targets that duplicate MAREA's Performance Indicators. Result 10 concerns only funding for but not actual implementation of successful projects. Finally, eight of the result statements state "outcomes" and 12 state "outputs" but none of them, or the strategic objectives, states "an explicit biodiversity objective," as required by the USAID Biodiversity Code.

MAREA's RF orients MAREA primarily toward the fishing sector. Nine of the eleven results (1, 2, 4, 5, 7, 8, 9, 10, 11) concern fisheries. By contrast, part of Result 11 concerns tourism, Result 3 concerns marine turtles, and Result 6 combines the issues of coral reefs, mangroves and climate change. Although MAREA's documents frequently refer to its concern with "ecosystem approaches," and although SO 2 states that MAREA has "an emphasis on ecosystem-based approaches to management," the term "ecosystem" is used only in one of the 11 results (Result 6).

The MAREA Program's Development Hypothesis

MAREA's development hypothesis posits: *"If USAID invests in sound coastal and marine management practices and market solutions in the region that are tailored to guarantee sustainability at the local level, then coastal communities will have alternative income opportunities that can lead to greater food security and marine biodiversity"* (USAID 2014). MAREA's theory of change therefore includes both management practices and market solutions.

Sound management practices are the most standard, versatile and proven method for maintaining production from natural resources while also conserving their biodiversity.[6] Data from documents, KIs, FGs, and FOs indicate that MAREA's promotion of improved management practices is likely to help conserve marine and coastal biodiversity. Field observations, for example, in the Bay of Jiquilisco, El Salvador; and El Venado, Honduras, indicate that MAREA has financed the collection of turtle eggs from vulnerable nests, raised turtle hatchlings and released them into the ocean. Furthermore, MAREA has assisted, replanted or helped to conserve mangrove forests and reduce fishing on reefs and has introduced fishing techniques or equipment, such as nets with larger mesh and lobster traps, whose widespread adoption could lead to more conservation of some marine species and has financed the preparation of management plans for some species, such as the Nassau grouper and Queen Conch.

If implemented widely, experience in other parts of the world as well as in Central America itself indicates that these techniques would be likely to improve the conservation status of these species. Similarly, MAREA has helped to establish no-catch zones within the Port Honduras Marine Park, the Isla de Bahia Marine Park and other areas, and such areas offer a way to increase the rate of reproduction and survival rate of some marine species. Some of these management actions, such as the management plans for commercial species of fish, have so far remained as plans, so their conservation effects have not occurred and cannot be measured. Others of these management actions, such as the collection of turtle eggs and release of hatchlings or the protection of mangroves and reefs have been implemented. MAREA, however, has not collected biological data that would reflect the conservation results of such actions, so it is not possible to determine their location, degree or sustainability of its conservation actions.

Markets are an integral part of the management of renewable natural resources, since they frame the incentives, linkages, alliances and income streams that contribute to the costs of conservation practices. The greatest depth of experience in the developed and developing world are with mainland forests. Forest management is the classic example of the link between management of a renewable natural resource and markets: forests are managed to produce a sustained flow of products to markets and the

income from the sale of forest products is used to finance forest management, including the preservation of the forest's biodiversity and ecosystems. Fisheries management, similarly, aims to sustain the stocks of commercial species of fish while harvesting them to supply markets. The products and services provided by the renewable natural resources, such as fish and wood, contribute to economic activity and growth and therefore to household incomes and welfare. Ecosystems themselves also have economic value, as witnessed by the tourists who pay to see and walk in forests or scuba dive in reefs. The products and services of renewable natural resources play an important role in Central American economies.

Market approaches are being invented and tested more and more and, like regulation, often are contingent upon how enforceable are community or personal property regimes and access to natural products.[7] The MAREA approach has been to explore promotional initiatives that would achieve higher prices for sustainably-harvested catch, which in turn would reward sustainable practices, and thereby increase their abundance of threatened species.[8] MAREA was supposed to increase demand for sustainably harvested products through campaigns to increase public awareness of sustainably produced fish products[9] (USAID 2014).

No data from MAREA's activities conclusively demonstrate whether MAREA successfully used the first market mechanism to increase the supply of sustainably harvested marine products. Indeed, some of the evidence MAREA itself produced indicate that this market mechanism is unlikely to work at least at a scale that would stimulate wide-spread adoption of best management practices for marine products. MAREA, for example, financed a study of the lobster value chain that indicated that U.S. consumers are unwilling to pay a higher price for sustainably harvested lobster (MAREA 2012).[10] Likewise, a KI commented that U.S. buyers of lobster would not pay more for sustainably harvested lobster (KIH22[11]). Although KIs representing a large buyer of fish products indicated their interest in obtaining fresh, sanitary, high-quality supplies from a fishing cooperative whose processing operations MAREA had assisted it to improve, they did not indicate the buyer would pay more than market prices if the fish were to be produced through best management practices (KIES17). During the course of this evaluation, no evidence from documents, KIs, FGs, and VWs indicated that MAREA has yet implemented a significant public education campaign on a scale that might increase the demand for sustainably harvested marine products.

KIs mentioned two other possibilities though which they thought market mechanisms could be used to increase the conservation of marine and coastal biodiversity. One KI suggested that by adding value to their products, fishermen would reduce the intensity of their catch, leaving more fish in the ocean and thereby conserving biodiversity (KIES14).[12] Another KI suggested that when fishermen receive assistance in adding value to their products they become more willing to learn and adopt best management practices for fishing (KIES17). No data, however, were found in MAREA documentation that demonstrates the success of either of these potential mechanisms.[13] In theory, value-added products, enhanced by processing, can create new markets or demand, and feedback to incentivize producers. However the MAREA program does not prevent other fishermen from catching and selling the smaller fish that they leave behind. The second relies on education of fishermen, but the evidence is inconclusive whether it would affect their behavior.

Monitoring and Evaluation

MAREA's Monitoring and Evaluation (M&E) Plan (MAREA 2014g) has 20 Performance Indicators (PI) for MAREA's 11 Results (see Appendix 9). Each PI has its respective Performance Indicator Reference Sheet (PIRS). The PIRS were completed in considerable detail, but suffer from some weaknesses. For example, Result 3[14] sets a quantitative target, appropriate for a PI but not for a result. It is, moreover almost identical to PI 12[15]. Result five and PI 13[16] express roughly the same thing. Result 8[17] refers specifically to scuba divers and the number of productive projects but its implementation is to be measured by PI 17[18] which makes no reference to either scuba divers or pilot projects. Result 9's statement is not stated clearly and precisely,[19] and PI 18,[20] which is associated with Result 9, measures only the number of people trained not the only significant purpose of that training, increased income for disabled SCUBA divers from activities other than SCUBA diving. Result 11[21] and PI 20 [22] refer to gross sales rather than net profit although what

matters in relation to an improved standard of living is the latter. The parts of the PIRS that refer to "Project, Frequency and Timing of Data Acquisition," indicate that two of the sheets were to be updated yearly, 16 quarterly and two monthly, and that the updates were to be presented to USAID through quarterly and annual reports. Time limitations prevented the evaluation team from ascertaining the extent to which these updates were reported in the quarterly and annual reports, although they presumably were since USAID approved these reports. Nonetheless, the evaluation team found the lack of updates of the PIRS themselves to make it more difficult to evaluate the extent to which these updates were made and therefore to form an opinion about the effectiveness of the M&E Plan as a means to manage MAREA.

Baseline Data

The basis for the design of MAREA, a 2006 USAID report, emphasized that inadequate baseline data limited the understanding of trends for biodiversity conservation in many Latin American and Caribbean countries (USAID 2006 – see: Appendix I/Bibliography).[23] Nonetheless, the MAREA M&E Plan simply says, "For the majority of indicators in the M&E Plan the baseline is zero" and, in fact, the baseline noted on the PIRS is 0 for all 20 indicators. Baseline information, however, did exist in 2010 for some of the indicators in documents that existed before 2010. Such possible sources of baseline data include the 2006 report on Latin America coastal and marine biodiversity, the various USAID country reports on biodiversity and tropical forests and reports such as the World Wildlife Fund's *Global 2000* report and Conservation International's Marine Hotspots analysis (USAID 2006). For example, the 2006 USAID report provides baseline data on the threats to marine and coastal biodiversity of the Central American countries and on their institutional capacity to respond to those threats **(**USAID 2006). If these baseline data had been used in the preparation of the PIRS, they could have provided a baseline against which to measure MAREA's accomplishments.

Participation in MAREA's Design Process

Evidence from documents, KIs, FGs, and VWs indicate that MAREA's original design was not prepared with sufficient participation of Central American regional, national or local public or private institutions. One informant noted that some countries did not feel sufficiently consulted about the design and operations of MAREA (KIES1), and another KI recommended that USAID develop its next projects concerned with fishing in consultation with the fishing authorities (KICR4), while a third KI expressed the opinion that *"a project could be more effective and spend less on administration and more in implementation if it promotes more participation"* (KICR7). The general manager of a fish processing and exporting plant, suggested that MAREA should have accepted guidance from those people involved in fish commerce (KIH13). In one workshop a participant of the country's fisheries department, ostensibly involved in the design of MAREA described their role as follows: *"The department was not involved in the initial design of the project, so when we heard of it they already had their activities planned. For Nassau grouper they wanted to monitor and formulate regional policies to protect this species, but we were ahead of all this, we had size limits, monitoring, seasons. So when it came to a lot of their activities we were ahead of them. We contributed to the other countries with our information to the consultants who came here to see how they could apply our experience to other countries. We were never consulted during the design so a lot of the design was done in house among their team. We wanted to make it beneficial to Belize but they told us that we could not put in new activities because the design was already done"* (VWB1). Another KI made a pertinent comment: "*If they are really promoting conservation I would want to believe they should have approached every country and site to ask, do you have anything in mind that matches our purpose?"*

By contrast, however, the data do indicate that during the implementation of MAREA its administration took some pains to respond to local needs, priorities and opportunities. For example, a KI said, "Because MAREA allowed us to implement our 'tried and true' strategies for hawksbill research and conservation that we developed in conjunction with local community members over multiple years—instead of imposing other approaches on us—all of ICAPO's project activities supported by MAREA were highly successful" (KIES15). Another KI described in detail how MAREA's assistance had responded to the

priorities of the fishermen's cooperative to which he belonged, saying "They did a lot of consultation with us and we had regular meetings and we went through what we needed and what they could do" (KIB3).

Implementation Mechanisms

Several KIs noted that MAREA's implementation mechanisms were often overly cumbersome. For example, several different informants observed that obtaining USAID concurrence to undertake proposed activities was a slow process that inhibited implementation and that USAID's branding process also retarded implementation. A KI also noted that sometimes MAREA's procurement procedures were slow: "Things arrived very late for MAREA due to administration problems. The system that USAID uses for getting quotations takes a long time, three or four months. Our project had a life of 11 months, so we had built the infrastructure but did not have the glass windows, which held up the whole project." Concerns were expressed about the planning and support provided by the El Salvador hub of MAREA, including failure to anticipate import taxes, to provide shipping information and failure to compensate for transport costs. Some KIs expressed concern that the decision to implement MAREA through a contract negatively forced its contractor to concentrate on attaining the quantitative targets established in its contract.

Budget

Appendix 4 catalogues the MAREA project's expenditures by country. The total expenditures for all the countries were $12,474,921 through August 2014. Among these, El Salvador had the highest expenditure (US$3,871,880), followed by Honduras (US$2,687,169), Nicaragua (US$1,601,974), Panama (US$1,508,156), Belize (US$1,275,871), Guatemala (US$779,810) and Costa Rica (US$750,061). MAREA's original design did not define how strategic objectives and results would map against the budget. Nor did the budget documents from MAREA show how the total budget of the program was distributed per year, by objectives, activities, and results. Although MAREA's work plans and quarterly reports show an estimated budget by activities, its quarterly reports only provide evidence on expenditures by variables (labor, other direct costs, indirect costs, and fixed fee). Furthermore, there was no provision of information on actual expenditures in these categories. It was not possible, therefore, to analyze how the available funds were converted into products or what category of activity produced the greatest cost/benefit ratio of expenditures vs. conservation of biodiversity itself, or the creation of the conditions required to conserve biodiversity. Several KIs indicated that they thought that MAREA's funds alone were insufficient to accomplish the programs strategic objectives. One KI, for example, said "MAREA could finance studies as one option, but not much more" and suggested that perhaps MAREA had had to tie in with other programs to be able to achieve the targets set for it in its contract with USAID (KIH18).

USAID's support to MAREA in turn leveraged inputs from other sources. These non-USG co-financing resources also supported conservation efforts as well as the related fisheries, handicrafts and tourism. This amounted to $8,369,421 of leveraged funds from the beginning of MAREA through the third quarter of 2014, exceeding the original MAREA target by close to 37%. Sales by the target populations also generated income, roughly $9.8 million as of late 2014 over the life of MAREA. Sales revenue gave a boost to those fisherpersons using improved fisheries practices, rights-based mechanisms.

Attribution becomes difficult, however, when recognizing MAREA's leveraging of activities (and beneficiary income) in ways that also depend on other efforts. MAREA takes credit for the income that the KAUMA cooperative is making from selling salted jellyfish, based on the US$10,000 or so it spent to hire a consultant to prepare a business plan for KAUMA. Taking credit for the results of "leveraging" of funds beyond a certain point begins to make it difficult to distinguish what would have been achieved absent MAREA's influence.

Timeframe

The 2006 report the recommendations of which underlay MAREA's design noted "Given the range of

stakeholders involved (particularly in the coastal zone), the incentives and actions required to maintain commitment, and the inevitable changes during project execution, significant time is required to plan, execute, and adaptively manage regional trans-boundary coastal and marine programs. This far exceeds a two-year and possibly even a five-year investment horizon. A total time investment ranging from 8 to 15 years from project planning to execution to projected outcomes has been required in other regional environmental programs" (USAID 2006). Nonetheless, MAREA was designed to last for only five years. KIs commented on the shortness of this timeframe given the complexity of the problems MAREA set itself to solve and noted that MAREA could have been more effective had it continued longer and thus been able to complete or carry further some of its activities (KIES4). One KI, for example, said "What I saw there was very limited time to execute some of these things. We got from April 2012 and completed by June 2012 and implementation in January 2013 to September 2013. I know of other projects that simply needed more time. There was only a little window of four or five months" (KIB5).

Question 2 - Assumptions

> ***To what extent did the assumptions identified by USAID hold true during implementation, influencing the achievement (or non-achievement) of MAREA's objectives, and should be considered for potential future programming?***

Assumption 1: Stable Socio-political Environment

Some territorial disputes created an unstable socio-political environment for MAREA activities. Since El Salvador and Honduras have not reached an agreement about Conejo Island in the Gulf of Fonseca, Honduras and El Salvador have not been able to implement joint actions to protect the Gulf of Fonseca. Honduras claims the Belizean-administered Sapodilla Cays off the coast of Belize in its constitution, but agreed to a joint ecological park around the cays, should Guatemala consent to a maritime corridor in the Caribbean under the 2002 Belize-Guatemala agreement sponsored by the Organization of American States. The historically tense relations between Guatemala and Belize have improved somewhat.[24]

Although difficult to document, drug trafficking and illegal fishing, aided by corruption may have complicated the achievement of some of MAREA objectives. The Miskito Coast area, as observations in Puerto Lempira clearly indicated is a center for drug trafficking (FOH3). The park rangers of the Port Honduras Marine Reserve commented that many fishermen from Guatemala have used corruption to obtain legal papers so "unless you catch them doing an illegal activity you cannot prove anything on them" (KIB5). In El Salvador, a KI commented that criminal activity, especially gang presence, is increasing in many coastal communities, which increases the difficulty of carrying out conservation activities and increases the likelihood that illicit activities relating to marine resource use, such as blast fishing in the Bahia de Jiquilisco, will occur (KIES8).

Assumption 2: Stable Fiscal, Monetary and Economic Environment

One indication that a stable fiscal, monetary and economic environment exists is the provision of adequate budgets to the public regional, national and local institutions, such as environment and fisheries ministries, the responsibilities of which include enforcing regulations governing the management and exploitation of marine and coastal resources. Budget data was not available for review, however several informants noted that the government ministries concerned with the environment and management of natural resources are under-funded in relation to other ministries and in relation to their needs.

Assumption 3: Willingness of Governments to Effect Change

Quantitative data, such as the size or trends in the budgets for ministries of environment, renewable natural resources or fisheries, were not available as the basis for evaluating the willingness of governments to take the actions required to increase the conservation of renewable natural resources and biodiversity. Common sense suggests, however, that the willingness of the Central American governments would probably vary between countries, between national and local governments, and

between different specific issues related to renewable natural resources and biodiversity. Willingness of governments to effect change would also probably vary over time, as the elected and appointed government officials with responsibilities for renewable natural resources, such as fish, change. One KI, for example, commented "The government of Guatemala has helped in an excellent way as has Nicaragua in their Fisheries and Environment Ministries. In Panama, the Authority of Aquatic Resources and the Fisheries authority also have provided support. The other four countries have been very weak in their support…MAREA had made an official presentation of documents about fishing to Costa Rica and received no response after three months" (KIES1). Other KIs, however, noted how governments can give priority to politics and border conflicts rather than to conservation (KIES14; KIES4).

Assumption 4: Full Support of Regional Organizations

The Secretary of OSPESCA summed up the difficulty of obtaining the full support of the SICA organizations, such as OSPESCA, as follows: "In synthesis there are two different methods that of SICA and that of USAID. Yet, in the end, it is the countries' program, not SICA's. If we were to give them a pre-made project they [the countries] would not participate. I think the method of formulation of the project should be more participative through SICA and the countries" and expressed concern that MAREA had become a group of national projects rather than a regional project as defined by SICA, (KIES4). The same informant noted that CCAD has often not had any secretary during the period MAREA has been implemented (KIES4). The current Secretary confirmed this observation saying: "I am new in this post, and they were finishing the project [MAREA] when I came. I have just participated in a meeting. I understand that we were on a board but we do not have records here that CCAD…was really involved [in MAREA]" (KIES16). The MAREA draft 2014 Annual Report also conveys a sense that CCAD has been unable to provide full support to MAREA: "Although the governments of Panama, Honduras, and Guatemala expressed interest and submitted letters, the Chief of Party (COP) requested that this be done through CCAD rather than separately by each country. The Regional Program presented the idea to CCAD's Executive Secretariat but received no answer, neither verbal nor written, despite repeated notes and telephone calls" (MAREA 2014b). Knowledgeable KIs expressed similar assessments of the capabilities of the regional organizations to support MAREA. One said "We have not seen much help from any of the regional organisms except for a minor follow up on the work plans and reports. They contributed little to the budget". SICA is ruled by what the ministries say; they have to do without any quality control about those decisions" (KIES1). Another said "I have 25 years working with SICA…They [the ministers] used to be more committed to regionalization, and now they only care about their own countries and try to use SICA…obtain benefits for their own country rather than [to implement] a coherent plan for any topic in the region (KIES15).

Assumption 5: Absence of Supply and Demand Shocks

Qualitative evidence suggests that the forces of supply and demand greatly affect the exploitation, management and regulation of marine products and, therefore, the possibilities for their conservation through the adoption of best management practices. Supply and demand shocks did, therefore, affect MAREA. Participants in a FG with a fishing cooperative, for example, noted that higher cost for electricity had driven up the cost of operating an ice machine that MAREA had donated to them, thereby reducing their net profits. Limitations on net profits would reduce the ability of cooperative members to invest in the improved fishing gear, such as new nets, that fishing best management practices require. Similarly, a KI commented that fuel costs are the largest cost for most fishing operations and fishermen tend to exploit those species that require less fuel to catch, an indication that fuel costs would affect management of the fish stocks. Control over exploitation of the fish resource is an important part of applying best management practices, making a comment from another KI pertinent: "I talked to the navy…and asked them to patrol. They said it costs $6,000 to patrol for 72 hours. CENDEPESCA says they have no funds to send out a boat."

Assumption 6: Accomplishment and Enforcement of Regional Agreements

OSPESCA members have officially approved nine regional agreements related to fishing, which shows that such agreements can be accomplished. OSPESCA's Secretary described these agreements as "integration in practical terms" and noting that such agreements provide a powerful tool for conservation: "with this regulation a country can be accused of non-compliance and classified as 'non-cooperative,' which could cause its markets for those products to be closed for those products, since it they would be illegal." He did note, however, that "like all regulations, some countries comply and some do not" (KIES4).

Without effective regulations, there is sometimes little incentive to improve on current harvesting practices for fish products. One KI described the difficulties in implementing the ban on using scuba gear to catch lobsters: "There was supposed to be a law to stop the scuba diving but its implementation…has been delayed three times for more than seven years" and mentioned that this lack of implementation has reduced the incentive for lobster boats to change their gear from scuba diving to lobster traps" (KIES15).

Assumption 7: Absence of Imposed Measures

Although data were unavailable on their exact origin and nature, imposed measures appear to have affected MAREA's implementation in Nicaragua, as indicated by the comment of a key informant that "USAID does not authorize any benefits for the government [of Nicaragua]" (KIES1). Another KI noted that poor United States relations with the Government of Nicaragua affected MAREA's implementation there (KIH2) and another said, "We wanted to have regional events financed by MAREA but they have not happened because the requirements were too complicated, and because Nicaragua did not want to participate. Prerequisites of USAID required certifications that were too complicated to comply with and we couldn't comply because we cannot exclude a country such as Nicaragua" (KIES4).

Assumption 8: Shared Regional Agendas

According to the draft 2014 Annual Report, MAREA "promoted and facilitated the drafting of nine legislative and policy instruments related to coastal and marine resource management." These instruments included a National Fisheries-Environment Agendas for Panama, Costa Rica, Guatemala, Honduras, El Salvador, and Belize as well as a report on the process for development of an agenda in Nicaragua. The result of the analysis of the six National Agendas was the development of the proposed Regional Fisheries-Environment Agenda which in FY 2014 was submitted to SICA, CCAD, and OSPESCA (MAREA 2014b).

Assumption 9: Support of National Ministries

The extent of the support of national ministries for MAREA is difficult to gauge. The term "support" has a nebulous meaning. Also, the staff of the ministries in most of the Central American countries changes frequently which makes them unlikely to know much about MAREA. Nonetheless, evidence suggests that some people who should have known about MAREA knew little about it. Both the Costa Rica Minister of the Environment, Energy and Seas (MINEA) and the director of the Costa Rica System of National Conservation Areas (SINAC), for example, said they knew nothing about MAREA. It is possible, however, that MAREA may have worked with the Minister's designated technician or officer without knowledge of the work being conveyed to these higher levels within the institutions. Due to the cool diplomatic relations between the U.S. and Nicaragua, there was little contact between MAREA and the ministries of environment or fisheries in Nicaragua (KIES4). By contrast, the Coordinator of Mesoamerican Biological Corridor and the Mesoamerican Barrier Reef System of Ministry of Environment of Guatemala described an excellent working relationship and collaboration with MAREA.

Question 3 - Implementation Challenges

What implementation challenges did MAREA face at each level of the Program (regional, national, local, and transnational)?

Regional Level

The Secretary of OSPESCA provided useful data on the implementation problems at the regional level MAREA experienced. "In our case in OSPESCA we have a commitment to integrate the eight countries…Our objective is to determine common solutions to common problems. It is not enough that we just sit together – we have to work together too…If we think of the future we should think of working in this method of work of SICA… There are other projects that are regional in the sense of something in each of the countries without the purpose of working together… We use binding agreements that require countries to comply simultaneously… There are nine such regional agreements" (KIES4).

The Secretary noted that disputes over boundaries have affected the implementation of MAREA at the regional level, using the situation in the Gulf of Fonseca as an example: "Other entities have other criteria and make it complicated. For example it is necessary to harmonize methods of fishing used in Fonseca. The technical part was great but when the decisions and joint work have to be done then it is much more difficult because other entities have other criteria. Fonseca has three countries. The boundaries are not defined. For some countries it is more important to have the theme of boundaries than to form a common system. The solution is to divide up the disputed area equally. But we look at the Fonseca as one ecosystem and work in a coordinated way without worrying about boundaries until we have harmonious protocols for what people do in each country for those actions that will affect the other countries. The contamination of the Gulf for example is affecting all the countries. We are looking for harmonizing the policy to control these effects. But the technical issues are ignored by the Ministries of Foreign Relations, so MAREA made a proposal that is being analyzed by each country, not by all the countries jointly" (KIES4).

The MAREA project's draft *Fifth Annual Report*, by contrast, presents the viewpoint of the administrators of MAREA on the difficulty of working with the regional organizations: "Although in the past two years the Regional Program has repeatedly requested that the Executive Committee create an opportunity to present the Program's progress and results to national and regional authorities, it has yet to do so."

National Level

MAREA's draft *Fifth Annual Report* refers to implementation problems at the national level: "The main challenges were associated with activities that relied on the timing of government responses and other organizations' review and approval processes, which were sometimes beyond the control of the Program team and implementing partners".

Qualitative data indicate that national ministries also may generally lack sufficient funds to implement their regulatory responsibilities. Participants in the Guatemala VW, for example, indicated that the National Council of Protected Areas (CONAP) has produced many reports and studies but, for lack of sufficient public funding, depends on NGOs for implementing field actions (VWG1). Likewise, qualitative data suggest that capital sometimes has been lacking at national levels to finance the improvements in equipment that are required to achieve improved management of marine and coastal resources (KIN1, KIN2, KIN3), KIN5). For example, a KI said "Another thing that did not work out was fishing with the new *suripera* nets. Training was initiated in Nicaragua and the fishermen expected they would sell the product and make a profit. We taught them how to do it, but there were limitations of equipment so the people did not put what they learned into practice. Only one association has put it into practice because it had the boat that is required (KIN1)."

The relative remoteness of some of MAREA's field sites may have sometimes increased the difficulty, expense and time required to implement MAREA (KIN7). Evaluation team members experienced these difficulties themselves to a degree. A team member took an entire day to reach Puerto Cabezas from Managua (301 miles), travelling by plane, vehicles and motor boats, at considerable expense. Likewise, to travel from Tegucigalpa to the beaches west of Puerto Lempira (the site of jelly fish exploitation) took

members of the evaluation team a day with considerable expense (244 miles), and the trip from Belize City to Port Honduras Marine Reserve required travel by plane and boat, costing several hundred dollars.

Sometimes lack of clear assignment of responsibilities between public national institutions may complicate implementation (KIB9), but no specific effect of this problem on MAREA's implementation was identified.

Local Level

In all of the countries KIs and FG mentioned that insufficient patrolling, supervision, and compliance with regulations and laws is common. Fishermen said they rarely see action by government agencies responsible for enforcing regulations. Some KIs and FGs noted that government enforcement agencies often lack sufficient fuel to operate their boats and that cooperation and coordination between public agencies is often lacking. Sometimes local organizations do not cooperate: a KI in Belize observed "If the NGOs, coast guard and fisheries would work together it would be helpful. If they don't work together then it doesn't work out well. It is not being done now. You have the fisheries department and the forestry department. They don't work hand-in-hand" (KIB5). Similar observations were made in other countries. At least once, a national government agency acted directly contrary to the aims of MAREA, when in Rio Cruta in Honduras, naval vessels destroyed about 100 nets that MAREA had provided (KIH4).

Conflict between different users of marine resources emerged from the qualitative data as a common, serious impediment to the adoption of best management practices. A typical comment for example, is from the focus group discussion in La Union, El Salvador: "We are talking about the artisan fishermen but what about the industrial fishermen? It is they who are destroying the larvae" (FGES1). Similar tensions emerged from focus group discussions in Puerto Lempira, Roatan, and Santa Elena in Honduras (FGH1, FGH2, FGH3) and from KIs in Belize (KIB5, KIB7).

In some countries, corruption within public local institutions may complicate the enforcement of regulations and implementation of sound management practices. Key informants in a number of countries mentioned cases of corruption, bribery, illegal registrations and sale of fishing licenses. An informant in Honduras, for example, said "The fishing sector does not have a good reputation, as some boats have been found to be engaged in illegal activities" (KIH4). In Belize, informants also referred to corruption as a limitation on the control of illegal fishing in the Port Honduras Marine Reserve (KIB5).

Crime and violence are associated with drug trafficking and lack of enforcement at the local level. They may have thereby complicated MAREA's implementation in some field areas. A KI in El Salvador, for example, identified insecurity as a principal problem for some places where turtle hatchling projects are being implemented (KIES11). Participants in the VW in Guatemala noted that drug traffickers prohibit patrols on some beaches of Punta de Manabique National Marine Park (VWG1). KIs in Belize noted that the transport of drugs may be occurring on fishing boats passing through the Port Honduras Marine Park (KIB7). Referring to beaches in Costa Rica and Panama, the draft MAREA 2014 Annual Report says "Due to security incidents, the following season the work was confined to Pacuare and Cahuita beaches, since it was impossible to obtain police protection to ensure the safety of WIDECAST's staff and volunteers" (MAREA 2014b).

Insufficient scientific data about local sites has sometimes complicated MAREA's intent to improve the management of marine and coastal resources. One respondent, for example, noted that while detailed data are available for snails and lobsters in Bocas del Toro, no data exists in respect of commercial fish species (KICR1). Participants in the Guatemala VW mentioned another aspect of local scientific information: "You cannot govern without information but also you cannot have governance without involving the users of the resource. It will not work. People think that information is for the purpose of regulation. You have to accompany requests for information with activities that benefit the people too and solve their problems" (VWG1).

Inadequate funding created problems in several ways. According to one MAREA administrator, banks,

particularly in Honduras and Nicaragua are extremely risk averse, requiring land as collateral and relying on credit history, and these requirements eliminated most fishing business from access to credit. They could not, therefore, buy fishing equipment, such as lobster traps, that is required to improve management of the natural resource they exploit.

Artisanal fishermen expressed frustration in their focus groups about being excluded from the use of marine and coastal resources. Participants in both FGs in Roatan, for example, expressed their frustration with the Roatan Marine Park's prohibition on fishing over the reefs (FGH2, FGH3). An informant in Puerto Lempira noted that industrial fishermen could exploit marine resources that local, artisan fishermen could not, due to lack of the necessary equipment (KIH5). A KI noted that 22 years after local fishermen were excluded from participation in the planning of the Cayos Marine Park in Honduras, they still feel antagonistic towards the park (KIH9).[25]

Transnational Level

"Transnational level" and "regional levels" intermixed with regard to recognition that target aquatic species are mobile across maritime boundaries and solutions, similarly were meant to be harmonized across the countries. Regional entities such as OSPESCA and international entities such as the IUCN certainly addressed trans-boundary issues during MAREA's program performance, as did each of the smaller actors who communicated and coordinated among themselves, or across country offices (such as World Wildlife Fund, or Chemonics). But MAREA found little direct success at getting governments to work toward new regimes on specific transnational issues.

Question 4 - Results, Benefits and Sustainability

a. What activities and methodologies have the potential to be sustainable by the end of MAREA? b. Which activities showed the fewest results and should be discontinued or approached differently? Explain why. c. What tangible, sustainable benefits have resulted from MAREA?

The findings for Question 4 are organized by the five categories of activities MAREA implemented: (i) policies and laws; (ii) fishing; (iii) economic alternatives; (iv) species and ecosystems; and (v) communications.

Policies and Laws

Table 1 in Appendix 7 indicates that MAREA implemented activities related to policies and laws in all seven Central American countries. It prepared inter-sectorial agendas for fisheries and environment in Belize, Guatemala, El Salvador, Costa Rica, and Panama; updated fisheries acts in Belize and Honduras; prepared guidelines for research on marine resources in Belize, Guatemala, El Salvador, Costa Rica, and Panama; and prepared a policy for closed season for the Nassau grouper in Belize, Guatemala, and Honduras. MAREA prepared a strategy for sea turtles in Guatemala and a conservation strategy for hawksbill turtles in El Salvador. It prepared protocols for damage to coastal resources in El Salvador and Honduras, management plans in Nicaragua and Panama, regulations for fishing in Panama and Nicaragua. Assessments of cockles harvesting and long-line fishing, a plan for cockles and harmonization of fishery management were implemented in Honduras. In El Salvador, MAREA prepared policies for fishing gears in the Gulf of Fonseca and a national policy for coastal resources, and in Nicaragua it prepared a policy for lobster diving closure and an agreement on closed season. Codes for labor conduct were prepared for the Miskito fisheries in Honduras and Nicaragua.

Table 2 in Appendix 7 indicates that, as of September 30, 2014 MAREA had met or exceeded its quantitative targets for all of the PIs. PIs 2, 8 and 14, however, refer to both the drafting and the implementing stages of policy and law activities, and the former is easier to accomplish than the latter, and the MAREA FY 2014 *Annual Report* does not provide data on degree of implementation. A number of KIs, however, commented how difficult it is to enforce laws governing the use of marine and coastal resources (e.g. KIES4, KIGU01, KIB7, KIB5, KIB2, KIES14) with observations similar to "The other problem for conservation is the lack of control on the resources since there is no patrolling, supervision, limited follow

up on the regulations and laws" (KIES15). Participants in FGs expressed similar frustration at the difficulty of enforcing laws (e.g. FGES1, FGH2, FGH3, FGP3). For example, participants in one focus group commented "Enforcement by government agencies is critical. Here we have laws and institutions but they do not function well" (FGES1). Field observations in the Port Honduras Marine Reserve confirmed how difficult it is to enforce regulations governing fishing (FOB2). Moreover, that 85% of the respondents to the surveys said that more regulations are beneficial may indicate that regulations are not being consistently implemented in at least some of the Central American countries.

Fishing

As seen in Table 3 of Appendix 7, MAREA has implemented activities related to fishing in all the Central American countries. Activities about access rights have been implemented in Belize, Guatemala, Nicaragua, and Honduras. MAREA prepared a plan for Nassau groupers in Belize and Guatemala, management plans for Queen Conch in Belize and Honduras; management plans for cockles in El Salvador, Honduras, and Nicaragua; and quota systems or management plans for spiny lobster in Belize and Nicaragua. In Nicaragua and Panama it has promoted *suripera* nets for catching shrimp. MAREA has supported the preparation of data bases for artisanal fisheries and the establishment of no-take zones in Belize. In Belize it has assessed fishing in the Port Honduras Marine Reserve and in Honduras it has assessed mangrove cockles and long-line fishing. In Honduras, Nicaragua, Costa Rica, and Panama MAREA has promoted new technologies, such as gill nets and traps for lobster fishing and *suripera* nets for catching shrimp. In Nicaragua it has promoted diversification of catch to fin fish catch and medusa jelly fish. Artisanal lobster fishing for retired divers, a traceability system for lobsters and harmonization of fishing management have been MAREA's additional activities in Honduras, and the regulation of catch size for shrimp and fish, the regulation of mesh size, harmonization of fishing gear and protocols for damage to the coastline have been its additional activities in Nicaragua. In Belize and Honduras MAREA undertook activities related to the grouper.

Six performance indicators, shown in Table 4 in Appendix 7, relate to MAREA's influence on fishing activities, and that it has met or exceeded its quantitative targets for all of them. PI 10 refers to Individual Transferable Quotas (ITQs) "established" and to ITQs "implemented", although the draft FY 2014 MAREA Annual Report notes that since ITQs are rarely used in Central America, MAREA focused on other rights-based mechanisms.[26] In any case, data were not available to evaluate the degree to which the rights-based mechanisms have been "implemented" as opposed to "established."

Comments from KIs and FGs attested favorably to many of the fishing activities MAREA promoted (e.g. KIES11, KIB5). Other fishing activities did not work so well; for example, a KI in Nicaragua said "One thing that did not work was the *suripera*s, because they made test but in the end they could not make them work well" (KIN8).

About 76% of the respondents to the survey said MAREA had given them some type of assistance: 56% mentioned training, 47% equipment, 15% financial support (funds provided for operational costs, such as fuel, feed, meetings, electricity, etc.[27]), 15% technical assistance; and 13% some other type of support. Of the respondents, 61% indicated that MAREA had not influenced their fishing practices, 18% that it had influenced their fishing gear, 10% their processing practices and 7% their establishment of no-take zones. Thirty-seven percent identified lack of equipment, 33% insufficient financing, 25% lack of training, 22 % said there were no impediments. Fifty percent said their gross income had not changed, 34% said it had decreased and 16% said it had increased.

Market-based mechanisms for conservation of open-ocean fishes have been considered in many parts of the world, but rely on some form of enforceable property rights.[28]

MAREA signed several memorandums to promote marine conservation, including Marinos Pescaderia-NETUNO, where funds raised from the sale of Spiny Lobster would feedback to conservation. The market concept was that "Better Fishing Practices" would create demand for this specific – the Caribbean Spiny Lobster in Honduras - product stimulating a positive-feedback loop of participation. Preference was

to be given to the product caught under Better Fishing Practices and processed by the packing plant Marinos Pescaderia, and human and economic resources for documentation and implementation of the Better Fishing Practices in the boats that supply the packing plant Marinos Pescaderia, and to human and economic resources were allocated for the conversion of the boats that supply the packing plant Marinos Pescaderia from diving to traps gear, and to support and implement a traceability system for the Caribbean Spiny Lobster in Honduras.

Similarly, ASPESCU and Walmart established a relationship to promote compliance with good harvesting practices in El Salvador to purchase negotiated species. MAREA facilitated that these products caught should come from improve fishing practices, be processed in facilities that possess the required conditions and permits by the governmental institutions and Walmart standards to be marketed under the concept of Responsible Consumption of Seafood. Under this memorandum of understanding ASPESCU obtained nets to comply with current fishing legal regulations, resources for a stepwise process to transitions toward sustainable fishing gear, and ensure selling of sustainable caught fishing products.

MAREA promoted effectively at least two market-based mechanisms, which are based on ensuring selling[29] of products that use "good fishing practices," which in turn, foster conservation of marine resources. According to the evidence from interviews, United States and European markets prefer products, which respect and protect biodiversity and in the near future will require sustainable certifications.

Juvenile lobsters are very important to maintaining robust lobster stocks. The program expectation was that with the elimination of scuba diving from the fisheries (using traps (*nasas)* as improved fishing gear technique), many juveniles will not be harvested and will grow to maturity to repopulate dwindling lobster stocks. The reasons are that scuba divers have to catch quickly, sometimes with not much visibility, and are paid based on the catches (weight), not on the correct size (from 5 inches). Furthermore, divers catch them with harpoon, which kills and destroys the lobster. Then juveniles cannot be in any case returned to the sea alive.

Field data reviewed about former lobster divers and collected by MAREA's team on the Miskito Coast of Honduras and Nicaragua from January 2012 to the present indicates that as a result of program activities, 391 divers in the Miskito Coast had either retired or switched to one of the economic alternatives promoted by the Program, resulting in a total of 201,650 juvenile lobsters not harvested during the lobster season. This figure surpasses the life of project target of 164,102.

Economic Alternative Activities

As seen in Table 5[30] in Appendix 7, MAREA has implemented activities related to economic alternatives in all the Central American countries. It has strengthened fisher's cooperatives in Belize, Guatemala, and Honduras; given training in processing practices in Guatemala, Honduras, and Nicaragua; and improved market links in El Salvador, Honduras, Costa Rica, and Nicaragua. In Belize it tracked lobster sales, MAREA assisted in the improvement of fishing gear in El Salvador, Nicaragua, Costa Rica, and Panama. In Panama, El Salvador, and Honduras MAREA promoted scientific tourism involving sea turtles; and in Panama and Honduras it promoted the National Geographic Geo-tourism platform. The production activities MAREA supported include fish culture in cages in Panama, sea bass and shrimp fishing and construction of boats for retired lobster divers in Honduras, cockle cocktails in Honduras, and improved fishing practices in the Carataska Lagoon in Honduras. The association between wealth-creation, local economic opportunities and conservation of nature has been increasingly researched via USAID initiatives.[31] As seen in Table 6 in Appendix 7, PIs 16 through 20 were associated with the economic alternative activities MAREA supported and all their quantitative targets have been achieved or exceeded.

A range of informants expressed considerable satisfaction with the economic alternatives assistance MAREA had generated for them. Members of fishing cooperatives particularly appreciated the provision of ice machines and administrative training (e.g. FGES1, FGES2, KIH5). One informant involved with conserving sea turtles was very satisfied with MAREA's assistance (KIES15). Some comments, however,

indicated that not all MAREA support to existing fishing enterprises was effective: one KI said "Although much of MAREA's assistance was effective, the alternatives that are suggested are not actually profitable. I think that the countries created too many expectations for this idea of alternative economics" (KIES4). Another said that their attempt to sell live lobster failed. Participants in another FG said "*Things have been presented to us but we have not learned how to do it…We need training"* (FGH3).

Evidence suggests that MAREA had limited ability to discern economic alternatives to fishing that would prove competitive and sustainable. Interviews with KIs who had implemented a poultry project in Punta Gorda in Belize, for example, clearly indicated its rudimentary financial and technical basis (KIB7): see the case below. Similarly, the economic alternative project on the Miskito coast involving boat building did not succeed (FGH1, KIHI18). By contrast, an interviewed entrepreneur on the Miskito coast involved with the exploitation of jellyfish reaffirmed the general experience that successful entrepreneurs take risks, act quickly and respond flexibly to market opportunities (KIH16). These interviews suggest that MAREA was generally unable to match these characteristics of successful entrepreneurs.

Case: Poultry Production in Punta Gorda, Belize

MAREA assisted in the development of chicken production in Punta Gorda, Belize, as an economic alternative for fishermen. The two fishermen interviewed, discouraged by what they term the depletion of some resources, declining catch rates, restrictions on fishing in the protected area (Port Honduras Marine Reserve) and competition from Guatemalan fishermen, attended training sessions for poultry production in a pilot project to raise broiler chickens. The objective was to produce broiler chickens for meat in 6-8 weeks and layers in 3 months.

A number of challenges led the venture to falter and caused the fishermen to change to the production of free-range chickens, which do not require prepared feeds and are sold at six months. The chicken coops were provided with wire netting which rusted very quickly when close to the sea and even further inland did not last more than one year; sturdier material would have lasted longer. Storage was inadequate for the feed, some of which became hard. MAREA provided free feed for the initial production cycles, which were profitable. Farmers raising broilers found it hard to generate a profit after paying for the feed. There was less demand for broilers which sell for BZ$2.75/pound, than there was for larger size local chickens which sell for BZ$6/lb. The economic feasibility of raising chickens is very different when raising local chickens, as compared to broilers, since, although the sales price is substantially higher and the feed cost much less (it was said the local chickens can be fed with practically anything), the growing time is about three times longer.

Ecosystems and Species

Table 7 in Appendix 7 indicates that MAREA has implemented species and ecosystems activities in all the Central American countries. These activities include the preparation of climate change plans in Belize, Guatemala, and Honduras and protected area or species management plans in Guatemala, Honduras, Nicaragua, and Panama. It has prepared assessments or plans for marine turtles in Guatemala, El Salvador, and Panama and has financed turtle hatchlings release programs in Costa Rica and El Salvador. Other activities at this level have been specific to one country: Nassau grouper and conch plans in Guatemala, a cockle management plan in El Salvador, and a critical habitat for lobster study in Nicaragua. In Belize it has promoted no-take zones in the Port Honduras Marine Reserve.

PIs seven and 12 (see Table 8) are related to ecosystem and species activities; PI 7 has a "drafted or updated" part and an "implemented" part. Several stakeholders interviewed believed climate change activities to be particularly sustainable and useful for programming. For example, a KI commented: "As coastal populations have increased the potential for increased conflict in access rights and resource use has increased accordingly. This is especially evident among community-based fishing interests and the tourism industry (USAID 2006). An interviewee, however, questioned the accuracy of the data and utility of a climate change plan for a specific site, stating that they were too generalized and the analysis too superficial as they were regional data, not specific to communities (KIB9).

Communications

Table 9 in Appendix 7 indicates MAREA supported communication activities in all the Central American countries. In Belize, El Salvador, and Honduras they concerned shark fisheries. In Costa Rica and Panama they concerned the conduct of tourists on turtle nesting beaches. In Nicaragua they concerned plans for the management of the Nassau grouper, conch and lobster plans, fishing gear, and fisheries measures in the Gulf of Fonseca. In Panama the communication activities were also concerned with seafood consumption, the National Geographic tourism program and workshops for tour guides and craftsmen.

None of the performance indicators were associated with the communication activities. A number of KIs expressed their opinion that communication about conservation is important. A Salvadorian KI, for example, noted that participants in the turtle nursery programs tend to have been educated to not participate in illegal fishing with explosives: "the people who are involved in conserving turtle eggs do not use dynamite to fish. We have seen how people change their attitude when they become involved with turtle nurseries" (KIES11). Fishermen KIs said "we have changed our mindset because of the assistance we have received from USAID…we will do our part to show that we mean to protect the resources" (KIB3). Another KI said that creating a social conscience is the only way to get future generations is to take care of natural resources (KIH13).

Question 5 - Experiences in Regional Biodiversity Conservation

> ***Based on USAID's experience with the Central American Commission for Environment and Development (CCAD), CCAW and MAREA, as well as current regional biodiversity challenges, where should USAID invest biodiversity funding in the future?***

USAID has been financing regional natural resource management projects for over 25 years. The last four regional projects have been the Regional Natural Resources Management Project (RENARM), the Central American Regional Environmental Program (PROARCA), the CCAW and, most lately, the subject of this evaluation, MAREA. The CCAD and the OSPESCA have been involved in one or more of these projects.

Regional Natural Resources Management Project

The Regional Natural Resources Management Project (RENARM) started in 1989 and ended in 1995 and had a budget of $60 million. It had three components: (i) policy and technical support; (ii) environmental education and awareness and biodiversity conservation; and (iii) sustainable agriculture & forestry. The principal lessons learned from RENARM were to: (i) disaggregate effects & interactions of policies; (ii) focus on synergies for common objectives; (iii) focus conservation on critical pristine sites; (iv) focus sustainable use on ameliorating threats to those sites; (v) concentrate policy on mitigating threats to defined areas; (vi) ensure research is directly pertinent to problems; and (vii) team with US NGOs to obtain technical skills.

Central America Regional Environment Program

MAREA's predecessor, the Central America Regional Environment Program (PROARCA) operated from 1989 to 1995 with a budget of $6 million. It was designed to: (i) adopt a single strategy with the objective of biodiversity conservation in critical ecological systems and to aim efforts at reducing the possible and evident threats to the sites selected; (ii) structure activities by geographic areas; and (iii) invite different interest groups to form confederations with the purpose of working together in identifying and solving problems of common interest. Its Coastal Zone Management Component, Costas, was established to promote integrated coastal management in Central America by strengthening local capacity for the conservation and effective management of coastal and marine resources. The project focused geographically on the (i) Gulf of Honduras (Belize, Guatemala, and Honduras); (ii) the Miskito Coast (Honduras and Nicaragua); (iii) the Gulf of Fonseca (Honduras, Nicaragua, El Salvador); and (iv) the Gandoca/Bocas del Toro (Costa Rica and Panama).

The final evaluation of PROARCA made the following recommendations for future USAID regional

natural resource conservation programs: "(i) coalition building at a site is a successful model for strengthening local participation and should be continued, expanded and replicated; (ii) concentrate all activities both thematically and geographically within four to six trans-boundary sub-regions…including adjacent watersheds; (iii) focus on selected areas and/or sub-regions; (iv) promote participatory models involving inter-organizational coalitions; (iv) emphasize environmentally-sound productive activities using best practices; (v) apply efforts in living-laboratory conditions within sub-regions including legislative and enforcement issues to create precedents with universal application throughout the region; (vi) use two or three contracting modalities to increase operating efficiencies and reduce administrative costs; (vii) establish social, economic and technical (biophysical) baselines to permit monitoring of project progress and impacts (viii) USAID/G-CAP and CCAD should not micro-manage project activities, rather act as advocates of regional and institutional policies and forces of integration; (ix) clearly define the relationship and participation of the project with the governments of the various countries including other than environment ministries, and define coordination mechanisms with NGOs, governments, and regional organizations." (USAID)

Conservation of Central America Watersheds Program

The Conservation of Central American Watersheds Program (CCAW) operated from 2007 to 2009. Its budget was not determined. The project had the following components: (i) Sustainable finance for areas of critical biodiversity importance; (ii) more consistent implementation of existing management plans for areas of critical biodiversity importance; (iii) private sector management and participation to enhance biodiversity conservation, natural resource protection, and sustainable economic growth. According to its final report the lessons learned from CCAW were: (i) address trans-boundary threats at the regional level; (ii) access large numbers of stakeholders by supporting cooperatives; (iii) communicate how the projects' local activities were tied to the regional threats; (iv) demonstrate a practice or process that could be replicated on a regional scale; (v) build on local initiatives and capacity to achieve rapid results; (vi) allow time for change within governments; (vii) take a market-based, private sector approach to obtain local stakeholder buy-in of conservation efforts; (viii) use revenue-generating business models; and (ix) act as a catalyst with local partners.

Central America Commission for Environment and Development

The secretariat of the CCAD has a predominantly policy-setting and coordination, rather than an implementation role. As expressed by its secretary, one of its main objectives is to transmit successful conservation experiences throughout Central America: "Regional for us can be the eight countries or two of them. We can have two or three countries and it is regional. We also promote activities at the sub-country level – then we learn lessons and try to look for successful experiences to build capacities in other countries" (KIES16). The Secretary also emphasized that CCAD works "for the ministries of environment in every country, so when you want a program to be successful you have to involve the technical people from these ministries to build their capacities and make them part of the program" (ESKI16). According to a KI, CCAD did not have a secretariat for a long time which weakened its ability to work with MAREA (KIES4).

Organization of Fishing and Aquaculture in Central America

The OSPESCA aimed "to encourage the development and the coordinated management of regional fisheries and aquaculture activities, helping to strengthen the Central American integration process." According to its secretary it has had a more stable leadership than CCAD and has been able to communicate more effectively with MAREA (KIES4). The secretary emphasized that OSPESCA has a commitment to integrate the eight countries.[32] He said "Our objective is to determine common solutions to common problems. It is not enough that we just sit together – we have to work together too" (KIES4). The secretary said that OSPESCA has had more stable, long-term leadership than CCAD. As it is concerned with such an important economic sector for many of the Central American countries perhaps OSPESCA is given more attention by SICA than CCAD.

Question 6 - Women's Participation

How could MAREA have improved its integration of gender equality in the production, processing and marketing/sales phases of the fishery and coastal/marine value chain so as to maximize the impact of women in those areas?

Role of Women in Fishing

Women have been active participants in fishing activities, historically working in processing plants but today also working in research boats and directing public institutions such as ministries of fishing. Some fishing cooperatives have only female members, including those assisted by MAREA in Puerto Libertad, El Salvador and Roatan, Honduras. Women can also be in associations as boat owners, even if they do not directly fish themselves. In one artisanal fishermen's association in Playa El Cuco (*Asociación de Pescadores Artesanales de la Playa El Cuco*, ASPESCU), for example, 10 out of 45 members are female (KIES5).

Although women tend to be less numerous than men in the activity of fishing on the high seas, they tend to be more numerous in harvesting, processing and other types of marine and coastal resources. In the Gulf of Fonseca, for example, women harvest mangrove cockles in El Rosario, Nicaragua and replant mangroves (KIES2). In Puerto Cabezas, women commercialize lobster. Women appear to do most of the drying and salting of fish in the Central American countries the team visited (FOES1, FOES2, FOH2).

Often, however, women are not as involved as men in making decisions related to the management and use of marine and coastal commercial natural resources. The more general situation of women in fishing, for example, appears to be that expressed in a focus group in Honduras: "Most of the time the men are on the sea and then the women have to do everything. We men feed our family from the sea. The ladies are home and the guys are working." The comments of a woman KI regarding decision-making in a Salvadorian fishing cooperative expresses what may be a common situation in fishing cooperatives where there are fewer women than men members: "Men make the decisions and always use the money for their priorities not for the priorities of women (KIES7)."

Gender Approaches under MAREA

The evidence indicates that MAREA did not have a defined plan or systematic program for addressing gender issues related to the use, management or conservation of marine and coastal resources. It did not, however, exclude women from any activity and did implement some activities that involved only women, such as the trash collection program in Puerto Lempira, Honduras and the mangrove cockle harvesting an management project in Rosario, Nicaragua.

The most common ways in which women participated in MAREA's activities were in training courses and in the organization of fishing cooperatives. The MAREA M&E Plan disaggregated data by sex in four of its 20 PIs. As of September 2014, of 6,984 fishermen provided training under PI 9, 2,488 were women and 4,496 were men; under PI 18 of a total of 1,031 trainees, 230 were women and 801 were men.

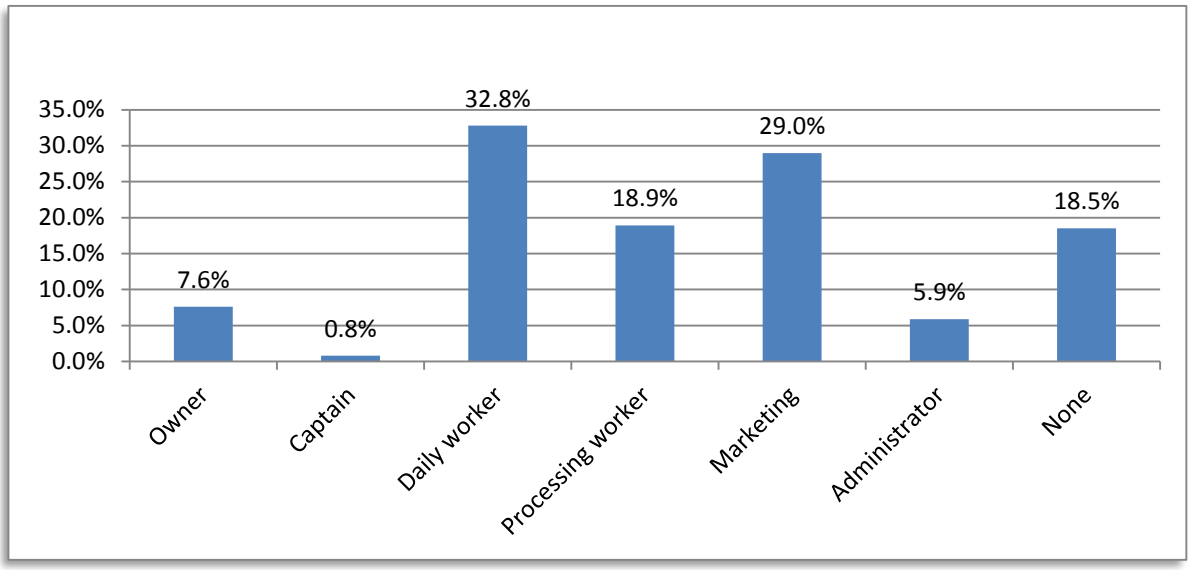
The respondents to the quantitative surveys generally agreed that women participated in MAREA to some extent even though fishing, MAREA's main focus, is more a male than a female occupation. One informant observed that half of the members of the local fishing cooperative are women and that a woman is the leader of the cooperative. There are groups of women who have participated strongly as for example Miskitu Indiang Mairin Asia Takanka (MIMAT, on the Atlantic Coast of Honduras) and the Business plan for Women Processors of Fish (BUCARIMA), in Barabacuta where MAREA supported women to obtain legal status and training for operating community businesses. Adaptation and resilience to climate change are issues that concern women and men equally, and one KI noted that the discussions have included women as well as men in the adoption of plans for resource management (KIH9).

The evaluation team's local quantitative surveys captured 243 persons, 30 (12%) of whom were female and 213 (88%) male. Of the 243 men and women surveyed who were direct beneficiaries of MAREA, 32.8% have determined that women mostly work with the sea, for example in Puerto Cabezas, they are

"*pickineras*" which comes from the English word "pick" and they buy from fishermen and resell (fish, lobster, and others). Twenty-nine percent indicated that women work in marketing of the products, including selling fillets which have a higher value added. Almost 19 percent worked in processing of product, their sale and distribution. Nearly eight percent are boat owners, for example in the Gulf of Fonseca; 6% run businesses and 1% are captains. Of the women who were surveyed, nineteen percent not have any type of participation (Figure 3). Women who were not employed in fish processing plants ("processing worker"), but caught fish or were otherwise employed in fall into the category "worker women", who do not have permanent contracts but are involved somehow with fishing.

Women who worked in processing plants are defined as such in this figure, whereas other workers, in the supply chain, cleaning, trade and harvesting of sea-foods are listed as "daily worker".

Figure 3. Role of women in the activity supported by MAREA



When asked about the needs and requirements of women to increase their participation in the value chain, 55% of the respondents said training, 36% said financing, 35% equipment, 19% technical assistance, and 11% availability of time. Slightly more than two percent indicated that they did not need any help.

MAREA could have improved its integration of gender equality in the production, processing and marketing/sales phases of the fishery and coastal/marine value chain, so as to maximize the impact of women in those areas by: (i) including evaluations of women's roles in the specific value chains that it was intending to assist; (ii) based on the results of those evaluations define specific activities to increase the integration of women into the value chain; (iii) monitor and evaluate systematically the effects of these specific actions on the role of women in the value chain; (iv) adjust the activities to improve the integration of women according to the M&E findings.

This evaluation suggests that future regional biodiversity conservation programs focus on the management of renewable marine and coastal resources (i.e. biological) segments of value chains rather than on the processing and marketing segments.

Women are less involved in the management or direct harvesting of renewable resources such as fish. Nonetheless, there are opportunities for women to become more integrated into the production and management segments of value chains, especially when they would not have to leave their homes. The experience of women in El Rosario, Nicaragua, where they have been given a concession in the mangroves for their exclusive use to harvest mangrove cockles and use them for the preparation of cocktails for tourists is an example that could be replicated elsewhere in Central America. Another

example of the type of productive activity involving the protection of the environment, if not renewable natural resources as such, is the success of women in starting a trash collection business in Puerto Lempira, Honduras on the Miskito Coast. Property rights, including marine resources, land-use and water supply, has been well studied via USAID with regard to resource conservation.[33]

Perhaps more important to women than becoming involved directly in the management and production of renewable natural resources, however, is their becoming involved in the decision-making that is required to conserve and manage those resources. There are at least two strong arguments for increasing the participation of women in making the decisions that affect the use of renewable marine and coastal natural resources. Sound management of local resources requires an increasing inclusion of female stakeholders in decision-making. Second, women often have a direct stake in the sustainable use of renewable marine and coastal resources since they themselves, and their children, so frequently depend on those resources for their food and/or income. They should be involved in making the decisions that will be likely to affect their welfare.

CONCLUSIONS

The MAREA program has addressed an ongoing threat that is only growing worse. Coastal human populations have continued to increase across the Central American region, while construction of shrimp ponds and hotels close to beaches and reefs has accelerated. The effects of climate change have augmented threats to infrastructure – and there is not only more infrastructure but the infrastructure is more economically valuable. The economic contribution of coastal and marine resources has grown in many Central American countries, as fishing has increased while hotels have been built along beaches, attracting more tourists. Furthermore, due to MAREA's experiences, USAID/ECAM now has accumulated solid, empirical experience upon which to draw for the design of a regional biodiversity conservation project focused on marine and coastal resources as well as more links to local organizations which have capabilities to implement successfully at the local levels.

Question 1 - Effect of Design and Resources

> ***To what extent did MAREA's design and resources help or hinder the Program's ability to achieve its objectives and measurable results within its scope and established time-frame?***

Selection of Field Sites Benefited the MAREA Program

The evidence indicates that the four general geographic areas and the specific sites where MAREA has been implementing field activities are extremely important for the conservation of Central America's marine biodiversity. That these field sites were selected, therefore, helped the Program to achieve its objectives and measurable results.

MAREA's Development Hypothesis Incorporated Notable Flaws

Evidence from MAREA experiences supports the element in MAREA's development hypotheses that "sound coastal and marine management practices…can lead to greater food security and marine biodiversity." Moreover, the natural resource management professions (forestry, soil conservation, fisheries, etc.) have been using sound management practices for a long time to provide sustained provision of products, including food, and services, including the conservation of biodiversity. This part of MAREA's development hypothesis, therefore, helped MAREA to achieve its objectives and results. In general, the "market solutions" part of MAREA's development hypothesis also is sound. Markets provide revenue for financing the management and protection of renewable natural resources.

Data from field research (KIs, FGs, VWs), and from document review, however, do not suggest positive evidence about MAREA having leveraged "market-based mechanisms" including increased or higher sales

prices or new or increased public demand for sustainably produced marine products effectively to increase the conservation of coastal and marine resources. The evaluation team should have found such data were they available, given the prominence of the market mechanism in MAREA's development hypothesis. No such data, however, were made available to, or could be located by the evaluation team.

Moreover, the team expert in markets for marine products has over fifty years of experience with the functioning of markets for fish. His experience has led him to conclude that markets are fundamentally unsustainable and are constantly changing to meet changes in demand, in competition and in other factors and that sustainable harvesting of fish is not an argument for a buyer to pay a higher price, since there would be no perceived increase in the value of the fish products themselves. The customers for a seller of lobster tails, for example, would undoubtedly want to buy lobster tails at their current market prices since, if they paid more their customers would not be able to pay them more without pricing themselves out of the market. In sum, both evidence from MAREA itself and evidence from the many other situations that the fisheries expert has encountered indicate that the part of MAREA's development hypothesis that posits market mechanisms as a way to increase conservation of marine biodiversity hindered rather than helped MAREA to achieve its objectives. It diverted attention away from the standard, proven rationale for adopting best management practices for the exploitation of renewable natural marine resources such as fish: well-managed renewable natural resources are more likely to produce a sustainable flow of raw materials that will contribute to economic prosperity and growth, in general, and specific improved livelihoods, specifically.

MAREA Could Have Been More Participatory

USAID's own background document for MAREA's design states "participatory planning is key" to design an effective biodiversity conservation program (USAID 2006). Although the evidence indicates that many personnel and institutions collaborated fruitfully and effectively with MAREA during its implementation phase, it also indicates that there was insufficient participation during MAREA's initial design phase. Consequently, MAREA's design process did little to build on or take advantage of the experiences, ideas, concerns and strengths of the professionals who were working in regional, national and local institutions that affect the conservation of biodiversity. MAREA's design would have been sounder and its implementation more effective and efficient if it had been designed with more participation of Central American regional, national and local public and private institutions.

MAREA's Results Framework Was Broad and Ambitious

MAREA's Results Framework (RF) did not offer a sufficiently clear, robust conceptual structure upon which to base the design and implementation of specific MAREA activities. Consequently, MAREA's implementers, participants, and beneficiaries did not always have a common, clear understanding of its intended results and objectives. Unclear logical links in MAREA's RF reduced its administrator's ability to focus its activities on those of them that would most efficiently and effectively contribute to it achieving its objectives. This problem was compounded by the large number of the results statements and their imbalance in numbers between the two SOs. The weak RF, in turn, made it difficult to formulate a straightforward, intelligible M&E Plan that could guide the management and program updates, based upon reliable data. MAREA's RF hindered the Program's ability to achieve its objectives and results.

Monitoring and Performance Indicators Were a Weak Link in Adaptive Learning

MAREA's M&E Plan did not adequately serve as a sound basis for monitoring and evaluating MAREA's progress and accomplishments. That its PIRS, were not updated between June 2013 and June 2014 indicates that neither USAID nor MAREA used them for program management. Nor did the evaluation team find that MAREA M&E Plan provided data that was especially useful for this final performance evaluation. MAREA's M&E Plan was designed to measure compliance of the contractor with its contract quantitative targets rather than the progress of MAREA towards its SOs. The M&E Plan hindered rather than helped MAREA's achievement of its objectives and results.

Baseline Data was Inadequate for MAREA's M&E Needs

MAREA's M&E Plan did not have baseline information but used a baseline of zero for all of its performance indicators. The M&E Plan, therefore, was not particularly useful for determining what difference MAREA activities to the conservation of marine and coastal resources in Central America. As the adage says, "If you do not know where you are, you cannot know where you are going." The M&E Plan did not establish what the conservation situation was with respect to its different activities when MAREA started. A simple calculation conveys the usefulness of baseline information: by training about 10,000 fishermen, MAREA has improved the knowledge of about 2.5% of all the fishermen in Central America (about 400,000). USAID regulations may not require a baseline other than zero for program outputs. Baseline information would have been extremely useful for determining MAREA's effectiveness, and its lack hindered MAREA's ability to achieve its objectives and results.

Implementation Mechanisms Partially Hindered MAREA

The evidence collected by the evaluation team indicates that MAREA was administered with great professional ability (KIES1, KIES4, KIES14, KIH4). Nonetheless, administrative costs usually increase, with the increased administrative complexity of a program, and MAREA had complicated implementation mechanisms. Although the required financial information to compare costs with results was not available for the evaluation, given its complexity MAREA's administrative costs, were probably higher than if its implementation mechanisms had been simpler. Difficult implementation mechanisms, furthermore, tend to distract attention from technical issues, reducing the time that can be devoted to them and thereby reducing the effectiveness of a program. MAREA's implementation mechanisms hindered rather than helped its ability to achieve its objectives and results.

Budget Partially Hindered MAREA

MAREA's budget was realistic to fulfill its outputs and quantitative targets since, according to MAREA's draft FY 2014 Annual Report, Chemonics has achieved all the quantitative targets in its contract with USAID. Qualitative evidence suggests, however, that MAREA was probably under-budgeted in relation to its objectives and results. It achieved some of its results only because it was able to count its relatively small contributions to an overall activity or to an institution as the catalysis for other activities that it did not finance.

The Range of Activities Required Longer Time Frames

MAREA piloted a wide range of important experiments, each needing time to unfurl. Qualitative evidence from key informants, focus groups, and validation workshops clearly indicate that MAREA is leaving uncompleted processes that it began because it lacked time to complete fully. Benchmarks were all met, but represent a step in a longer effort. The FY 2014 MAREA Annual Report indicates that MAREA's two SOs have been accomplished but MAREA's time-frame was too short for it to demonstrate sustainable success in the supply chains, transnational collaborations and integrated ecological strategies.

Question 2 - Effect of Assumptions

> ***To what extent did the assumptions identified by USAID hold true during implementation, influencing the achievement (or non-achievement) of MAREA's objectives, and should be considered for potential future programming?***

The table in Appendix 7 summarizes the conclusions about the extent to which the assumptions identified by USAID held true during implementation, influenced the achievement of MAREA's objectives and should be considered for potential future programming.

Assumption 1: Socio-political Environment Not Always Stable

Unstable socio-political environments have affected the implementation of MAREA in some of the Central American countries. Territorial conflicts can affect the willingness of governments to work together to conserve the resources of shared marine waters. Drug trafficking and criminal activities have created an increasingly unfavorable sociopolitical and economic environment in many areas where MAREA has worked, Honduras in particular. Assumption 1 was pertinent to MAREA, was held to be partially true and therefore should be considered in future programming.

Assumption 2: Fiscal, Monetary and Economic Environment Not Always Stable

The fiscal, monetary and economic environment within which MAREA has operated has not been stable and the instability has affected its implementation, distracting and limiting the scope of Central American governments and potential co-funders. Assumption 2 was pertinent to MAREA, proves to be only *partially true,* and should be considered in future programming.

Assumption 3: Willingness but Partial Inability of Governments to Effect Change

More than willingness, the seven different Central American national governments have varied in their ability to effect change related to the conservation of marine and coastal biodiversity. MAREA's experience reinforces the importance of strong support from local governments for effective planning and implementation of conservation measures for marine and coastal resources. Several of its experiences indicate that it is at the local level that governments can become more effective if they work towards conservation of marine and coastal biodiversity by participating effectively in coalitions that include private sector, research and NGO institutions. The assumption that governments would be willing to effect change was pertinent, but the assumption was found to be *not true,* yet can be considered in future programming.

Assumption 4: Partial Support of Regional Organizations

Regional organizations, such as SICA, OSPESCA, and CCAD, have partially but not completely supported MAREA. Although not essential for planning and implementing effective conservation activities within one country, these institutions were established in part precisely to encourage the sharing of effective conservation practices across national boundaries. The assumption that they would support MAREA's objectives was therefore pertinent and *partially true only*, and should be considered in future programming.

Assumption 5: Shocks Occur

The definition of the term "shock" could be variable, depending on one's perspective. What could be a "shock" to one person or business could be inconsequential to another person or business. Although no global economic "shock" appears to have occurred during the time of MAREA's implementation, a rise in the price of fuel and electricity in some of the Central America countries did affect the use of its marine and coastal resources, by affecting the costs of their exploitation, and, therefore, its biodiversity. The assumption that no shocks would occur was, therefore, pertinent, it was *not true* and it should be considered in future programming.

Assumption 6: Some Regional Agreements Lacking

MAREA was involved in drafting some binding regional agreements so this "assumption" was more a result than an assumption. Nonetheless, the assumption that regional agreements would be made and enforced was important to some of the other results that MAREA was expected to accomplish, such as the harmonization of fishing policies, laws and regulations. Not all the regional agreements, however, have been enforced, perhaps most notably the agreement to ban the use of scuba diving to catch lobster. Without such a ban lobster producers were unwilling to invest in alternative techniques to catch lobsters, such as the use of lobster traps. This assumption was pertinent, did *not hold true fully*, though *partially* and should be considered in future programming.

Assumption 7: Imposed Measures Affected Nicaragua

The assumption as stated was that there would be an absence of policy measures such as sanctions. This was not the case for Nicaragua. Implementation of MAREA in Nicaragua was hindered by restrictions imposed by the U.S. government on the use of USAID funds for activities with the Government of Nicaragua. Therefore, this assumption was pertinent, was only *partially true,* but should be considered for future programming.

Assumption 8: Shared Regional Agendas Partially Implemented

This statement also does not really qualify as an assumption since it is stated as an action that was under the control of MAREA itself. Nonetheless, the issue of shared agendas is pertinent, did prove to be *true* to some extent and should be considered in future programming.

Assumption 9: Support of National Ministries including Information

None of the national ministries disagreed with or opposed MAREA, though some supported it more than others, as Guatemala supported it more than others including Costa Rica. The extent that the ministries supported MAREA was influenced by how much they participated in the selection, design and implementation of its activities and how pertinent these activities were to their priorities. This assumption was pertinent, and partially true and should be considered in future programming.

Question 3 - Effect of Implementation Challenges at Different Levels

What implementation challenges did MAREA face at each level of the Program (regional, national, local, and transnational)?

Regional Level

At the regional level of Central America an implementation challenge was to identify activities and modes of operation that involved working towards the resolution of specific conservation problems at the local level while still giving the project regional significance for the conservation of marine and coastal resources. A related challenge was to work with and through SICA and its organizations OSPESCA and CCAD. Both OSPESCA and CCAD have their own, established, deliberate, participatory and consensus building modes of operation that do not always square completely with the operating mode of USAID projects, particularly when they have been contracted to consulting firms. A third challenge was to work to conserve species and ecosystems that cross national boundary lines, especially when there are boundary disputes pending between the countries. A fourth challenge was to involve OSPESCA and CCAD in MAREA when they had not been fully involved in MAREA's planning and design so that their personnel did not feel any commitment to its successful implementation because its activities were not exactly aligned with their priorities. Finally, it was a challenge to work with CCAD when it did not have a secretary for some part of the MAREA's period of operations. CCAD and OSPESCA should be involved in the design of any regional conservation project from its conception, through its design, implementation and evaluation.

National Level

At the national level, a principal implementation challenge was to implement activities that depended on government actions. A second problem was to interest ministries and local governments in MAREA's activities when they had not been sufficiently involved in their prior planning and design. National and local governments often lacked sufficient financing to follow through on the implementation of the actions that are required to conserve marine and coastal biodiversity. A fourth challenge resulted from inflated expectations for financial resources that the words "economic alternatives" in MAREAs name sometimes created. At the national level different, conflicting priorities among different ministries or within ministries hindered the fulfillment of MAREA's policy efforts. The design of a future regional marine and coastal conservation program should ensure that no false expectations should be raised

about a possible flow of funds into national ministries from USAID, that the environment and fisheries ministries should be formally and closely involved in the design process for the program and that the design should not expect that the national ministries will be able to contribute financial resources or personnel to the implementation of the program's activities.

Local Level

At the local level, the principal problems MAREA faced in its implementation were local conflicts, crime and violence, conflicts between users of renewable marine natural resources, lack of institutional capacity in local public and private institutions, the absence of local representatives of national institutions, and lack of funding in public institutions. The conclusions to be drawn from these challenges are that the design process for a regional marine and coastal resource conservation program should recognize that some of these challenges are not going to disappear from where they now occur and may begin to occur where they do not now occur. The program must find ways, as MAREA did, to implement its activities regardless of these types of challenges. Others of these local challenges, however, such as funding, could be alleviated by choosing local sites, such as places where there have been large investments in beachside hotels, where large financial interests are at risk from a deterioration in natural resources such as reefs, mangroves and fish stocks. People with large financial interests in the success of conservation must finance local conservaton activities as part of their business costs if conservation is to be successful at such sites.

Question 4 – Results, Benefits and Sustainability

Which activities showed the fewest results and should be discontinued or approached differently? Explain why.

Policies and Laws

The policies and laws activities showed results in their aspects that concerned drafting and presenting policies and laws. The activities showed fewer results in their aspects that concerned the implementation of the policies and laws. The implementation of policies and laws by its nature is the responsibility of governments not of development programs such as MAREA. MAREA did about all it could do to assist the Central American countries and SICA institutions to prepare policies and laws. It is now up to the countries and SICA to implement these policies and laws. A future USAID regional biodiversity conservation project is unlikely to be able to assist them much in this task.

What activities and methodologies have the potential to be sustainable by the end of MAREA?

Fisheries and Species and Ecosystems

MAREA's fisheries and species and ecosystems activities were intended to introduce and promote sound management marine and coastal natural resources. Evidence from MAREA's experiences indicates that its activities to increase the sound management of coastal and marine resources have produced the most results and have the greatest chance of being sustainable. Its introduction of technologies and practices, such as no-catch zones and improved nets, are likely to assist the people who use renewable natural marine resources to conserve and preserve them. Evidence from many parts of the world, moreover, indicates that management of renewable natural resources is a principal way to conserve their market and non-market values. MAREA's fisheries and the species and ecosystem activities, therefore, have the potential to be sustainable by the end of MAREA. MAREA did, however, relatively little to incorporate applied scientific research into these activities. Its own experiences, with the hawksbill turtle being a prime example, as well as experiences from many other parts of the world, indicate that applied scientific research underlies sound management of renewable natural resources and the preservation of biodiversity. MAREA's scientific activities are not only sustainable, but are essential for the sustainability of its management activities.

EcoTourism

Among MAREA's various experiments in market and economic approaches, eco-tourism was among the most visible and potent, as is common in much of the developing world where enforcement, compliance and attention are greatest in areas drawing the most international attention.[34] Belize in particular has demonstrated the benefits and pitfalls of ecotourism on coral reef and species protection. The links between global tourism, conservation, development (with support from USAID's Global Development Alliance), though so far the experiences of MAREA mirror global experience which is that the local economic benefits of eco-tourism do not generate many jobs and have only marginal impact on reducing stress on fragile environments, while protection of biodiversity is circumscribed.[35]

Economic Alternatives

The economic alternatives category of MAREA activities showed the fewest results for conservation of biodiversity. Although market demand is central to the sustainable management of renewable natural resources, no data were found that indicated MAREA had successfully used specific "market mechanisms" to increase conservation of either specific species or biodiversity in general. Evidence does not indicate that MAREA was able to identify and develop enterprises that would provide sufficient reliable income to fishermen so they would exploit less fish, thereby conserving fish stocks. There are many instances of how market demand has driven the degradation of renewable natural resources – the deforestation of vast areas of Latin America to produce cattle, cacao, coffee, and other crops is one example of the degradation of natural resources that market demand can cause. MAREA's experience indicates that sound management of renewable natural resources promotes economic benefits.

Communications

The USAID 2006 background report on the situation of marine and coastal biodiversity in Central America said, "Public awareness and education programs are essential in building support for major changes within the community, and are relatively inexpensive methods for inducing significant change in community behavior." MAREA did not implement a systematic, regional or national program of environmental communication; its experiences with communication provide relatively few data on the contribution environmental communication can make to sustainability of renewable natural marine and costal resources. The limited qualitative data from MAREA itself, however, suggest that effective public education about conservation also underlies sustainability of programs to increase conservation of biodiversity and renewable natural marine and coastal resources. Conservation experience from elsewhere supports the USAID 2006 report's that public awareness and education programs are often required Public education about conservation in Central America's marine and coastal resources should be a more important component of future natural resource programming.

What tangible, sustainable benefits have resulted from MAREA?

Policies and Laws

MAREA has produced numerous policies and laws. Speculation suggests that this activity of MAREA has resulted in two types of tangible, sustainable benefits. First, the process of preparing the policies and laws is likely to have increased the level of comprehension among policy-makers and regulators about the policies and laws required to achieve conservation of marine and coastal resources and biodiversity; the preparation of the policies and laws was probably in itself an educational process. Certainly education is a tangible and sustainable benefit. Second, to the extent that the policies and laws have been well-prepared and have been implemented they are likely to produce tangible, sustainable benefits for both human populations and for the conservation of biodiversity and marine and coastal resources.

Fisheries and Species and Ecosystems

MAREA's fisheries and species and ecosystems activities were intended to improve the management of certain Central American marine and coastal resources. As discussed previously, management of

renewable natural resources is intended to maintain a steady flow of tangible, sustainable benefits to humans, through the production of market and non-market goods and services while at the same time preserving biodiversity. MAREA supported a wide range of management interventions, some of which worked and some which did not. Even those that did not succeed, however, did provide additional experiences in the management of Central America's marine and coastal resources. If those experiences are used in the future, then they themselves could be considered tangible, sustainable benefits.

Economic Alternatives

In general terms, MAREA's activities have been intended to combine with contextual, sustainable production of economic goods and services from marine and coastal resources. It is difficult to quantify the extent to which its activities succeeded in that endeavor, but certainly the attempt to do so can be considered a substantial contribution to the eventual conservation of Central America's renewable marine and coastal natural resources and biodiversity.

Some of MAREA's specific economic alternative activities have yielded tangible, sustainable benefits. For example, its support for some fishing cooperatives has raised their ability to maintain competitive levels of sanitation in their processing plants, thereby opening markets for their products that formerly were closed. The markets could eventually provide increased and more reliable income that will benefit the livelihoods of the families of the members of the cooperative. The educational process itself also is a tangible, sustainable benefit from the training aspects of MAREA's economic alternatives activities.

Communication

Evidnece was insufficient to draw firm conclusions about the tangible, sustainable benefits that MAREA's communication activities may have produced.

Question 5 - Lessons for Achieving Regional Biodiversity Conservation

> ***Based on USAID's experience with the Central American Commission for Environment and Development (CCAD), CCAW and MAREA, as well as current regional biodiversity challenges, where should USAID invest biodiversity funding in the future?***

Several lessons emerge from a review of USAID's experience with its prior regional conservation projects (RENARM, PROARCA, CCAW). First, scientific research and baseline information combined with a useful, accurate system for measuring and monitoring biophysical parameters of specific sites is a necessary condition for a successful conservation activity. Second, production of the products of renewable natural resources can also contribute to conservation of biodiversity through the adoption of best management practices, while at the same time involving people in conservation through giving them a financial interest in conserving the natural resources upon which their livelihoods depend. Third, coalitions of public and private organizations give promise of being able to achieve conservation of renewable natural resources and biodiversity at local levels even without strong support from national public institutions. Fourth, regional conservation programs should provide for flexibility so that they can be adapted based on local conditions and on learning experiences during their implementation. Fifth, local conservation successes can be used as examples for initiating local conservation successes in other geographic areas – conservation successes can not only stimulate other conservation successes but are required to create confidence about how to go about achieving conservation successes. Finally, 25 years of USAID experience with regional conservation projects clearly indicate that regional conservation projects do not simply duplicate bilateral conservation projects in Central America but add an important, perhaps vital, regional element that can contribute to more effective conservation of renewable natural resources and biodiversity for the entire region.

USAID's experience with SICA, CCAD, and OSPESCA indicate that these institutions ought to be involved in any USAID-supported regional conservation programs from their design through their implementation and evaluation. These are the official organizations that the Central American countries

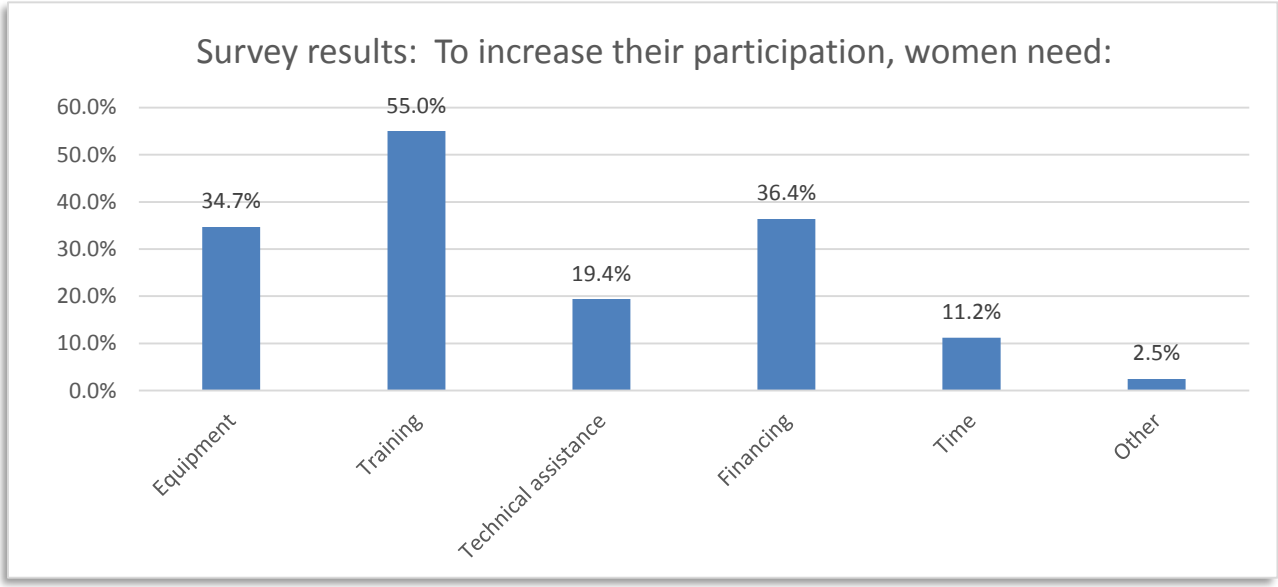
have set up in part to coordinate regional efforts to conserve renewable natural resources and biodiversity. To be successful in its own efforts to conserve Central America's renewable natural resources and biodiversity, USAID has to work with these institutions. Nonetheless, USAID's experience with CCAD and OSPESCA suggest that their roles within USAID programs are best restricted to coordination, consultation and sharing of best practices lessons from successful local level experiences.

Question 6 - Effects of Women's Participation

> ***How could MAREA have improved its integration of gender equality in the production, processing and marketing/sales phases of the fishery and coastal/marine value chain so as to maximize the impact of women in those areas?***

The evidence from MAREA's experiences indicates that women and men generally have differentiated, although equally important, roles in the management, use and conservation of natural resources. MAREA has no specific plan for achieving improved integration of gender equality in the production, processing, and marketing/sales phases of the fishery and coastal/marine value chain so as to maximize the impact of women in those areas. Only in this way could MAREA have been able to identify the specific needs of women that if resolved would permit them to participate more fully and effectively in these value chains.

Figure 4. What women need in order to increase their participation



RECOMMENDATIONS

Question 1 -- Design and Resources

1) Focus on the conservation of marine and coastal biodiversity

The rationale set out in the USAID 2006 report for focusing USAID biodiversity resources on coastal and marine resources remains as valid now as it was eight years ago. Indeed, field observations, interviews, and focus group discussions indicate that coastal and marine resources are probably more threatened now than they were eight years ago. There is little rationale for shifting USAID's regional biodiversity focus to the conservation of terrestrial biodiversity and strong reasons to continue and expand on MAREA's experiences in a future regional biodiversity conservation program.

2) Establish a results framework for the program that defines a clear strategic objective for the conservation of marine and coastal biodiversity

The conservation of marine and coastal biodiversity is a valid economic objective in and of itself, given its substantial economic value. It does not need to be justified economically by subsuming it within some other economic objective. USAID/ECAM, therefore, should formulate a sound Development Hypothesis and Results Framework to underlie the design of a future regional biodiversity conservation program based on biodiversity conservation Strategic Objective. Other USAID/ECAM objectives, such as economic growth or gender equality, should be tied to the Results Framework for the conservation of biodiversity Strategic Objective. Benefits will include: First, it will permit the preparation and use of a monitoring and evaluation system that can be used for adaptive management of the program. Second, it will permit the purpose and content of the project to be designed with effective participation of Central American public and private institutions at regional, national and local levels. Third, the budget can be formulated so that funds are assigned to achieve maximum possible effectiveness and efficiency.

3) Establish useful, systematic monitoring and evaluation processes that can be used for adaptive management of the program

Renewable marine and coastal natural resources are subject to fluctuations in populations due to naturally occurring population cycles and to the effects of weather patterns and ocean currents. Markets for associated products also fluctuate. Therefore, monitoring and evaluation processes are vital to keep track of these variations and their potential inter-relationships. M&E provides data for both the management of renewable natural resources and for adjusting program activities to make them more effective and efficient. The M&E system for any future regional conservation activities should constantly evaluate the empirical data about its effectiveness, while tracking new circumstances and opportunities.

4) Implement the program through flexible, simple mechanisms

USAID/ECAM should use an implementation mechanism, perhaps a cooperative agreement, that permits flexible, adaptive management that gives local governments, private enterprises, producer cooperatives and conservation NGOs the maximum possibility to coordinate and collaborate to achieve together conservation objectives which they establish themselves through inclusive, participatory negotiations for the geographical circumscribed areas.

5) The design process should be more participatory by supporting engagement of local coalitions that can formulate joint conservation and development plans

USAID/ECAM should recognize that the process used to choose, design, and implement activities which have the objective of conserving biodiversity through management of natural resources will greatly affect the degree of success in permanently establishing those management actions. SICA, CCAD, and OSPESCA, should be considered full partners in design processes. Institutions that represent private sector, for-profit organizations, experienced environmental NGOs and research institutions should also be more closely involved. USAID/ECAM should aim from the start of the design process that its next regional conservation program is understood, accepted and owned by Central American institutions.

Local peoples tend to care about the renewable natural resources that surround them more than non-local people because they often derive their livelihood from them. Local organizations, including governments, NGOs, research institutions, and private sector enterprises, provide the means to translate this concern of local people into effective conservation actions. USAID/ECAM may therefore design its future regional conservation program in collaboration with local coalitions of organizations, funding them and linking them to technical assistance to permit them to set long-term local conservation goals for circumscribed geographic areas, make commitments and take the initial actions to work towards those goals. USAID/ECAM should consider future interventions in terms of the initial phase of a long-term program that will be planned, agreed upon, and implemented by local organizations whose activities occur with a circumscribed geographic area that crosses the continuum from sea to land and includes biodiversity rich reefs. In this regard, biodiversity programming can benefit from USAID's evolving experience and policy about Adaptive Learning for nimble and responsive learning and modification within programs.[36]

6) Combine activities to conserve marine and coastal biodiversity with those to increase adaptation and resilience to climate change

Reefs, mangroves, sea grass beds and beaches constitute the first defense against the effects of climate change, such as rising sea levels and stronger storm surges. Measures to protect them will also protect marine and coastal biodiversity. USAID/ECAM should, therefore, design a future regional biodiversity conservation program to take full advantage of its synergies with activities to adapt to climate change and to increase the quality, quantity and sustainability of production of marine and coastal resources.

7) Match the available budget and time frame with the scale of the proposed activities

USAID/ECAM should, therefore, design future regional biodiversity conservation programs at a scale that is feasible given its planned financial resources and timeframe.

8) Maintain the regional character of the biodiversity conservation program by systematically sharing local experiences within Central America and Mexico

USAID has financed regional conservation programs in Central America for over 25 years, as have a number of other regional and international institutions. Yet there is not a sense that the trends for conservation of marine and coastal resources are positive. Models of success are urgently required in the region to avoid yet more years of isolated, sporadic, seemingly essentially ineffectual attempts to reverse the degradation of marine and costal resources. The local models within circumscribed areas could provide the impetus for achieving such a reversal. These models can be shared across Central America. Mexico has successful examples of local conservation successes that ought to be circulated. USAID/ECAM should negotiate with SICA during the design of a future regional conservation program so that the overall purpose of the program becomes a regional, inclusive of Central America and Mexico.

Question 2 – Assumptions

1) Consider the eight assumptions in future programing for a USAID regional biodiversity conservation program

USAID/ECAM should consider MAREA's eight assumption eliminating Assumption 8 which was not really an assumption and be fully realistic about the current situation of each of these assumptions. It should not expect that the situation with respect to these assumptions will improve. Rather it should be design the regional biodiversity conservation program so that it will be able to attain results and objectives even if the situation becomes more rather than less difficult.

2) Clearly differentiate the situation of these assumptions in the different Central American countries

Each of the Central American countries has different situations related to MAREA's eight assumptions. Therefore, USAID/ECAM should design whichever future regional biodiversity conservation program based on assumptions that take into account these differences.

3) Substitute commitments for assumptions

When designing a future regional biodiversity conservation program USAID/ECAM should aim to minimize as many assumptions as possible by obtaining commitments from local organizations and institutions to carry out specific actions that are required to improve the conservation of biodiversity. In other words, USAID/ECAM should try to convert assumptions into commitments on the part of local institutions and organizations.

Question 3 -- Implementation Challenges

1) Design the program with the full participation of SICA

SICA is Central America's lead institution for regional integration. USAID/ECAM, therefore, should design any forthcoming regional conservation initiatives with the full participation of SICA. When the program succeeds in producing local successes in the conservation of marine and coastal biodiversity, then SICA, and its specialized institutions, such as CCAD and OSPESCA, will be able to transfer these successes between countries, thus giving circumscribed conservation activities regional significance.

2) Confine field activities circumscribed sites with reef-sea grass-beach continuums

Although USAID/ECAM should locate its activities within the Gulf of Fonseca, the Gulf of Honduras, the Miskito Coast of Honduras and Nicaragua, and Cahuita-Boca del Toro, where USAID already has experience and institutional relationships upon which to build, within those general areas it should focus its activities on circumscribed sites that encompass a continuum of open water, reefs, and sea grass, beach and near-beach developments. These continuums are where marine and coastal biodiversity is concentrated and fostered so they are far more important for the conservation of biodiversity than open seas. The boundaries of the circumscribed sites should correspond to the boundaries of one or more local governments and, if possible, overlap with existing or potential marine and coastal protected areas.

3) Choose field sites where operations are not excessively difficult, expensive and time-consuming

USAID/ECAM should choose field sites where operations will not be excessively expensive and time-consuming. The purpose of the field demonstrations is to achieve demonstrations of how successful, permanent conservation of marine and coastal biodiversity can be achieved. There is no reason to make this objective more difficult than necessary by adding difficult logistical problems or by increasing the costs of implementing the demonstrations. Similarly, USAID/ECAM should avoid geographic areas and institutions where corruption and violence are likely to affect program implementation.

4) Emphasize equity in the use of coastal and marine resources among different social groups

There is enough experience to date so that the economic benefits of MAREA-associated interventions can be scaled up to benefit a greater span of local communities. Meanwhile, the skills and knowledge of all of the social groups that depend on marine and coastal biodiversity for their welfare are required to achieve the conservation of this biodiversity. Traditional fishermen are an untapped source of knowledge about past and current condition of reefs, needed to complement scientific reef monitoring.

Question 4 – Results, Benefits and Sustainability

1) Support the introduction and widespread adoption of effective management and conservation practices for marine and coastal biodiversity, in particular species that have commercial value

USAID/ECAM should concentrate its efforts on the introduction and adoption of improved management and conservation practices for marine and coastal natural resources. Activities to supply markets and to adapt to climate change can be used to increase conservation or marine and coastal biodiversity. Improved management of renewable natural resources offers an immediate way to increase the quantity, quality and reliability of marine products and services, thereby contributing to economic growth while also preserving biodiversity and ecosystem processes.

2) Support applied scientific research that will provide a sound basis for effective management and protection of marine and coastal biodiversity

Central America's marine and coastal renewable natural resources and biodiversity can continue to produce enormous economic benefits if they are managed rather than degraded. Inevitably, however, most attention and funds go into extracting and marketing the products of marine and coastal renewable natural resources rather than into their management for sustainable production. Entrepreneurs are almost certain to invest and extract when opportunities to gain from the exploitation of renewable marine and coastal resources appears. By contrast, the financial and human resources needed to establish the sustainable management of these resources are rarely adequate. Almost always sufficient funds are lacking to finance the applied research upon which their sound management must be based.

3) Finance systematic, targeted communication of improved management practices and conservation policies, laws and regulations

Field demonstration conservation projects are unlikely to attain a scale that will result in large-scale, permanent conservation of coastal and marine biodiversity. Field projects, therefore, should provide examples of successful conservation practices that can be replicated and adapted to other coastal locations in Central America. A well-financed, systematic communication program, therefore, is a much-needed component of a successful regional biodiversity conservation program.

Question 5 – Experience in Regional Biodiversity Conservation

1) Incorporate lessons learned in prior regional conservation programs into a future regional conservation program

As noted earlier, since the late 1980's USAID has financed and implemented the Regional Natural Resources Management Project (RENARM), the Central American Regional Environment Program (PROARCA), the Conservation of Central America Watersheds Program (CCAW), and MAREA itself. During the implementation of these projects it has supported the Central American Integration System (SICA), and its implementing institutions, such as CCAD and OSPESCA. Each of these prior programs has been evaluated and important lessons have been learned from each, including: (1) focus on synergies for common objectives by using participation to build inter-organizational coalitions at the local level; (2) concentrate policy on mitigating threats to defined geographic areas; (3) ensure research is directly pertinent to problems; (4) emphasize environmental sound productive activities using best practices; (5) create precedents with wide-spread application throughout Central America; (6) incorporate markets for commercial products from marine and coastal natural resources into program design and implementation; (7) work closely with SICA in the design and implementation of the program to support its principal purpose of furthering the integration of the Central American countries. USAID should heed and incorporate these lessons learned in future conservation programming.

Question 6 – Women's Participation

1) Establish specific objectives for including women in the design of the program

Otherwise, it may be unlikely that they will benefit from being more involved in the exploitation of marine and coastal resources, which often requires long periods away from home or difficult physical labor. They should, however, play an equal role with men in taking the decisions that will determine the sustainability of the production of these resources. A future USAID regional conservation program, therefore, should be designed to incorporate women more often and fully into decision-making processes related to the use and protection of renewable marine and coastal resources. In tandem, include systematic measurement of women's participation in program activities, especially in relation to decision-making processes.

APPENDIX 1 – END-NOTES AND BIBLIOGRAPHY

ENDNOTES

[1] MAREA, USAID and other in-text citations are below in the second part of Appendix 1, the Bibliography.

[2] Findings thus "grounded" in and "emerged from the evaluators' interaction with the qualitative data" (Patton 2001).

[3] USAID TIP # 13, Building Results Statements says "AOs and IRs should express an outcome, in other words, the results of actions, not the actions or processes themselves. For example, the statement —increased economic growth in targets sectors‖ is a result, while the statement —increased promotion of market-oriented policies‖ is more process oriented."

[4] "At least 1.5 million sea turtle hatchlings are protected using public-private alliances and best management practices in select areas throughout Central America."

[5] Moreover the sea turtle hatchlings program occurred not all over Central America but only on a few beaches in El Salvador, Costa Rica, and Panama.

[6] The professions of forestry, soil conservation, and fish and wildlife management, among others, are based on the use of scientific information to develop and apply management practices that will sustain the production of goods and services for economic benefits from natural resources while also conserving biodiversity.

[7] Matti Salo et al in their 2014 *Diagnosing Wild Species Harvest: Resource Us and Conservation*, Elsevier publications Amsterdam, after reviewing many cases in the tropics, distinguish between the degree of species being harvested as being intrinsically excludable or substitutable, among competing fisherpersons.

[8] "Market – based mechanisms are ways to match up buyers and sellers, and are generally driven by supply and demand. In this program, market – based mechanisms shall foster best management practices. Lobster fishermen, for example, would have a greater incentive to comply with best management practices if they could secure access to markets which would pay greater value for their sustainable harvested products (USAID 2010 p.6).

[9] "*This program will promote, through market – based mechanisms, a demand on products and/or services provided through best fisheries/management practices. To achieve this, Contractor will provide, through sub-contracts, strategic public awareness efforts. Contractor will focus its efforts in the target species. Public awareness efforts will be implemented at strategic moments during the various phases of project execution considering law enforcement, seasonal restrictions and best fisheries practices implementation. Contractor will design and implement regional public awareness efforts to change people's attitudes towards the consumption and unsustainable use of endangered species"* (USAID 2014 p.21).

[10] Regulations in the countries where the catch takes place also prohibit the taking of undersized lobster and gravid females. If the fisherperson catches either of these and the authorities find him with them, then he is subject to the penalties prescribed by law/regulation. If he thinks that he can get away with breaking the regulations, and is not caught by the local authorities, then he has to be able to sell the product in alternative non-U.S. markets, which may be a local market or another export market, such as Japan, if the volume is sufficient to justify the cost of the shipment. The fisherperson would normally know before making the decision to keep or not to keep the prohibited product. Price and payment arrangements would also be factors in making the decision whether or not to take the risk of keeping prohibited lobster. The higher the price and the quicker the payment the more likely the fisherman is to consider it a risk worth taking.

[11] Throughout the document, sources are cited in data collection tool, country, number of interviewee format. For example the twenty-second key informant in Honduras is cited as "KIH22." The data sources cited are key informants (KI), focus group discussions (FG), validation workshops (VW), and field observations (FO) in the following countries: Belize (B), Nicaragua (NI), Honduras (HO), El Salvador (ES), Guatemala (GU), Costa Rica (CR), and Panama (P). For a list data sources, see Appendix 10 Sources of Information.

[12] Market value could be added by catching larger sizes, using ice to keep the fish fresh, and processing, storing

and transporting the fish to higher standards of preparation and hygiene.

[13] The addition of value is not generally done by the fishermen at sea, but in the processing plant where fish may be filleted or otherwise transformed. The fishermen still sell the whole fish to the plant, which then adds value (and cost) and sells at a price which should give the plant a better return. How much, if any, of the additional value (if, after additional costs have been taken into account, there is a positive margin) flows back to the fishermen depends on the competitive position of the fishermen in selling their catches. The exception to this general rule is where the fishermen are also members of a cooperative, which undertakes processing of the catch, and so share in any profits which the cooperative may generate. The women's mangrove cockle cooperative in Nicaragua is an example of a success in adding value, by preparing and selling the catch in the form of cocktails (Historia de Exito – Derechos y Valor Agregados al Curil, Cocteles). The Placencia Fishermen Cooperative, on the other hand, is unable to cover its overhead and operation costs and so would not be able to generate any additional income for its members (FOB3, Placencia Producers Cooperative Society Limited). Experience with fishermen leads to the belief that there is no reason to suppose that fishermen stop catching when they have enough fish to reach a certain level of income (although this might be so in the case of fishermen fishing only for their own consumption, who might stop fishing when they have enough to feed the family on a given day). Normally, fishermen try to maximize their catches and income, since they have the view that what they do not catch today may be caught by other fishermen or simply not be available tomorrow. A key informant made clear that he intended to catch as much fish as possible. In the so-called good season, the boat spent more days at sea and was operated by the owner himself, as compared to the poor season when the boat only went out when other boats had identified that there were good prospects (Indicative Profitability of a Fishing Vessel owned by a member of ACOPACIFICO).

[14] Result 3: "At least 1.5 million sea turtle hatchlings are protected using public-private alliances and best management practices in selected areas throughout Central America."

[15] Indicator 12: "Number of sea turtle hatchlings protected and released."

[16] Result 5 is **"**Decreased landings of juvenile lobster in at least two select marine sites of regional importance". PI 13: "Decrease in the number of Juvenile Lobsters Harvested as the Result of Program Interventions."

[17] Result 8: Sustainable and productive pilot projects formulated and implemented in Honduran and Nicaraguan Miskito Coast, which allow active lobster scuba divers, to move on to appropriate new jobs, with improved labor conditions and earnings, in substitution to the SCUBA lobster fishery.

[18] Indicator 17. "Number of families benefitting from productive pilot projects in the Miskito Coast of Honduras and Nicaragua."

[19] Result 9: "At least nine hundred disabled Scuba fishermen or family members trained in new skills and abilities to start their own businesses or gain employment through alternate economic activities, earning higher revenues in Gracias a Dios Department, Honduras and the North Atlantic Autonomous Region in Nicaragua."

[20] Indicator 18: "Number of disabled fishermen or household members of disabled fishermen in the Miskito Coast trained in business or productive skills."

[21] Result 11: "No less than US$8 million in additional sales of products and services generated as a result of the implementation of the productive projects and business plans on sustainable fisheries, sustainable tourism and arts and crafts, implemented with associations and cooperatives in the Program's sites."

[22] PI 20: Value (USD) of additional sales of products or services that can be directly attributed to the activity interventions and which support conservation and/or sustainable use efforts.

[23] The report did note, however, that five monitoring programs were underway in the Caribbean basin, including CARICOMP, CPACC (MACC), GCRMN, AGGRA, CWIP and ReefCheck. It says, however, that these programs are generally not integrated with one another, do not readily share data for region wide comparison or for the assessment of status or trends and "were designed to meet specific purposes, and do not necessarily meet the needs of individual countries" (USAID 2006).

[24] One reason that the UK held on to Belize for so long as a colony or protectorate was because of Belize's own recognition that Guatemala was explicit, even in its constitution, in its desire to annex Belize.

[25] Although MAREA was not involved in the planning of the Cayos Marine Park, evidence indicates that the conflict is difficult to overcome once it has arisen due to gaps in participation.

[26] These other mechanisms include: 1) limited entry or access rights (e.g. concessions, licensing, limited entry licensing); 2) quotas or catch shares; 3) closed areas or "no-take zones;" and 4) input rights (e.g. time fished, gear restrictions, size requirements).

[27] MAREA, for example, bought the feed for the poultry project in Punta Gorda in Belize.

[28] The "problem of the commons" plagues marine fisheries managers since no-one conserves a resource that belongs to everyone. Management program designed to control inputs in the harvesting process have generally been unsuccessful if property rights for the in situ resource do not exist. In recent years, rights-based management measures have been developed to give fishermen partial property rights or access rights to fish-in-the-sea as an alternative approach to achieving fisheries rationalization. However, this alternative approach has also been criticized for its shortcomings. Copes (1986) presents many sound arguments against the use of individual transferable quotas (ITQs) as a fishery management instrument citing the results of actual applications. These include quota-busting, data-fouling, residual catch management, unstable stocks, short lived species, flash fisheries, real-time management, high-grading, multi-species fisheries, seasonal variations, spatial distribution of effort, TAC-setting, transitional gains trap, and lack of industry acceptance. In addition, impacts of transferability of individual quotas on allocation of income and equity have been identified. Finally, the question of whether ITQs are preferable to the common property or open access fishery scenario remains unanswered. See: *www.FAO.org/docrep/003/x8985e/x8985e08/htm*

[29] A market-based mechanism toward conservation of marine resources is not only the one, the effect of which is a higher price, but for example one that through consumption foster conservation.

[30] MAREA provided Table 5, and the other tables of MAREA activities found in Appendix 7, to the evaluation team. Their data are presented as they were received, although some activities, such as the economic alternatives MAREA financed in Belize of poultry and pigs, are missing. Limitations of time prevented the evaluation team itself from revising these tables.

[31] See: James Morton and IBTCI 2014 *Promoting Transformations by Linking Nature, Wealth and Power, a Final Performance Evaluation of the TRANSLINKS Program*, Development Experience Clearinghouse.

[32] SICA and OSPESCA also include the Dominican Republic as well as the other seven Central American countries.

[33] See: IBTCI 2014 *Property Rights and Resource Governance Program Performance Evaluation Final Report* USAID: Development Experience Clearinghouse.

[34] The general power of ecotourism, alongside threats is made in OECD 2001 *Harnessing Markets for Biodiversity: Towards Conservation and Sustainable Use* Paris: OECD; "Not all biodiversity elements are amenable to market protection. The most successful and extensive existing markets for biodiversity are in eco-tourism, which is both a public sector and private sector activity."

[35] See: IBTCI, April 2014 *Global Sustainable Tourism Alliance Performance Evaluation Final Report* USAID: DEC

[36] The complex dynamic between human poverty reduction and environmental conservation requires iterative, adaptive learning. See: Robert Fisher et al 2008 *Linking Conservation and Poverty Reduction: Landscapes, People and Power* Earthscan UK. This book examines various cases where locally initiated natural resource restoration coincides with intentional poverty reduction, where biodiversity outcomes can be better than from a heavy-handed government approach.

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APPENDIX 2 – MAREA PROGRAM EVALUATION STATEMENT OF WORK

(Source: AID-596-O-14-00006)

A. Purpose of the Evaluation

The purpose of this final performance evaluation (as defined in USAID's Evaluation Policy) on the USAID Regional Program for the Management of Aquatic Resources and Economic Alternatives (MAREA) is to ascertain the value and impact of USAID's regional biodiversity funding investments in the coastal marine environment, and to use this information to guide the design of a new biodiversity activity. The evaluation covers implementation from the start of the Program in January 2010 through March 2014 (six months prior to the September 2014 project completion date).

The objectives of the evaluation are:

1) analyze and question the initial design of MAREA;
2) identify and analyze challenges at each level (local, national, regional) of MAREA's implementation; and
3) identify methodological considerations for future regional biodiversity project design.

The main participants in the evaluation will be the Program's subcontractors: The Sea Turtle Conservancy (STC), Solimar International Sustainable Tourism, The Nature Conservancy (TNC), Wildlife Conservation Society (WCS), and World Wildlife Fund (WWF); Program partners, including the General Secretariat of the Central American Commission for Environment and Development (CCAD), the General Secretariat of the Central American Integration System, the National Oceanic and Atmospheric Administration (NOAA), the Regional Center for Micro, Small and Medium Businesses (CENPROMYPE), and the Organization of Fishing and Aquaculture in Central America; (OSPESCA); the Global Environmental Facility (GEF) Small Grants Program with the United Nations (particularly in Honduras, Nicaragua and Panama); private sector partners involved in the Program; national governments of the countries involved; Program beneficiaries in the local communities; the implementing partner Chemonics International, Inc.; USAID/Central America and Mexico (ECAM) office and USAID offices in Guatemala, Nicaragua, and Honduras. The principal audience of this evaluation internally will be USAID/ECAM and other USAID offices that are expected to use the results to make decisions about future activity design.

B. Background Information About the Program

Project Name:	USAID Regional Program for the Management of Aquatic Resources and Economic Alternatives (MAREA)
Contract Number:	IQC No. EPP-I-00-04-00020-00 Task Order No.5, with modifications EPP-I-05-04-00020-00
Implementing Partner:	Chemonics International, Inc. with Subcontractors: • The Sea Turtle Conservancy (STC) • Solimar International: Sustainable Tourism • The Nature Conservancy (TNC) • Wildlife Conservation Society (WCS) • World Wildlife Fund WWF
Award Dates:	January 2010- September 2014
Funding:	Initially $11,679,861 increased by $919,431 to $12,599,292, including Biodiversity earmarked funding and Labor earmarked funding

The USAID Regional Program for the Management of Aquatic Resources and Economic Alternatives (MAREA) in Central America, under Contract EPP-I-00-04-00020-00 Task Order No. 5 with Chemonics International, Inc. (Chemonics) is a $12.5 million program focusing on protecting important coastal resources in Central America. Implementation began in January 2010 and is scheduled to end in September 2014. The evaluation will cover Project implementation from January 2010 to approximately March 2014.

The focus of MAREA is to target both fisheries and the conservation of important species, as well as promote viable opportunities and best management practices in four marine-coastal sites that cross the boundaries between CAFTA-DR member countries: Gulf of Honduras (Belize, Guatemala, Honduras); Mosquito Coast (Honduras, Nicaragua); Cahuita-Bocas del Toro (Costa Rica, Panama); and Gulf of Fonseca (El Salvador, Honduras, Nicaragua) (see H.l). In order to accomplish these goals, MAREA promotes the effective enforcement, compliance, and monitoring of policies and legislation regarding marine-coastal resources, as well as ways of managing marine-coastal resources that encourage their conservation and sustainable use.

Within USAID's Regional Strategic Objective "Economic Freedom: Open, diversified, and expanding economies," MAREA, in particular, contributes to Intermediate Result No.4 "Improved Management and Conservation of Critical Watersheds," and specifically to Sub I.R 4.1 "Improved end use management of critical watersheds" and Sub I.R. 4.3 "Increased harmonization and enforcement of environmental laws and regulations." The Program was designed based on a 2006 USAID assessment of the opportunities and challenges in coastal and marine conservation in Latin America and the Caribbean (see H.2).

MAREA followed USAID's 2007-2009 Conservation of Central American Watersheds Program (CCAW) whose purpose was to improve the management of two of Central America's most important watersheds-the Gulf of Honduras in Guatemala, Honduras, and Belize and the Bocas del Toro watershed in Panama and Costa Rica. USAID worked to protect their unique biodiversity by supporting the application of sustainable finance solutions for protected areas, providing assistance in the implementation of existing management plans for critical biodiversity areas, and engaging the private sector in economically viable activities. CCAW followed three prior regional programs promoting environmental protection and improved management of natural resources in Central America: PROARCA II 2001-2006, PROARCA I 1996-200 I and RENARM 1990-1995 (see H.3).

This MAREA evaluation follows a Regional Office of Inspector General's (RIG) July 2013 performance audit. The RIG audit focused on whether MAREA and Chemonics complied with results, particularly highlighting issues on: 1) monitoring policies and legislation, 2) data quality, 3) consistency between indicators and results, and 4) a connection between regional commitments and participation.
This evaluation will closely examine MAREA to: 1) analyze and question the initial design of MAREA; 2) identify and analyze challenges at each level (local, national, regional) of MAREA's implementation; and 3) identify methodological considerations for future regional biodiversity project design. USAID closed the audit findings in a September 2013 memo. Answers to the evaluation questions will give USAID new information not available from the RIG audit, and will help USAID to determine the strategic focus of future biodiversity investments in the Central America/Mexico region.

Due to the regional nature of MAREA and its design, the Program has required many levels of coordination across different local, national and international actors. The following table shows these levels of interaction and can be used to further define the evaluation approach:

Levels	Actors
Regional decision-making	USAID, SICA
Regional coordination	USAID, CCAD, OSPESCA
Cross-border operations	USAID, STC, Solimar International, TNC, WCS, WWF
National decision-making	Related authorities (environment, fishing, tourism, foreign relations)
National operations	Technical contacts named by related authorities and regional Organizations
Local community level decision-making	Civil society organizations, local governments, cooperatives and committees

In addition, the following definitions are important to the evaluation objectives:

Rights- based mechanisms: In fisheries, two kinds of rights are important: "management" rights which deal with those who have the right to be involved in managing the fishery and "use" rights which deal with those who have the right to use the fishery or to go fishing. From this perspective, the concept of a right in fisheries can be thought of as a privilege and not necessarily as a property right involving exclusive ownership. User rights address such issues as who has access, how much fishing etlo11will be allowed and how much catch can be landed. In tum, this entitlement to use a fishery can be allocated to a variety of entities including groups, individuals, communities, corporations, and cooperatives, and may, in some circumstances, be place-based. Management rights and who holds them may depend on the type of the fishery management decisions being made. Broad policy issues involving, for example, the management approaches that will be allowed or the general guidelines for determining who has access, usually involve government managers and a wide range of interest groups. More specific regulatory decisions involving how the fishery will be fished may be more likely to involve just those who are directly engaged in fishery.

Market-based mechanism: Market-based mechanisms include, among other things, campaigns that match buyers and seller, relying on patterns of demand for consumption. Market-based mechanisms foster best management practices. Lobster fishermen, for example, would have a greater incentive to comply with best management practices if they could secure access to markets which would pay greater value for their sustainable harvested products.

In relation to the topic of gender, the initial MAREA Contract indicated that: "Gender issues should be considered as a critical criterion for site and activity selection."

Technical Approach

MAREA has two main objectives: 1) Promote effective monitoring and enforcement of coastal and marine resources, policies and legislation with an emphasis on compliance, and 2) Foster rights-based and market-based mechanisms and management incentives for the conservation and sustainable use of coastal and marine resources and ecosystems with an emphasis on ecosystem-based approaches to management.

The initial expected results were:

1. All Central American countries will adopt and implement harmonized policies on sustainable shark fisheries.
2. All Central American countries will adopt and implement harmonized best management practices for the sustainable use of target coastal and marine resources.

3. All Central American countries will adopt and implement harmonized policies for coral reef and mangrove management as critical ecosystems to adapt and build resilience to climate change.
4. At least 25% of fishing products sold of target species will be harvested under rights-based management regimes and best fisheries practices, from a 2009 baseline.
5. At least 250,000 sea turtle nests are protected using public-private alliances and best management practices in select areas throughout Central America.
6. The lobster population will increase by at least 20% in at least two select marine sites of regional importance.

However, these results were later modified to replace #5 with "At least 1,500,000 sea turtle hatchlings will be protected using public-private alliances and best management practices." and #6 with "Decrease in the number of juvenile lobsters harvested by at least 164,100 as the result of program interventions to improve fishing practices." In addition, the contract was modified and expanded to improve labor conditions, standards and livelihoods of fishermen to contribute to the sustainable management of coastal and marine resources. The specific objectives of that modification were:

1. Promote the substitution of traditional fishing practices through the implementation of pilot projects geared toward the improvement of the current labor conditions and health of local fishermen, as well as the establishment of productive, more sustainable alternatives.
2. Provide the required training to support Mosquito fishermen to develop new productive activities, especially to those whom have become disabled by the scuba diving for lobsters fisheries.
3. Improve local capacity to participate and implement projects and programs to improve labor standards, livelihoods and environmental management.

These objectives corresponded to five new results to be delivered, including:

1. At least two labor standard manuals, codes or guidelines drafted and validated with local communities, the private sector and government officials.
2. Sustainable and productive pilot projects formulated and implemented in Honduran and Nicaraguan Mosquito Coast, which allow lobster scuba divers to move on to appropriate new jobs with improved labor conditions and earnings in substitution to the Scuba lobster fishery. These should benefit more than 750 families in Gracias a Dios Department, Honduras and more than 500 families in the North Atlantic Autonomous Region (RAAN) in Nicaragua.
3. At least 900 disabled scuba fisherpersons or members of their families trained in new skills and abilities to start their own business or gain employment through alternative economic activities, earning higher revenues in Gracias a Dios Department, Honduras and in the North Atlantic Autonomous Region (RAAN) in Nicaragua.
4. No less than $1 million leveraged to co-finance productive project proposals from sustainable fisheries, sustainable tourism and arts and crafts in alliance and coordination with other financial institutions and the private sector.
5. No less than $1 million in additional sales of products and services generated as a result of the implementation of productive projects and business plans on sustainable fisheries, sustainable tourism and arts and crafts implemented with associations and cooperatives at the Program's sites.

USAID has used a number of indicators to monitor progress of the Project, as well as regular meetings with Chemonics, site visits and other means of communications (See H.4 and H.5). The

evaluation team will be responsible for collecting all monitoring data on Program indicators from Chemonics, analyzing it using cross tabulations and triangulation (or cross examinations from several data sets collected using different methods) and reporting on it in as much as it relates to the evaluation questions stated in this Statement of Work and in the Final Evaluation Report. Most Program indicators had a baseline of zero (0). The Monitoring and Evaluation Plan listed here was updated in August 2013 to reflect current Program implementation.

The **development hypothesis** of MAREA is: if USAID invests in sound coastal and marine management practices and market solutions in the region that are tailored to guarantee sustainability at the local level, then coastal communities will have alternative income opportunities that can lead to greater food security and marine biodiversity.

While the Program was not initially designed with a logical framework model, USAID/ECAM subsequently identified critical assumptions related to the development hypothesis and this evaluation. They include:

1. Absence of an unstable socio-political environment such as armed or violent regional and/or local conflicts.
2. Generally stable fiscal and monetary policies and macro-economic environments.
3. Willingness of local national governments to affect change and reform, in particular to rights-based mechanisms.
4. Full support of regional organizations, Central American Integration System (SICA), Regional Fisheries and Aquaculture Organization (OSPESCA), and the Central American Commission tor Environment and Development (CCAD).
5. Absence of any sudden supply or demand shocks such as energy price shocks that would interrupt coastal and marine activities.
6. Accomplishment and enforcement of regional binding agreements under SICA.
7. Absence of internationally imposed measures that would have detrimental effect on the general political and economic stability in Central American countries, such as internationally imposed sanctions.
8. That the Program will encourage shared agendas by adding to existing regional processes.
9. The Ministries of Environment and Agriculture in the region support the Program and provide required information.

C. Evaluation Questions

For the Evaluation of MAREA, the Evaluator must comply with USAID's Evaluation Policy. (online at: http://www.usaid.gov/evaluation/policy.)

The following evaluation questions, **in priority order,** have been identified by USAID. They should be answered by the evaluation team and clearly presented in the Final Report in terms of how they relate to the evaluation purpose.

- Quality of design: To what extent did MAREA's design and resources help or hinder the Program's ability to achieve its objectives and measurable results within the proposed scope and established time-frame?
- Validity of assumptions: To what extent did the assumptions identified[1] by USAID hold

[1] This evaluation focuses on 4, 6 and 9 identified in the SOW, as are for USAID: 3) of local national governments to affect and in particular to mechanisms; 4) Full support of regional organizations, Central American Integration System (SICA), Regional Fisheries and Aquaculture Organization (OSPESCA), and the

true during implementation, influencing the achievement (or non-achievement) of MAREA's objectives, and should be considered for potential future programming?

- Implementation challenges: What implementation challenges did MAREA face at each level of the Program (regional, national, local and transnational)?
- Results: What activities and methodologies have the potential to be sustainable[2] by the end of MAREA?
- Which activities showed the fewest results and should be discontinued or approached differently? Explain why.
- What tangible, sustainable benefits have resulted from MAREA?
- Future biodiversity investment: Based on USAID's experience with the Central American Commission for Environment and Development (CCAD), CCAW and MAREA, as well as current regional biodiversity challenges, where should USAID invest biodiversity funding in the future?
- Gender: How could MAREA have improved its integration of gender equality in the production, processing and marketing/sales phases of the fishery and coastal/marine value chain so as to maximize the impact of women in those areas?

D. Data Collection, Analysis and Methodology

The data collection plan for this evaluation will include at a minimum: a desk review of relevant documents; interviews and/or focus groups; and direct observation through site visits to at least two of the four Program implementation sites. USAID/ECAM expects both qualitative and quantitative data to be collected; and the results of this data collection will be analyzed for content on both a qualitative and quantitative basis. The evaluation team may propose additional data collection methodologies in the Evaluation Plan; all methodologies should be presented by evaluation question in the proposal.

- **Desk review of relevant documents**

USAID/ECAM will provide the evaluation team with all relevant program specific documents, such as statements of work, reports, prior assessments, etc. The evaluation team should review the documents before meeting with local stakeholders for interviews. The evaluation team is expected to review these and create a Document Review Matrix to be delivered to USAID/ECAM using the following illustrative format, which may be improved by the Evaluator:

Document Review Matrix (Sample Table)

Document Name	*Evaluation Question 1*	*Evaluation Question 2*	*Evaluation Question 3…*	*Comments*
Quarterly Report #1	*X*	*X*		

Central American Commission for Environment and Development (CCAD); 6) Accomplishment and enforcement of regional binding agreements under SICA; 9). The Ministries of Environment and Agriculture in the region support the Program and provide required information.

[2] "Sustainable" in this question for the purpose of the evaluation means a MAREA activity, result or approach that has either been completed or taken over by a local, national or regional entity to continue in the future or one that would a small short-term additional investment from USAID or another entity to reach that point.

- USAID or Chemonics will provide monitoring data on indicators.
- USAID can provide the documentation listed in Section Has data sources for this evaluation.

Consulting stakeholders

- Key Informant Interviews, Group Interviews, Focus Groups, Short Surveys. The Evaluator will interview people, through informant interviews, group interviews, surveys and/or focus groups, from the institutions listed below, as well as any from others deemed relevant to this evaluation. The Evaluator will ensure access to both men and women to participate in the stakeholder consultation processes. In addition, the Evaluator will ensure a good mix of types of institutions, participants and beneficiaries. USAID/ECAM will provide the list of contact information to facilitate selection once the contract is awarded. The selection methodology should be recorded in the Evaluation Plan. The Evaluator may propose additional contacts.

List of contacts:

1. USAID/ECAM (including Contracting Officer Representative)
2. Chemonics
3. The Sea Turtle Conservancy (STC)
4. Solimar International; Sustainable Tourism
5. The Nature Conservancy (TNC)
6. Wildlife Conservation Society (WCS)
7. World Wildlife Fund (WWF)
8. General Secretariat of the Central American Commission for Environment and Development (CCAD)
9. Central American Integration System (SO-SICA)
10. lNational Oceanic and Atmospheric Administration (NOAA)
11. Organization of Fishing and Aquaculture in Central America; (OSPESCA)
12. The Regional Center for Micro, Small and Medium Businesses (CENPROMYPE)
13. The GEF Small Grants Programme with the United Nations (particularly in Honduras, Nicaragua and Panama)
14. Private sector partners involved in the Program
15. Local and national governmental entities related to Program Implementation
16. Ministries of Agriculture/Fisheries in Central America
17. Ministries of Environment in Central America
18. Ministry of Tourism in Honduras
19. People directly involved in Program implementation in local communities
20. USAID Mission offices in Guatemala, Honduras and/or Nicaragua

Specific interview, survey and/or focus group questions will be prepared in advance and finalized with approval from USAID/ ECAM; the questions should be suggested by the Evaluator with the specific purpose of answering the evaluation questions listed in this Statement of Work and must be limited in number. A sampling plan for who is selected for interviews, and their sex, must be developed and summarized in the Evaluation Plan and Final Evaluation Report, whether purposeful sampling, random or a combination of approaches is used for selecting institutions and beneficiaries to respond.

Site visits to at least two of the four participating coastal communities:

- Gulf of Honduras (Belize, Guatemala, Honduras)
- Mosquito Coast (Honduras, Nicaragua)
- Cahuita-Bocas del Toro (Costa Rica, Panama), and
- Gulf of Fonseca (El Salvador, Honduras, Nicaragua).

USAID recommends that the evaluation team focus its data collection in the field at two implementation sites to review the listed activities that were carried out there since they composed a majority of Program focus and activities:

1. Gulf of Fonseca (from Jiquilisco Bay, El Salvador to Padre Ramos, Nicaragua)- best fisheries management through a market-based approach, sea turtle conservation and improved livelihoods, mangrove cockle management and rights based management.
2. Mosquito Coast (Honduras and Nicaragua)- transformation of current spiny lobster fishery to a sustainable fishery including economic alternatives and labor issues and National Geographic ecotourism platform and protected area management in the Honduran Bay Islands.

- Team planning meetings
    - An initial team planning meeting will be held between USAID/ECAM and the Evaluator before the evaluation begins so that USAID can clarify any questions from the Evaluators, expectations and guidelines. The expected result of this meeting is to:
        - Clarify each team member's role and responsibilities
        - Confirm the anticipated timeline and deliverables
        - Discuss data collection tools and methodologies by evaluation question to be presented in the Evaluation Plan
        - Identify communications logistics and how the Evaluator, USAID/ECAM and the Contractor will communicate with each other
    - A second team planning meeting will be held among USAID/ECAM, the Evaluator and Chemonics in El Salvador before the evaluation begins so that the Evaluator can clarify the evaluation methodology and initiate contact with the Contractor.

MAREA was designed to focus on coastal and marine biodiversity, specifically. However, for purposes of the evaluation, the evaluation team may consider other key areas related to biodiversity and natural resource management, for example, inland river management or others. In addition, the design differentiated market-based and rights-based approaches for implementation; as such, the evaluation must differentiate between these approaches when answering the evaluation questions, when applicable and possible.

The analysis of the data collected is just as important as the actual collection. The Evaluator must triangulate data collected in order to have sound evidence for the findings and conclusions in the final evaluation report based on the data presented. In both the Evaluation Plan and the Final Report, the Evaluator should list any biases or limitations that exist for both data collection and analysis. In addition, all real or possible conflicts of interest must be disclosed by each member of the evaluation team in writing (Disclosure of Conflict of interest Form).

All data must be disaggregated and analyzed by sex. All data reported by Chemonics for its indicator reports is sex disaggregated. All data analyzed in response to the evaluation questions must be disaggregated by geographic location for the coastal communities visited and included in the evaluation data collection.

E. Deliverables

The contractor shall submit the following deliverables:

1. Timeline and/or Milestone Plan in Word or Excel to be finalized after the Team Planning Meetings no later than 14 calendar days after the award.

2. An Evaluation Design and Work Plan in Word with the suggested methodology per evaluation question, sampling plan and limitations to be finalized after the Team Planning Meetings no later than 14 calendar days after the award.

3. Weekly bullet reports of activities in Word, particularly for Weeks 1-9 (7 to 63 calendar days after the award), due every Monday by the close of business.

4. A Validation workshop held with the Project's main stakeholders before the evaluation team leaves each country in approximately 28 and 35 calendar days after the award.

5. Document review matrix in Word or Excel (see format above) to be completed no later than 49 calendar days after the award.

6. A draft of the Final Report for review due no later than 49 calendar days after the award. USAID/ECAM will provide comments within one week. The draft report should be submitted in English. It should include an Executive Summary no longer than 4 pages, stating the methodologies, limitations, findings, conclusions, and recommendations of the evaluation. (The final Executive Summary will be presented in both English and Spanish with the Final Reports.)

7. A Final Report in Word and PDF, in the USAID Evaluation Report format provided by USAID/ECAM, no longer than 35 pages excluding annexes, identifying methodologies, limitations, findings, conclusions, and recommendations. The Final Report should be presented in English and Spanish and have incorporated USAID's comments, as appropriate. USAID/ECAM and/or the Contractor may attach a Statement of Differences as an annex to the Final Report if any differences remain in the final version. The Evaluator should tum in two copies in print in each language and 1 copy in electronic version with both languages (DVD or flash drive). The Final Report will be due to USAID/ECAM one week after the Evaluator receives comments on the draft and no later than 63 calendar days after the award. USAID/ECAM will review and then approve the Final Report if comments have been incorporated satisfactorily.

8. Any raw data (qualitative or quantitative) collected in electronic form (DVD or flash drive, in original format of Word, Excel, etc.) due no later than 63 calendar days after the award.

9. A Final Presentation with Powerpoint slides to USAID and Chemonics as the Final Report is being finalized no later than 63 calendar days after the award. Only the Team Leader needs to be present for the Final Presentation; however, local/regional evaluation team members may also attend.

13. Other deliverables as identified during the Team Meeting and agreed to by USAID and the contractor.

All reports and papers will be considered draft versions until they are approved by USAID/ECAM.

APPENDIX 3 – EVALUATION DESIGN AND METHODS

(Source: USAID/Central America Regional Program for The Management of Aquatic Resources and Economic Alternatives (MAREA) Final Performance Evaluation Methodology and Work Plan, revised October 1, 2014)

Note: not all of these methods were pursued as per the original plan, as this set of methods preceded receipt from USAID of program documents that described MAREA's activities in depth, who were the key stakeholders, and benchmarks.

Evaluation Question	Type of Answer/ Evidence Required	Data Collection Methods	Data Sources	Sampling/ Selection	Data Analysis Methods
1. Quality of design: To what extent did MAREA's design and resources help or hinder the Program's ability to achieve its objectives and measurable results within the proposed scope and established time-frame?	Was $1 million leveraged to co-finance productive project proposals from sustainable fisheries, sustainable tourism and arts and crafts in alliance and coordination with other financial institutions and the private sector?	Document review; Interviews with partners (KIIs); Field interviews and Focus Group Discussions (FGDs)	MAREA budget, resource levels from other (including leveraged) inputs. Sources of leveraged income. Ministry and regional budgets; KII responses, and others to be determined	This will be investigated based on USAID documents for all activities in each country and regionally; Identification of key enabling factors and perceptions	Synthesis of qualitative information, comparing expectations against resource allocations; Comparison of design features with alternatives; Determine attribution of leveraging from nongovernmental groups
2. Validity of assumptions: To what extent did the assumptions identified by USAID hold true during implementation, influencing the achievement (or non-achievement) of MAREA's objectives, and should be considered for potential future programming?	Were local and national governments willing to effect reform of rights-based mechanisms? Did Ministries of Ag and Environment support the program & its goals? Achievements and results attributable to project mechanism and design	Document review; Interviews with partners (KIIs); Field interviews & FGDs; Comparison of targets with results, with respect to leveraged funds	USAID, implementing agencies, local partner organizations. USAID strategic plans, project plans; amendments, and M&E Plan, and others to be determined	KIIs selected among project staff, local and national stakeholders and independent experts in each area of activity, seeking diversity to cross-check one another	Narrative of program development supported by timeline of key events, deliverables and other milestones; Qualitative description with some tabulation for frequency of how case studies were used and under what circumstances
3. Implementation challenges: What implementation challenges did MAREA face at each level of the	Compilation of project reports and special studies; key informant interviews	Document review; Interviews with partners (KIIs); Field interviews & discussions with project participants at 4 Program field sites	Program documents, SOW, TORs, Chemonics proposal, revised TOR, USAID revised assumptions. KIIs	Focus groups and KIIs selected to capture range of opinion from implementers, partners, donors, Ministries, pan-regional bodies	Qualitative description taking into account scale of activities (local, regional) and the distinct stakeholder and gatekeeper

Evaluation Question	Type of Answer/ Evidence Required	Data Collection Methods	Data Sources	Sampling/ Selection	Data Analysis Methods
Program (regional, national, local and transnational)?		and direct observation	from implementing staff, associated stakeholders and gatekeepers, and others to be determined		entities at community, national, trans-boundary, oceanic and Central American scales
3A. What independent political trends influenced performance?	Degree of program effectiveness determined by unforeseen, external factors out of USAID control	Cross check results from KIIs; Document review	KIIs, broad literature review, and others to be determined	Per country and regionally	Synthesis to understand inter-governmental changes in cooperation and outside influence
4. Results: What activities and methodologies have the potential to be sustainable by the end of MAREA? *Which activities showed the fewest results and should be discontinued or approached differently*? Explain why. *What tangible, sustainable benefits have resulted from MAREA?*	Change in target biodiversity levels; and accessibility and use of marine resources by dependent coastal human populations. Systematic data on biodiversity in the targeted areas & changes in biodiversity. Based on evidence from USAID documents and from interview information. Also based on evidence about reduced threats to biodiversity	Document review; Interviews with partners (KIIs); Field interviews & discussions with project participants at 4 Program field sites	Compilation of project reports and special studies, M&E Plan & evaluations Inputs from contacts provided by USAID and Chemonics, and others to be determined	Evidence should be available from USAID documents and field discussions. If systematic data on biodiversity (and changes in biodiversity) are available from other sources, they will be used	Analysis of attribution (i.e., project role in intended change)
4A. Turtle population	At least 1.5 million sea turtle hatchlings protected using alliances and best practices	Distill from databases local populations around program sites. KIIs and FGDs; direct observation	Ministries, STC, TNC, WCS, CCAD, WWF, CI, IUCN, GEF, SWOT, NMFS, FWS, Dutch Caribbean Nature Alliance, and others to be determined	Comparison of global and regional databases	Consider progress against long-term goals in determining conclusions
4B. Lobster population	Increased by at least 20% in two select sites, while a decrease of juvenile hatchlings harvested by 164,000	Distill from databases local populations around program sites. KIIs and FGDs; direct observation	Ministries, TNC, UNDP, CME, Monterey Bay Aquarium, Reeflink Database (EPA), Spiny Lobster Init., PRONEGOCIOS, and others to be determined	Comparison of global and regional databases	Gauge MAREA's contribution to knowledge about lobster demographics

Evaluation Question	Type of Answer/ Evidence Required	Data Collection Methods	Data Sources	Sampling/ Selection	Data Analysis Methods
4C. Enforcement regimes strengthened	At least 25% of fishing products sold of target species harvested under rights-based regimes & best fisheries practices	Distill from databases local populations around program sites. KIIs and FGDs; direct observation	Government policies, regional regulatory mechanisms. KIIs and FGDs about compliance and enforcement, and others to be determined	KIIs with stakeholders at each level. Discussions with local cooperatives and societies	Analyze which enforcement mechanisms have seemed to be effective
4D. National policies harmonized across region	Are policies promoting conservation and sustainable usage more harmonized now than before?	KIIs with key USAID, project implementer, and Mission staff; relevant national government agencies	CCAD; General Secretariat of the Central American Integration System; GEF; USAID/ECAM, and others to be determined	KIIs with stakeholders at each level. Discussions with local cooperatives and societies	Narrative review and interpretation against annual timeframes
4E. Fishers trained	Changes in beneficiary skills, knowledge, and productivity	FGDs; Household surveys; direct observation	Project and thematic reports; key informants; survey of training participants. CENPROMYPE, and others to be determined	Random sampling of target beneficiaries at 2 Program field sites	Calculation of change in knowledge and awareness among targeted audiences
4F. Fishing regimes affected	Have significant changes in usage regimes occurred and how many people affected? At least 900 disabled scuba fisherman trained in new skills	KIIs; Community FGDs; Short Survey; direct observation	CENPROMYPE, and others to be determined	By species, and / or by coastal communities with MAREA activities	Sifting evidence of any attribution
5. Future biodiversity investment: Based on USAID's experience with the Central American Commission for Environment and Development (CCAD), CCAW and MAREA, as well as current regional biodiversity challenges, where should USAID invest biodiversity funding in the	How can USAID get best value for money in protecting marine biodiversity, using tourism, managed fishing and government policies? What options are most feasible for reviving threatened species and preserving marshlands, mangroves, and coral?	Document review Interviews with partners (KIIs) Field interviews & discussions with project participants at 4 Program field sites and direct observation	Inter-regional laws, regulations, treaties, policies. CCAD and CCAW policies compared, and others to be determined	Per advice of experts in each country.	Comparison of evaluation results against emerging issues in the region, including, for example, role of China, Nicaragua Canal, new Climate Change threats, markets for fish catch, ocean circulations, ocean acidification, coral bleaching

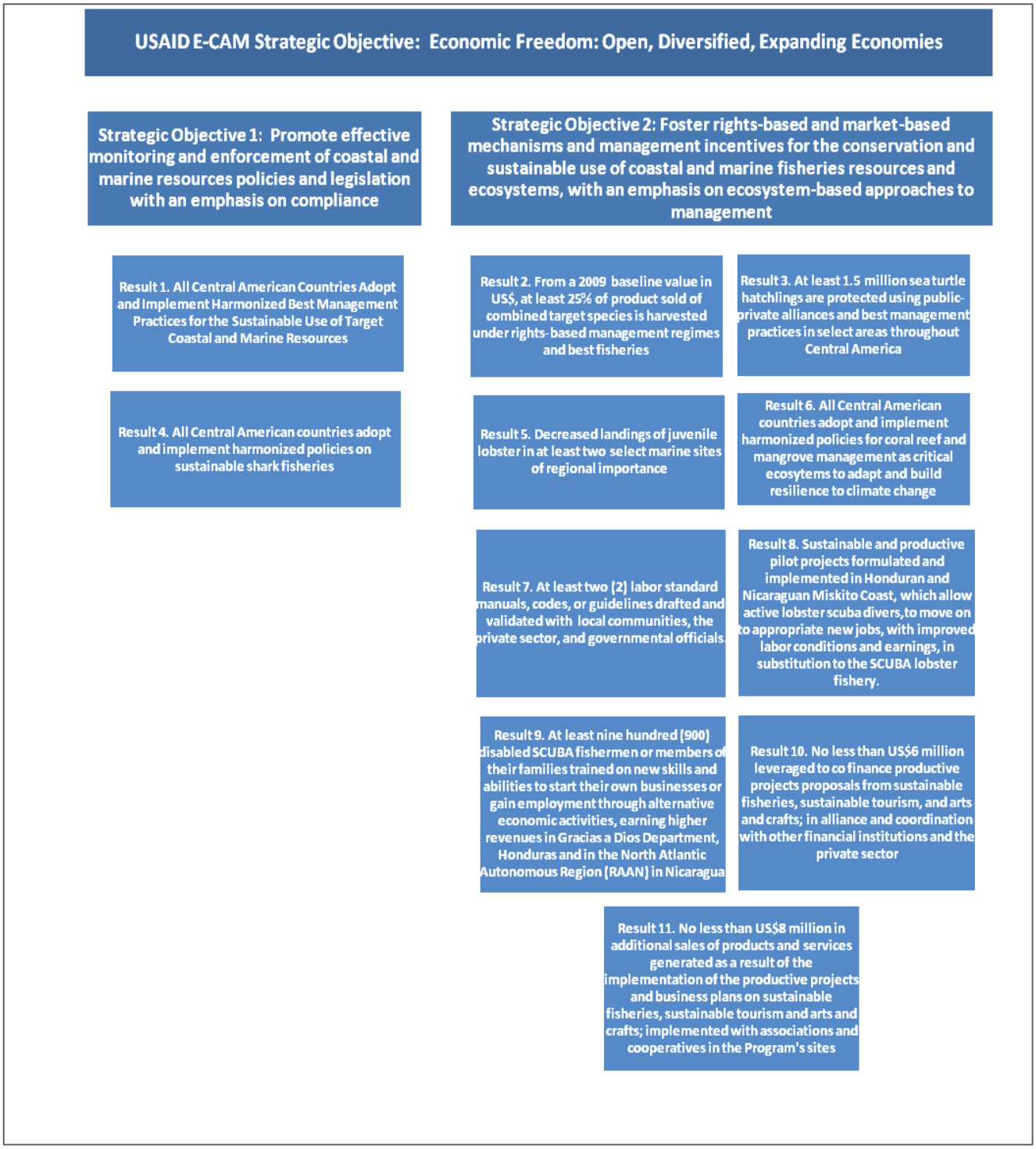
Evaluation Question	Type of Answer/ Evidence Required	Data Collection Methods	Data Sources	Sampling/ Selection	Data Analysis Methods
future?					
6. Gender: How could MAREA have improved its integration of gender equality in the production, processing and marketing/sales phases of the fishery and coastal/marine value chain so as to maximize the impact of women in those areas?	Women's roles before and after, incomes before and after, decision making before and after	Document review Interviews with partners (KIIs) Field interviews & discussions with project participants at 4 Program field sites and direct observation Review of program design and implementation (including partner patterns of community engagement)	M&E Plan, USAID monitoring, stakeholder FGDs, KIIs; community user groups (Program activities), and others to be determined	Minimum of 30 women asked in each project site visited	Lessons and recommendations about gender inclusion in regional, national and local technical interventions and barrier analysis that elucidates limits to female engagement
6A. Balanced and appropriate engagement of women in skills training and market regime outreach	Extent to which women are targeted by or participating in project activities. Differences in impacts between men and women; gender	Surveys and observations about factors associated with women's involvement with markets, incentives, rights, and legal use regimes	Focus group discussions, household surveys at coastal community level	FGDs by fishing cooperative, by location, by catch, comparing intervention vs. non-intervention populations	Comparison of program results in light of USAID policies and program goals
6B. Gender equality in program plans and stakeholder inputs to key decisions taken	Women have balanced voice with men in program design and unfolding	Compilation of relevant reports; key informant interviews with gender specialists; survey of training participants; compilation of existing survey results relating to knowledge management outreach impacts	Program documents and KIIs, and others to be determined	Raise issue in all KIIs.	Content analysis of reports, as carried out wherever possible
6C. Gender captured in M&E Plan indicators	Disaggregated data from reports, data collection	M&E Plan	Chemonics, USAID	Comprehensive look at all performance management metrics	Content analysis of reports
6D. Broad recommendations	Options for USAID action for coastal resource management in Central America in short and medium term future	All the above, plus recommendations articulated in the course of interviews (KIIs)	Culled from KIIs, experts, and officials. Documentation	At local level: FGDs, at national level, KIIs. At regional level, USAID, intergovernmental agencies	Synthesis after weighting feasibility of suggestions. Original distillation by team

APPENDIX 4 – MAREA EXPENDITURES BY COUNTRY

Total expenditures of MAREA over life of project, as captured through August, 2014.

County	Amount Spent
El Salvador	$3,871,880
Guatemala	$779,810
Nicaragua	$1,601,974
Costa Rica	$750,061
Belize	$1,275,871
Panama	$1,508,156
Honduras	$2,687,169
TOTAL	**$12,474,921**

APPENDIX 5 – MAREA'S RESULTS FRAMEWORK



APPENDIX 6 – DATA COLLECTION TOOLS AND SURVEY PROTOCOL

Data Collection Form – Documents

Team Member(s) Collecting Data:
Date:
Document Reference:

Evaluation Questions

EQ4

1. What type of achievements of MAREA can be identified?
2. What quantity of achievements can be identified?
3. What is the quality of the achievements that can be observed?
4. Do the results appear to be sustainable? Does it appear that they can be scaled-up?

EQ3

5. What problems with the implementation of MAREA activities appear to have been encountered?
6. How does it appear that these problems were addressed?
7. Does it appear that the problems were successfully resolved?

EQ2

8. What assumptions would have to be valid for MAREA activities at this site to be successful?
9. What biological characteristics at this site would have to be considered to be successful?

EQ6

10. Can roles for women be identified at this site?
11. Do the activities observed at this site appear to have benefited women in particular?

EQ1

12. Is there some aspect of the site that would have to be considered to achieve success?

EQ5

13. Would this be an activity that USAID could usefully finance in the future? Why?
14. Would this be an appropriate location for future USAID activities?

Data Collection Form – Field Observations

Team Member(s) Collecting Data:
Date:
County:
Location:
Category of MAREA Activity:
Field Observation Number:

Background Questions

1. What did MAREA implement at this field site?

2. When did MAREA implement activities at this field site?

3. Who or what group participated in MAREA activities at this field site?

Evaluation Questions

EQ4

4. What type of achievements of MAREA can be identified?

5. What quantity of achievements can be identified?

6. What is the quality of the achievements that can be observed?

7. Do the results appear to be sustainable? Does it appear that they can be scaled-up?

EQ3

8. What problems with the implementation of MAREA activities appear to have been encountered?

9. How does it appear that these problems were addressed?

10. Does it appear that the problems were successfully resolved?

EQ2

11. What assumptions would have to be valid for MAREA activities at this site to be successful?

12. What biological characteristics at this site would have to be considered to be successful?

EQ6

13. Can roles for women be identified at this site?

14. Do the activities observed at this site appear to have benefited women in particular?

EQ1

15. Is there some aspect of the site that would have to be considered to achieve success?

EQ5

16. Would this be an activity that USAID could usefully finance in the future? Why?

17. Would this be an appropriate location for future USAID activities?

Data Collection Form – Focus Groups

Names/Organizations/Telephones/emails of Participants (attached)
Team Member(s) Collecting Data:
Date:
County:
Location:
Focus Group Number:

Purpose of the Focus Group Discussions: Muchas gracias por darnos su tiempo. Estamos haciendo una evaluación del Proyecto MAREA con el propósito de identificar qué resultados y beneficios este proyecto ha logrado. Con la información que recogemos vamos a hacer recomendaciones a USAID para mejorar las actividades que implemente relacionadas al manejo y conservación de los recursos marinos-costeros. Para este propósito sus opiniones y experiencias relacionadas a MAREA sería para nosotros de mucha utilidad. Hemos formulado las preguntas siguientes y vamos a escribir sus comentarios y opiniones cuidadosamente. Cualquier comentario será tratado en forma de absoluta confidencialidad.

Background Questions:

1. ¿Qué actividades suyas tiene que ver con los recursos marinos y costeros?
2. ¿Cuáles son los problemas principales para lograr la conservación de estos recursos?
3. ¿Uds. han participado en alguna manera en el proyecto MAREA?

Evaluation Questions

EQ4

4. ¿Qué beneficios ha logrado MAREA?
5. ¿Cree que estos beneficios van a durar? ¿Por qué?
6. ¿Cuánto y cómo se sabe del estado biológico del recurso marino?
7. ¿Qué actividades de MAREA no ha dado resultados? ¿Por qué?

EQ3

8. ¿Qué problemas fueron encontrados al ejecutar las actividades de MAREA?
9. ¿Cómo podría evitar o resolver estos problemas?

EQ2

10. ¿Había factores que Ud. cree que MAREA no ha tomado en cuenta?
11. ¿Qué características biológicas debe tomarse en cuenta en el manejo del recurso marino-costero?

EQ6

12. ¿Cuáles fueron los roles de mujeres en las actividades de MAREA? ¿Han participado?
13. ¿Las actividades de MAREA han apoyado a las mujeres? ¿En qué manera?

EQ1

14. ¿MAREA ha funcionado en una manera que permita lograr resultados importantes?
15. ¿Habría cómo mejorar su manera de llevar a cabo sus actividades?

EQ5

16. ¿Qué actividades debe USAID apoyar en el futuro? ¿Por qué?
17. ¿En cuáles lugares debe USAID concentrar su apoyo futuro? ¿Por qué?

Data Collection Form – Key Informant Interview

Name of Key Informant:
Organization:
Position:
Telephone:
Email:
Team Member(s) Collecting Data:
Date:
County:
Location:
Interview Number:
Background Questions

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EQ6

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13. ¿Las actividades de MAREA han apoyado a las mujeres? ¿En qué manera?

EQ1

14. ¿MAREA ha funcionado en una manera que permita lograr resultados importantes?
15. ¿Habría cómo mejorar su manera de llevar a cabo sus actividades?

EQ5

16. ¿Qué actividades debe USAID apoyar en el futuro? ¿Por qué?
17. ¿En cuáles lugares debe USAID concentrar su apoyo futuro? ¿Por qué?

Local Survey Protocol

USAID está llevando a cabo la evaluación final del Programa Regional para el Manejo de los Recursos Acuáticos Alternativas Económicas (MAREA). La evaluación tiene el propósito de analizar el diseño original del programa, identificar y analizar retos al nivel local, nacional y regional e identificar recomendaciones para proyectos futuros. El propósito de esta encuesta es recolectar datos de campo para complementar esta evaluación. La información entregada por Ud. será completamente confidencial. Muchas gracias.

PERFIL DEL ENCUESTADOR

1. Debe tener conocimiento del entorno local.
2. Son responsables de su rendimiento y sus productos. Son responsables de la presentación clara, precisa y justa, de manera escrita, de las respuestas a las preguntas del cuestionario.
3. Debe presentar información detallada, completa y justa de cada pregunta del cuestionario, para que las decisiones o medidas que se tomen con esta información tengan un buen fundamento.
4. Deben proteger el anonimato y la confidencialidad de los informantes individuales. Deben minimizar las demandas de tiempo, y respetar el derecho de las personas de no participar. Los encuestadores deben respetar el derecho de las personas a suministrar información de forma confidencial y deben garantizar que la información confidencial no pueda rastrearse hasta su fuente.
5. Deben ser sensibles a las creencias, maneras y costumbres, y actuar con integridad y honestidad en las relaciones con todos los interesados. Deben ser sensibles a las cuestiones de discriminación e igualdad de género, y abordar tales cuestiones. Deben evitar ofender la dignidad y autoestima de aquellas personas con las que están en contacto en el transcurso de las entrevistas. Gracias a que saben que las respuestas de los beneficiarios podría afectar negativamente los intereses de otros, los encuestadores deben realizarlas y comunicar el propósito de manera que respete claramente la dignidad y el valor propio de los interesados.
6. Deben ser prudentes en el uso de los recursos de la evaluación.
7. El **mismo día** que realizan las entrevistas deben: i) digitar las respuestas por entrevistado, en el programa que se les indique, para ser verificadas en línea. ii) escanear y enviar las encuestas originales.

GUÍA PARA EL LLENADO DE LAS PREGUNTAS

1. Escribir su nombre y fecha de la entrevista.
2. Nombre completo del entrevistado.
3. Lugar donde se lleva a cabo la entrevista con detalle de caserío, área, región, provincia y país.
4. Número de personas que viven en la misma casa.
5. Número de miembros de la familia que trabajan con el entrevistado.
6. Pueden ser respuestas múltiples, ya que se pueden dedicar a varias actividades.
7. Pueden ser respuestas múltiples, ya que se pueden desempeñar a varios niveles de actividad.
8. Nombre completo de la organización y a qué se dedica dicha organización.
9. Especificar cuántos días se dedica a la actividad y marcar con X si el dato brindado es por semana o mes.
10. Responder si las actividades a las que se dedica actualmente (preguntas 6 y 7) son las mismas a las que se dedicaba anteriormente o ha cambiado de actividad.
11. Año en que cambió a la actividad actual.
12. Se refiere a que si ha recibido alguna ayuda directa del Proyecto MAREA.
13. Se refiere a si ha habido cambios en los últimos 3 años.
14. Se refiere a que se sus prácticas de manejo han cambiado debido a las ayudas de MAREA (preguntas 12 y 13).
15. Se refiere a que si los cambios han traído mejoras para ellos o su entorno.

16. Se refiere a problemas que han encontrado para realizar las mejores prácticas.
17. Se refiere a que si sus ingresos se han incrementado debido a la adopción de las mejores prácticas descritas anteriormente y a la ayuda brindada por el proyecto MAREA.
18. Es una estimación de cómo se han incrementado los ingresos, no debe ser un dato exacto, pero sí insistir en estimarlo (también especificar si más bien se ha disminuido su ingreso).
19. Se refiere a qué actividades un nuevo proyecto podría apoyar con el fin de apoyar en la conservación de la biodiversidad (especialmente marina y costera). Podrían también incluirse actividades que los beneficie directa o indirectamente y que redunden en lograr el objetivo de conservación de la biodiversidad.

Local Survey Instrument

ENCUESTA PROYECTO MAREA

Entrevistador _____ Fecha_____
Lugar_____

Nombre_____
Cooperativa_____

1. ¿Cuántos años ha vivido en este lugar?

a) Menos de 1 año b) 5 a 10 años c) 10 a 30 años d) todo la vida

2. ¿Cuántos son los miembros de familia que viven con Ud? _____

3. ¿Cuántos de estos tienen un ingreso? _____

4. ¿Cuántos miembros de su familia trabajan con usted? _____

5. ¿A cuál(es) actividad(es) se dedica Ud. ahora?

a) Pesca de pargos/ meros/tiburón/langosta/conchas/caracoles b) Agricultura c) Jornalero

d) Artesanal e) Profesional f) Manufactura g) Construcción h) Otra ¬¬¬¬¬¬¬¬¬ _____

6. ¿A cuál(es) actividad(es) se dedicaba Ud. antes?

a) Pesca de pargos/ meros/tiburón/langosta/conchas/caracoles b) Agricultura c) Jornalero

d) Artesanal e) Profesional f) Manufactura g) Construcción h) Otra _____

7. ¿A qué nivele(s) de la(s) actividad(es) se encuentra?

a) Dueño de barco b) Capitán c) Pescador bajo el mando del capitán

d) Procesamiento e) Comercialización j) Otra _____

8. ¿Cuántas semanas al mes se dedica a esta(s) actividad(es)?

a) 1 b) 2 c) 3 d) 4

9. ¿Durante cuántos años se ha dedicaba a esta actividad?

a) Menos de 1 año b) 1 a 5 años c) más de 5 años

10. ¿Ha cambiado su actividad en los últimos dos años?

a) Sí b) No

11. Si su respuesta es afirmativa, ¿por qué cambió de actividad?
a) Para ganar más b) Ya no había el trabajo c) No le gustó el trabajo d) Se enfermó
12. ¿Desde hace cuánto tiempo trabaja en la nueva actividad?
a) Menos de 1 año b) 1 a 5 años c) más de 5 años
13. ¿Ha recibido alguna ayuda directa de MAREA?
a) Sí b) No
14. Si su respuesta es afirmativa, la ayuda de MAREA ha sido en:
a) Equipo b) Capacitación c) Asistencia técnica d) Financiamiento e) Otra _____
15. ¿Los mercados para su producto han cambiado en los últimos dos años?
a) Aumentado c) Disminuido c) Ningún cambio
16. ¿Las regulaciones para su producto han cambiado en los últimos dos años?
a) Aumentado c) Disminuido c) Ningún cambio
17. ¿Cree Ud. que MAREA ha influenciado en estos cambios?
a) Nada b) Poco c) Moderado d) Mucho
18. En su opinión, los cambios en las regulaciones son:
a) Innecesarios b) Necesarios c) Irrelevantes
19. ¿MAREA ha afectado la cantidad de su producción?
a) Ningún cambio b) Aumentado c) Disminuido
20. ¿MAREA ha afectado la calidad de su producción?:
a) Mejorar calidad b) Menor calidad c) Ninguno cambio
21. ¿De qué manera MAREA ha afectado sus prácticas?
a) Artes de pesca b) Zonas c) Profundidades d) Prácticas sanitarias e) Ninguna f) Otro _____
22. ¿Qué dificultades ha encontrado para efectuar estas mejores prácticas?
a) Equipo b) Capacitación c) Asistencia técnica d) Financiamiento e) Ninguno
23. ¿En los últimos dos años sus ingresos se han:
a) Reducido c) Mantenido c) Aumentado
24. En los últimos dos años sus costos se han:
a) Reducido c) Mantenido c) Aumentado
25. ¿Mujeres participan en esta actividad cómo?:
a) Dueña b) Capitán c) Trabajadora f) Procesadora g) Comercializadora h) Administradora i) Ninguna
26. Para participar más en la actividad las mujeres necesitan:
a) Equipo b) Capacitación c) Asistencia técnica d) Financiamiento e) Tiempo f) Otra_____
27. ¿Ud. tiene una manera de saber si la cantidad del recurso marino cambia?
a) Sí b) No. Si sí, cuál es la manera: _____
28. ¿Cuáles de los siguientes cree Ud. que se requiere para conservar los recursos marino-costeros?
a) Cambios en las prácticas b) Capacitación c) Cumplimiento de regulaciones d) Mejores ingresos f) Voluntad g) Otro _____

APPENDIX 7 – RESULTS, SUSTAINABILITY AND BENEFITS - ANALYTICAL TABLES

Table 1 Policies and Laws – Activities

Country	Policies and Laws Activities	
	Regional/Caribbean	**National/Pacific**
Belize	(1) Fisheries Act updated (2) Inter-Sectorial Agenda for Fisheries/Envir. (3) Guidelines research marine resources (4) Closed season Nassau grouper	None
Guatemala	(5) Closed season Nassau grouper (6) Inter-Sectorial Agenda for Fisheries/Envir. (7) National research strategy (8) Strategy for sea turtles (9) Regional Agenda for Fisheries/Envir (10) Regional research strategy marine resource.	None
El Salvador	(11) Fishing gears Gulf of Fonseca (12) Protocols damage La Union coast. Res. (13) Nat. policy for coastal resources (14) Inter-Sectorial fisheries/environ. Agenda (15) Coastal marine research strategy	(16) Conservation hawksbill turtle (17) Access rights cockles
Honduras	(18) Fisheries Act (19) Regional ban Nassau grouper fishing (20) Code of labor conduct Miskito fisheries (21) Protocol for damage to coastal resources	(22) Harmonize fishery management (23) Plan for cockles (24) Assessment of cockles harvesting (25) Assessment long line fishing (26) Protocol damage coastal resource
Nicaragua	(27) Management plan Cayos Miskitos (28) Lobster diving closure (29) Codes of labor conduct Miskito coast	(30) Regulation size cockle (31) Regulation fish size (32) Regulation mesh size (33) Agreement closed seasons
Costa Rica	(34) Inter-Sectorial agenda fisheries/envir. (35) National research strategy marine resource	None
Panama	(36) Management plan Damani Guanviara site (37) Regulations for fishing (38) Inter-Sectorial agenda for fisheries/environ (39) National research strategy	None

Source: compiled from MAREA Activity Summary Sheets by Country

Table 2 Policies and Laws - Performance Indicators

No	Statement of Performance Indicator	Quantitative (Planned Actual % of Planned)
1	Number of coastal and marine resources conservation and sustainable use policies and legislation drafted and presented	20 23 115%
2a	Number of coastal and marine resources law monitoring and enforcement strategies drafted	5 5 100%

No	Statement of Performance Indicator	Quantitative (Planned Actual % of Planned)
2b	Number of coastal and marine resources law monitoring and enforcement strategies implemented	No data
3	Number of countries implementing harmonized fisheries violation reporting system	3 3 100%
4	Number of people from fisheries and environment governmental and non-governmental institutions trained	1500 2,406 160%
5	Number of regional mechanisms implemented to foster research, providing peer reviewed information to sustainably manage coastal and marine resources	1 2 200%
6	Number of technical/scientific articles on marine and coastal resource management developed with program support	30 51 170%
8a	Number of countries adopting harmonized policies or best practices in sustainable shark fisheries	6 6 100%
8b	Indicator 8. Number of countries implementing harmonized policies and best practices in sustainable shark fisheries	Same as 8a
14a	Number of policies for coral reef and mangrove management to adapt and build resilience to climate change drafted, adopted	10 14 140%
14b	Number of policies for coral reef and mangrove management to adapt and build resilience to climate implemented	No data

Source: compiled from MAREA M&E Plan and MAREA FY 2014 Draft Annual Report

Table 3 Fishing - Activities

Country	Fishing Activities	
	Regional/Caribbean	**National/Pacific**
Belize	Training on access rights Implement Nassau grouper plan Licensing under access right mechanisms Quota system for spiny lobster Assessment of fishing in PHMR	Queen conch management plan Nassau grouper management plan Data base for artisanal fishery Promoting access right mechanism for artisanal fisheries in PHMR No-take zones in PHMR
Guatemala	None	Workshop on access rights Implement Nassau grouper plan
El Salvador	Management plan for mangrove cockle Workshop in best practices/access rights	Implement mangrove cockle plan
Honduras	Artisan lobster fishing for retired divers Queen conch management plan Grouper artisanal fishing Robalo sustainable fishing Access rights in Cayo Cochinos Traceability system for lobster	Harmonization fishing management Plan for mangrove cockles Assessment of mangrove cockles Assessment of long lines fishing
Nicaragua	Management plan for lobster Workshop on access rights Fin fish diversification	Regulation catch size (shrimp/fish) Regulation mesh size Plan for cockles

Country	Fishing Activities	
	Regional/Caribbean	**National/Pacific**
	Suripera nets for shrimp Medusa fishing[3]	Harmonization fishing gear Protocols for damage to coast
Costa Rica	Gill nets for lobster fishing	None
Panama	Promote lobster fishing with traps Promote *suripera* nets for shrimp	None

Source: compiled from MAREA Activity Summary Sheets by Country

Table 4 Fishing – Performance Indicators

No	Performance Indicator Statement	Quantitative (Planned Actual % of Planned)
9	Number of artisan & industrial fisherpersons trained about best fisheries practices, with emphasis on rights- and/or market-based mechanisms	5,000 6,984 140%
10a	Number of Individual Transferable Quotas (ITQs), catch-shares, or rights-based mechanisms established for strengthened best fisheries practices on target species	10 12 120%
10b	Number of Individual Transferable Quotas (ITQs), catch-shares, or rights-based mechanisms implemented for strengthened best fisheries practices on target species	unknown
11	Percentage of total harvest of target species under rights-based Mechanisms	25% 39% 157%
13	Percent decrease in the volume of juvenile lobsters harvested as the result of program interventions at two program sites	164,102 201,650 123%

Source: compiled from MAREA M&E Plan and MAREA FY 2014 Draft Annual Report

Table 5 Economic Alternatives - Activities

Country	Economic Alternatives Activities	
	Regional/Caribbean	**National/Pacific**
Belize	None	Strengthen Placencia Prod. Coop Pig prod. Sarteneja Fish. Ass. Track lobster sales Glover's Reef
Guatemala	Strengthen fishermen Ass. Barra Sarstun Training production practices	None
El Salvador	Legal gears Gulf of Fonseca Sale from responsible fishing	Business plans ACOPACIFICO, Bocana Lempa Link ASPESCU w Walmart Scientific tourism
Honduras	Online marketing platform Management practices w. National Geogr. Fishing practices in Karataska lagoon Sea bass fishing for retired scuba divers	Tourism with ridley turtle Improved fishing practices Strengthen Coyolito fish center Training in processing fish

[3] The evaluation team visited jellyfish which had landed on beaches and the KAUMA plant where they were being processed where jellyfish were identified for potential export to China, though MAREA had said that the target market as Japan.

Country	Economic Alternatives Activities	
	Regional/Caribbean	**National/Pacific**
	Shrimp for retired lobster divers Boat manufacturing retired lobster divers Strengthen fishing cooperatives	
Nicaragua	Lobster traps Conversion of Copescharly lobster fleets Improve cold chain Wawa Bar & Krukira Foster artisanal-commerce link	Cockle cocktails El Rosario Commercial links/best practices
Costa Rica	Handmade traps artisanal lobster fishing Artisanal suriperas for shrimp nets Commercial links	None
Panama	Fish culture in cages Geoturism platform Turtle tourism Artisanal shrimp suriperas	None

Source: compiled from MAREA Activity Summary Sheets by Country

Table 6 Economic Alternatives – Performance Indicators

No	Performance Indicator Statement	Quantitative (Planned Actual % of Planned)
16	Number of labor standards, manuals, codes, or guidelines drafted and validated with local communities, the private sector, and governmental officials in the Miskito Coast of Honduras and Nicaragua	2 2 100%
17	Number of households benefitting from productive pilot projects in the Miskito Coast of Honduras and Nicaragua	1,250 1,780 142%
18	Number of disabled fishermen or household members of disabled fishermen in the Miskito Coast trained in business or productive skill	900 1,512 168%
19	Value (in USD) of non-US government funds leveraged to co-finance conservation efforts or productive projects in sustainable fisheries, sustainable tourism, and arts and crafts	6,000,000 8,369,420 139%
20	Value (in USD) of additional sales of products or services that can be directly attributed to the activity interventions and which support conservation and/or sustainable use efforts	8,000,000 9,999,762 125%

Source: compiled from MAREA M&E Plan and MAREA FY 2014 Draft Annual Report

Table 7 Species and Ecosystems - Activities

Country	Species and Ecosystems Activities	
	Regional/Caribbean	**Pacific/Gulfs**
Belize	Adaptation plan for climate change Vulnerability analysis for climate change	Adaptation plan for climate change No take zones in PHMR
Guatemala	Assessment marine turtles Climate Change (CC) plans Sarstun, Punta de Manabique Vulnerability analysis Gulf Honduras Adaptation strategy Gulf Honduras	None

	Nassau grouper management plan Queen Conch management plan CC adaptation plan	
El Salvador	Management plan cockle G Fonseca Conservation plan hawksbill turtle Conservation hawksbill turtle	Conservation hawksbill turtle
Honduras	CC adaptation plan CC adaptation plan national authorities Management PA: Bay Island, Cayos Cochinos Cayos Cochinos Management Plan Co-management Bay Islands fishermen Marine turtles strategy	National Turtle Strategy Recovery plan hawksbill turtle
Nicaragua	Management plan Cayos Miskitos Critical habitat lobster	Mangrove restoration Communication sharks
Costa Rica	89,437 turtle hatchlings released	None
Panama	1.3 million turtle hatchlings released Comange. Mech. Damani Guariviara Ngobe-Bugle turtle management plan	None

Source: compiled from MAREA Activity Summary Sheets by Country

Table 8 Species and Ecosystems – Performance Indicators

#	Performance Indicator Statement	Quantitative (Planned Actual % of Planned)
7a	Number of plans drafted or updated for management of target species	5 8 160%
7b	Number of plans implemented for management of target species	No data
12	Number of sea turtle hatchlings protected and released	1,500,000 1,606,565 107%

Table 9 Communications - Activities

Country	Communication Activities	
	Regional/Caribbean	Gulf
Belize	None	Awareness shark fisheries
Guatemala	None	Awareness seafood Izabal
El Salvador	Awareness shark fisheries	Diffusion cockle plan Diffusion local plan oysters
Honduras	Awareness shark fisheries	Diffusion cockle plan Diffusion hawksbill proposal
Nicaragua	Diffusion plan, N. grouper, conch, lobster	Campaign fisheries measures Gulf of Fonseca (GOF) Diffusion fishing gear GOF
Costa Rica	Tourism conduct turtle beaches	None
Panama	Tourist conduct Isla Bastimentos designed Tourism conduct codes turtle beaches Awareness seafood consumption Awareness National Geographic Geo-tourism Workshops tour guides & craftsmen	None

Source: compiled from MAREA Activity Summary Sheets by Country

APPENDIX 8 – TOOL TO ANALYZE MAREA's ASSUMPTIONS

Assumption	Held true	Influ-ence	Future Program	Comments
1. Absence of an unstable socio-political environment such as armed or violent regional and/or local conflicts	Partially	Yes	Yes	There has been an unstable socio-political environment, associated largely with illegal migration, drug trafficking and criminal gangs in all or some of several of the Central American countries. Lobster divers use marijuana to dampen pain from the bends and Pt. Lempira is a center for drug trafficking. Drugs are transported from Guatemala through Belize coastal waters.
2. Generally stable fiscal and monetary policies and macro-economic environments	Partially	No	Yes	Prices for seafood vary considerably and unpredictably affecting the profit margin of enterprises based on the capture, processing and export of sea food.
3. Willingness of local and national governments to effect change and reform, in particular to rights based mechanisms	No	Yes	Yes	Some parts of local and national governments may be will while other parts may not be wiling. Even if willing, many local and national governments lack the capacity to effect change and reform in terms of personnel, technical skills, and budget. Political and financial interests frequently block attempts by parts of local and national governments to effect change and reform.
4. Full support of regional organizations, Central American Integration System (SICA), Regional Fisheries and Aquaculture Organization (OSPESCA), and the Central American Commission for Environment and Development (CCAD)	Partially	Yes	Yes	Decisions made by SICA, OSPESCA and CCAD are made by the respective ministers of each member country not by the staff of these organizations. Ministers almost always represent the specific interests of their own countries not the common interests of all the member countries. Therefore, the interests of the member countries have to coincide closely for these organizations to fully support conservation actions. It is not frequent that the ministers place conservation interests before other of their country's interests so it is difficult for policies, laws and regulations for all of the members to be approved.
5. Absence of any sudden supply or demand shocks such as energy price shocks that would interrupt coastal and marine activities	No	Yes	Yes	Fuel costs are generally the largest expense for fishing enterprises so a rise in the price of fuel will generally greatly affect activities that require the operation of fishing boats. When the cost of fuel goes up it is likely that the pressure on more distant sources of fish will decrease while the pressure on less distant sources of fish will increase. Therefore, higher fuel prices are likely to increase the exploitation of coastal fisheries. Increased conflict between industrial and artisanal fishers is therefore more likely when fuel prices rise.

Assumption	Held true	Influ-ence	Future Program	Comments
6. Accomplishment and enforcement of regional binding agreements under SICA	Partially	Yes	Yes	See comment under (4).
7. Absence of internationally imposed measures that would have detrimental effect on the general political and economic stability in Central American countries such as internationally imposed sanctions	Partially	Yes	Yes	Internationally imposed measures affected implementation of MAREA in Honduras and would affect any future project as well.
8. That the Program will encourage shared agendas by adding to existing regional processes	Yes	Yes	Yes	This is not an assumption but a statement of how the program should operate. MAREA did succeed in establishing shared agendas and adding to existing regional processes.
9. The Ministries of Environment and Agriculture in the region support the Program and provide required information	Partially	Yes	Yes	The ministries with responsibility for fishing have tended to more involved with MAREA than the ministries of environment or agriculture. The metrics for determining the degree of support of ministries for the Program are difficult to determine so there are few objective data upon which to evaluate this MAREA assumption.

APPENDIX 9 – ANALYSIS OF STRATEGIC OBJECTIVES

Strategic Objective 1: Promote effective monitoring and enforcement of coastal and marine resources policies and legislation with an emphasis on compliance		**Analysis and Comments**
Result 1. All Central American Countries Adopt and Implement Harmonized Best Management Practices for the Sustainable Use of Target Coastal and Marine Resources (Grouper, Spiny Lobster, Queen Conch, Mangrove Cockle)	1. Number of coastal and marine resources conservation and sustainable use policies and legislation drafted and presented* 2. Number of coastal and marine resources law monitoring and enforcement strategies drafted and implemented 3. Number of countries implementing harmonized fisheries violation reporting system 4. Number of people from fisheries and environment governmental and non-governmental institutions trained* 5. Number of regional mechanisms implemented to foster research, providing peer reviewed information to sustainably manage coastal and marine resources 6. Number of technical/scientific articles on marine and coastal resource management developed with program support 7. Number of plans drafted or updated and implemented for management of target species	1. "Policies and Legislation" do not usually and should not go into detail about "Best Management Practices" 2. "Drafted" and "implemented" are quite different. The first is much easier to measure than the second 3. It is unclear how "number of countries implementing harmonized fisheries violation reporting system is defined" 4. Not clear what "number of people trained" has to do with the Result 1 5. Not clear what "regional mechanisms" to foster research has to do with Result 1 6. Not clear what "number of technical/scientific" articles has to do with Result 1 7. Number of plans drafted or updated is very different than "number of plans implemented"
Result 4. All Central American countries adopt and implement harmonized policies on sustainable shark fisheries	8. Number of countries adopting and implementing harmonized policies and best practices in sustainable shark fisheries	1. No PI
Strategic Objective 2: Foster rights-based and market-based mechanisms and management incentives for the conservation and sustainable use of coastal and marine fisheries resources and ecosystems, with an emphasis on ecosystem-based approaches to management		
Result 2. From a 2009 baseline value in US$, at least 25% of product sold of combined target species is harvested under rights-based management regimes and best fisheries	9. Number of artisan and industrial fishermen trained on best fisheries practices, with emphasis on rights and/or market based mechanisms*	1. The baseline value in US$ is not provided and its potential source is not indicated 2. The number of fishermen trained does not indicate much about the result 3. Measuring the implementation of best fisheries practices accurately must be very difficult

	10. Number of Individual Transferable Quotas (ITQs), catch-shares, or rights-based mechanisms, established and implemented for strengthened best fisheries practices on target species 11. Percentage of sales of harvest of target species under rights-based mechanisms and /or best fisheries practices*	
Result 3. At least 1.5 million sea turtle hatchlings are protected using public-private alliances and best management practices in select areas throughout Central America	12. Number of sea turtle hatchlings protected and released	1. Result 3 is stated as a PI, is difficult to differentiate from PI 12, and is not obviously linked to SO 2
Result 5. Decreased landings of juvenile lobsters due to the implementation of improve fishing practices as result of program interventions	13. Decrease in the Number of Juvenile Lobsters Harvested as the Result of Program Interventions at Two Program Sites	1. Result and PI say the same thing
Result 6. All Central American countries adopt and implement harmonized policies for coral reef and mangrove management as critical ecosystems to adapt and build resilience to climate change	14. Number of policies or plans for coral reef and mangrove management to adapt and build resilience to climate change drafted, adopted, or implemented 15. Number of hectares of biological significance and/or natural resources under improved natural resource management as a result of USG assistance (USAID Standard Indicator 4.8.1-26)*	1. Refers to policies so would be better placed under SO 1
Result 7. At least two (2) labor standard manuals, codes, or guidelines drafted and validated with local communities, the private sector, and governmental officials	16. Number of labor standard, manuals, codes, or guidelines drafted and validated	1. Result and PI say about the same thing
Result 8. Sustainable and productive pilot projects formulated and implemented in Honduran and Nicaraguan Miskito Coast, which allow active lobster scuba divers, to move on to appropriate new jobs, with improved labor conditions and earnings, in substitution to the SCUBA lobster fishery	17. Number of families benefitting from productive pilot projects in the Miskito Coast of Honduras and Nicaragua	1. Result 8 refers specifically to scuba divers and number of productive projects while PI 17 refers to number of families without reference to scuba divers or pilot projects

Result 9. At least nine hundred (900) disabled SCUBA fishermen or members of their families trained on new skills and abilities to start their own businesses or gain employment through alternative economic activities, earning higher revenues in Gracias a Dios Department, Honduras and in the North Atlantic Autonomous Region (RAAN) in Nicaragua	18. Number of disabled fishermen or family members of disabled fishermen trained in business or productive skills*	1. Result statement has two different results 2. PI does not measure result in terms of new businesses started or higher revenues
Result 10. No less than US$6 million leveraged to co finance productive projects proposals from sustainable fisheries, sustainable tourism, and arts and crafts; in alliance and coordination with other financial institutions and the private sector	19. Value (USD) of non-USG financed conservation efforts leveraged, payment for environmental services, or additional revenues provided for conservation by governments and the private sector*	
Result 11. No less than US$8 million in additional sales of products and services generated as a result of the implementation of the productive projects and business plans on sustainable fisheries, sustainable tourism and arts and crafts; implemented with associations and cooperatives in the Program's sites	20. Value (USD) of additional sales of products or services that can be directly attributed to the activity interventions and which support conservation and/or sustainable use efforts*	1. The amount of sales does not equal the amount of profit for target population

APPENDIX 10 – SOURCES OF INFORMATION

Table 10: Counts of Original Data by Type and Country

Country	Key Informant Interviews (KII)	Focus Groups Discussions (FGD)	Field Observations (FO)	Validation Workshops (VW)	Surveys
Belize	10	0	3	1	0
Guatemala	10	0	0	1	0
El Salvador	17	1	3	1	2
Honduras	9	3	2	1*	1
Nicaragua	21	1	2	1	1
Costa Rica	9	1	0	1	1
Panama	1	2	1	1*	1
TOTAL	**77**	**8**	**11**	**7**	**6**

** Validation Workshops were organized and held in Honduras and Panama but no invitees were able to attend.*

Acronyms regarding sources of information

Throughout the document, sources are cited in data collection tool, country, number of interviewee format. For example the twenty-second key informant in Honduras would be cited as "KIH22." The data sources cited are key informants (KI), focus group discussions (FG), validation workshops (VW), and field observations (FO) in the following countries: Belize (B), Nicaragua (NI), Honduras (HO), El Salvador (ES), Guatemala (GU), Costa Rica (CR), and Panama (PA). Transcripts of all data sources are submitted to USAID separately.

Table 11. Informants Disaggregated by Sex and by Country

Country	Men	Women	Total
Belize	6	5	11
Costa Rica	7	4	11
El Salvador	14	7	21
Guatemala	6	2	8
Honduras	16	5	21
Nicaragua	5	7	12
Panama	1	0	1
Total	**55**	**30**	**85**
Percentage	***65%***	***35%***	***100%***

Key Informants

Belize

Name	Affiliation
1. Lynette Williams	The Nature Conservancy (TNC)
2. Vicent Gilert	Coastal Resource Management
3. Chantelle Clarke-Samuels	Coastal Resource Management
4. Justino Méndez	Palencia Producers Cooperative
5. Lowell Godfrey	Palencia Producers Cooperative
6. Armando Ramírez	Rio Grande Fisherman's Cooperative
7. Narcisio Martínez	Port Honduras Marine Park
8. Erin Garbult	Port Honduras Marine Park
9. Allan Holiday	Port Honduras Marine Park
10.Martin Reyes	(fisherman)
11. Luis Valencia	(fisherman)
12. Hannah Martínez	Government of Belize, Forest Department
13. Resheda García	Government of Belize, Forest Department
14. Julio Maaz	Wildlife Conservation Society (WCS)

Costa Rica

Name	Affiliation
1.Ana Ramírez	Instituto Costarricense de Turismo (ICT)
2.Greimer Ramos-Loría	Instituto Costarricense de Pesca y Acuicultura (INCOPESCA)
3.Édgar Gutiérrez	Ministry of Environment, Energy and Seas (MINAE)
4.Jenny Ash	Sistema Nacional de Áreas de Conservación (SINAC)
5.Ivo Orellana	Alianza Trinacional para la Conservación del Golfo de Honduras (TRIGOH)/MAREA
6.Didier Chacón	Wide Cast
7.Andreas Lehnhoff	WWF
8.Maria Amalia Porta	WWF

El Salvador

Name	Organization
1.Zulma Ricord de Mendoza	MAREA
2.Sergio Martínez	MAREA
3.Augusto Rosales	MAREA
4.Mario González	Organización del Sector Pesquero y Acuícola de del Istom Centroamericano (OSPESCA)
5.José Francisco Pone Bonilla	Asociación de Pescadores Artesanales de la Playa El Cuco
6.Santos Arias Fuentes	Asociación de Pescadores Artesanales de la Playa El Cuco
7.Rafael Fernández Marinex	Asociación de Pescadores Artesanales de la Playa El Cuco
8.William Alexander Melgar	Asociación de Pescadores Artesanales de la Playa El Cuco
9.Héctor Fuentes	MAREA
10.Gertrude Molina	EcoPacifico
11.Mike Liles	Eastern Pacific Hawksbill Initiative (ICAPO)
12.Emilio Armando Chavarea	ICAPO

13.José Ovideo Perdomo Nieto	ICAPO
14.Daniel Antonio Merlo	ICAPO
15.Annie Henríquez	ICAPO
16.María Leonor Batres	Cooperativa Las Aguilas
17.Neptoli Sánchez	ICAPO
18.Luis Ramos	USAID
19.Néstor Windevoxhel	Chemonics/MAREA
20.Chista Castro	Central American Commission for Environment and Development (CCAD)
21. Claudia de Ibanez	Walmart

Guatemala

Name	**Affiliation**
1.Colum Muccio	ARCAS
2.Juan Carlos Villagrán	MAREA
3.Silja Ramírez	Fundación para el Ecodesarrollo y la Conservación (FUNDAECO)
4.Manuel Cifuentes	DIGIPESCA
5.Mario Díaz	Ministry of Environment and Natural Resources (MARN)
6.Andreas Lehnhoff	WWF
7.María Amalia Porta	WWF
8.Ivo Orellana	TRIGOH/MAREA

Honduras

Name	**Affiliation**
1.Harry Davis	(independent volunteer)
2.Neris Meptali Zelaya Habila	Asociación para la Protección de la Tortuga Delfina (ASPROTOGOLVE)
3.Gabriala Ochoa	UNDP
4.Augusto Rosales	MAREA
5.Abetnico Waldan	Dakni Tak Aslika
6.Geraldo Ambrosio Trino	Asociación Miskitos Hondureños Buzos Lisiados
7.Juan Molinox Dias Sabino	Asociación Miskitos Hondureños Buzos Lisiados
8.Anna Innes Osorio	MIMAT
9.Sayri Molina	GOAL
10.Celina Zepeda	TNC
11.Marsio Aronne	Fundación Cayos Cochinos
12.Ian Drysdale	Healthy Reefs
13.Perla Quezada	(previously with MAREA)
14.Roosevelt F. Terry Laing	Perlas de Mar
15.Sotero Medina	Solitur
16.Henry Haylock	KAUMA
17.Geovanni Lee	(entrepreneur)
18.Giacomo Palavicini	Roatan Marine Park
19.Rodolfo Alvarez	PRONEGOCIOS
20.Peter Hearne	United States Agency for International Development (USAID)
21.Miguel Angel Suazo	DIGEPESCA

Nicaragua

Name	Organization
1.Jaxier Sánchez	Cámara de la Pesca de Nicaragua (CAPENIC)
2.Armando Segura	CAPENIC
3.Milton Castrillo	MAREA
4.Angel Montenegro	Bancentro
5.Liza González	Paso Pacífico
6.María Engracia de Trinidad	Banco Centroamericano de Integración Económica (BCIE)
7.Dana Padilla Morales	INATEC
8.José Antonio Curvina Olivas	INATEC
9.Nelda Sánchez	MAREA
10.Carlos Goff	Coopecharly
11.Nytzae Dixon Webb	SERENA
12.Roger Rocha	SERENA
13.Patricia Martínez	SERENA
14.Ana Isabel Morales Solórzano	SERENA

Panama

Name	Organization
1.Javier Machazeck	Autoridad de los Recursos Acuáticos de Panamá(ARAP)

Organizations Represented at Validation Workshops

City	Name	Organization
Belize City, Belize	George Myvett	Fisheries Department
Belize City, Belize	Adriel Castaneda	Fisheries Department
Belize City, Belize	Isaías Majil	Fisheries Department
Belize City, Belize	Jamal Galves	Fisheries Department
Belize City, Belize	Kleon Coleman	Coastal Zone Management
Belize City, Belize	Roberto Pott	Healthy Reef for Healthy People
Belize City, Belize	Madi Bood	World Wildlife Fund
Guatemala City, Guatemala	Colum Muccio	ARCAS
Guatemala City, Guatemala	María Amalia Dorta	WWF
Guatemala City, Guatemala	Marco Tax Marroquin	CONAP
Guatemala City, Guatemala	Vanessa Dávila	CONAP
Managua, Nicaragua	Ángela Cárdenas	USAID/Nicaragua
Managua, Nicaragua	Annie de Valencia	USAID/El Salvador
Managua, Nicaragua	Sergio Martínez	MAREA
Panama City, Panama	Amada Noriega	Ministerio de Desarrollo Agropecuario (MIDA)
Panama City, Panama	Kate Skasten	US State Department
San Jose, Costa Rica	David Martínez	FECOP (Costa Rican Fishing Federation)
San Jose, Costa Rica	Jacklyn Rivera Wong	Ministerio del Ambiente, Energía y Telecomunicaciones (VAM-MINAET)
San Jose, Costa Rica	Ricardo Meneses	SINAC (Sistema Nacional de Áreas de Conservación)
San Jose, Costa Rica	Diego Acosta	US Embassy
San Jose, Costa Rica	Carolina Ovares	CEDARENA
San Salvador, El Salvador	Mike Liles	ICAPO
San Salvador, El Salvador	Luis Ramos	USAID
San Salvador, El Salvador	Mario González	OSPESCA
San Salvador, El Salvador	Reynaldo Morales	OSPESCA
San Salvador, El Salvador	Mariano Paca	FIAES (Fondo Iniciativa para las Américas)
San Salvador, El Salvador	Néstor Windelvoxhen	MAREA
San Salvador, El Salvador	Zulma de Mendoza	MAREA
Tegucigalpa, Honduras	N/A	N/A

APPENDIX 11 – TEAM's FIELD TRAVEL ITINERARY

BK: Bruce Kernan (Team Leader); RR: Robin Rackowe (Fisheries Expert); JG: Julio Guzman (Environmental Market Economist); VR: Virginia Reyes (Technical Logistics Coordinator/Economist)

Date	Location	Activity
September 2, 2014	El Salvador	BK: Arrival in San Salvador
September 2-5, 2014	El Salvador	BK: Kick off meeting with USAID, start of document review, Chemonics
September 5, 2014	El Salvador	RR: Arrival in San Salvador
September 5-8, 2014	El Salvador	BK and RR document review
September 8, 2014	El Salvador	JG and VR arrival in San Salvador
September 8-11, 2014	El Salvador	BK, RR, JG, RR draft Methodology and Work Plan JG: Arrival in Costa Rica
September 11, 2014	El Salvador	Submission of Methodology and Work Plan
September 12, 2014	Costa Rica	VR: Arrival in Costa Rica
September 15-19, 2014	El Salvador, Honduras, Nicaragua	BK, RR: Travel to Gulf of Fonseca; Survey in Jiquilisco Bay
September 19-21, 2014	San Salvador	BK, RR: Edits to Methodology and Work Plan
September 21, 2014	Honduras	BK, RR: Arrival in Tegucigalpa
September 22, 2014	Honduras, Nicaragua	BK, RR: Arrival in Puerto Lempira VR: Arrival in Managua
September 22-24, 2014	Honduras, Nicaragua	BK, RR: Survey in Puerto Lempira VR: Survey in Puerto Cabezas
September 25-27, 2014	Honduras	BK, RR: Travel to Roatan; Conduct Surveys
September 28, 2014	Honduras	BK, RR: Roatan to Tegucigalpa
September 29, 2014	Honduras	BK: Validation Workshop in Tegucigalpa
September 30, 2014	Belize, Costa Rica, Panama	BK and RR: Arrival in Belmopan VR: Arrival in Bocas del Toro
September 30 – October 3, 2014	Costa Rica, Panama	VR: Survey in Bocas del Toro
October 1, 2014	Belize	BK and RR: Validation Workshop in Belize
October 3-6, 2014	Belize	BK and RR: Survey in Punta Gorda
October 6, 2014	El Salvador	BK and RR: Return to El Salvador; Draft Final Report
October 8, 2014	Panama	JG: Travel to Panama City to host Validation Workshop; return the same day
October 9, 2014	Costa Rica, Guatemala, Nicaragua	BK: Travel to Guatemala City to host Validation Workshop; return the same day; RR: Travel to Managua to host Validation Workshop; return the same day; JG: Hosts Validation Workshop in San Jose
October 10, 2014	US	RR: Return to US
October 10-13, 2014	El Salvador, Costa Rica	BK, RR, JG, VR conduct data analysis, draft findings, conclusions, and recommendations
October 13, 2014	El Salvador	VR: Arrival in San Salvador BK and VR host Validation Workshop in San Salvador
October 14, 2014	El Salvador	BK and VR debrief USAID; both travel back to home countries

APPENDIX 12 – DOCUMENT REVIEW MATRIX

Document	Evaluation Question 1 Design	EQ2 Assumptions Held true?	EQ3 implementation Challenges and local vs. National levels	EQ4 Sustainable benefits	EQ5 CCAW CCAD Future investment?	EQ6 Gender	Notes
Arenas Granados, Pedro; Humberto Garcés B, 2009. *Diagnóstico de la Gestión del Litoral en la República de Panamá.* Red IBERMAR (CYTED), Cádiz. pp 72-90	X	X	X	X			Reviews institutions, laws, regulations in Panama
Barragan Munoz, J M (coord.), 2012. ***Manejo Costero Integrado en Iberoamérica: Diagnóstico y Propuestas para una nueva Política Pública***. Red IBERMAR (CYTED), Cádiz. 152 p	X		X		X		Examination of government capabilities
BIOMARCC-USAID, 2013. Vulnerabilidad y Escenarios Bioclimaticos de los Sistemas Marino-Costeros a nivel del Caribe Centroamericano. San José, Costa Rica. 80 p	X						Regional, intergovernmental perspectives on climate change
Cortés, Jorge and Ingo S. Wehrtmann 2009 Marine Biodiversity of Central America, Costa Rica, Springer Science + Business Media B.V. **500 pp**	X						Detailed lists of native aquatic life of Central America
Dominguez, J. P. 2011. Caracterización biofísica del área marina frente a Playa Las Tunas, Playas Negras, Playas Blancas, Playa Maculís, y las Mueludas, Municipio de Conchagua, Departamento de La Unión, El Salvador.				X			Includes geologic, topographic, biological and chemical understandings of coastal areas of El Salvador

USAID/IMCCW, San Salvador, El Salvador							
Eckert, K. L., K. A. Bjorndal, F. A. Abreu-Grobois, and M. Donnelly (Editors). 1999. *Research and Management Techniques for the Conservation of Sea Turtles.* IUCN/SSC Marine Turtle Specialist Group Pub. No. 4			X				Comprehensive guidance on development of conservation programs for sea turtles, numerous authors
Fondo de la Iniciativa para las Américas, 2012. *Proyectos de Cooperación en el Golfo de Fonseca*. 39 p	X		X				General policy views on shared programming in Fonseca
Gaos, Alexander R. et al. *Signs of hope in the eastern Pacific: international collaboration reveals encouraging status for a severely depleted population of hawksbill turtles Eretmochelys imbricate*				X			
Inter-American Development Bank. 2006. Documento del Proyecto. Gestión integrada de los ecosistemas del Golfo de Fonseca BID-RS-X1015				X			
Liles Michael J. Hawksbill turtles *Eretmochelys imbricata* in El Salvador: nesting distribution and mortality at the largest remaining nesting aggregation in the eastern Pacific Ocean, Endangered species research Vol. 14: 23–30, 2011 doi: 10.3354/esr00338		X		X			
MAREA 2011a. Diagnóstico sobre el Estado de Aprovechamiento del Recurso Conchas Negras(***Anadara tuberculosa* y *Anadara similis***) en la Costa Pacífica de Nicaragua. 45 p		X	X	X			Mechanisms to improve community participation in processes of use and management
MAREA, 2011b. La Propuesta del Plan de Manejo de la Langosta Espinosa del Caribe Centroamericano (***Panulirus argus***). 47 p	X		X	X			Detailed analysis of the lobster fishery and the proposed Management Plan
MAREA, 2011c. Plan para la Recuperación y Manejo del Caracol Gigante (***Strombus gigas***) en el Golfo de Honduras y las Islas de la Bahía. 38 p				X			
MAREA, 2012a. Caracterización General de Siete Especies Marino-costeras de Importancia Estratégica en Centro América. 37 p **MAREA, 2012b.** Manual de Buenas Practicas Pesqueras para la Langosta Espinosa (***Panulirus argus***). 55 p				X			

MAREA, 2014a. Perfil de Sitio Cauita-Bocas del Toro, Costa Rica-Panamá. 6 p	X	X	X	X		X	
MAREA, 2014b. Perfil de Sitio Costa Miskita, Nicaragua. 7 p				X			
MAREA, 2014c. Perfil de Sitio Costa Miskitos e Islas de la Bahía, Honduras. 8 p	X			X		x	Increased the income of more than 1,024 fishermen and their families by the sale of lobster, shrimp, finfish and jellyfish as part of the alternatives to diving in Honduras
MAREA, 2014d. Perfil de Sitio Golfo de Fonseca, El Salvador - Honduras - Nicaragua. 6 p	X	X	X	X			Walmart and Super Selectos generated $1.5 million revenue for communities
MAREA, 2014e. Perfil de Sitio Golfo de Honduras, Belice - Guatemala - Honduras. 6 p	X	X	X	X		X	Details pigs, production chickens to benefit 10 fishermen. Legal and policy training of govt officials
MAREA, undated, Plataforma Virtual de Geo Turismo: Go Blue Central America. 2 p. http://www.gobluecentralamerica.org/	X	X		X			Promotes tourism or understanding of protected areas that have international observation
MAREA, undated. Balance de los Mares - El Magnífico Tiburón está Amenazado. 1 p	X		X			X	
MAREA, 2014f. Cifras que Hablan: Principales Resultados del Programa Regional de USAID a Marzo 2014, in English and Spanish. 2 p	X	X					
MAREA, undated. Estrategia del Comprador. 2 p	X	X		X			
MAREA, undated. Estrategia Integral y Herramientas de Intervencion. 2 p	X						
MAREA, undated. Historia de Éxito: Cadena de Frío, el Eslabón que Faltaba… 2 p	X	X		X		X	Refrigeration benefits for supply chain in local community
MAREA, undated. Historia de Éxito: Derecho a Cultivar el Mar, Granjas de Pargos. 2 p	X	X	X	X		X	Floating fish cages. Production chickens to benefit 10 fishermen. More than half cooperative are women
MAREA, undated. Historia de Éxito: Derechos y Valor Agregados al Curil : Cocteles. 2 p	X	X				X	Mangrove cockles processed in the form of cocktails, the income achieved was reportedly 1,050% greater per dozen
MAREA, undated. Historia de Éxito: Pesca Sostenible en el Golfo de Fonseca. 2 p	X	X	X	X			More than 12,000 fishermen are implementing improved fishing practices
MAREA, undated. Historia de Éxito: Transformando Pesca de Langosta por Buceo. 2 p		X		X			

MAREA, undated. Historia de Éxito: Turistas Pagan por Tortugas en El Venado. 2 p			X	X			
MAREA, undated. Management Measures for Best Fishing Practices of Grouper in the Caribbean Sea, and the Pacific Ocean, in Central America. 2 p			X	X			
MAREA, undated. Medidas de Ordenación para Buenas Practicas en la Pesquería en Centroamérica de: Tiburones 2 p – Langosta Espinosa 2 p – Pargos 2 p – Caracol Reina 2 p – Meros 2 p	X	X	X	X			
MAREA, undated. Medidas de Ordenación para Buenas Practicas en la Extracción de Curiles en el Golfo de Fonseca, Centroamérica. 2 p		X		X			
MAREA, 2010 *Regional Plan for the Conservation and Management of the Nassau Grouper*		X	X	X			Nassau Grouper traditional sites disappearing, lives in Caribbean shallow coral reefs. New regulations and monitoring progress in Gulf of Honduras including spawning sites as marine reserves
MAREA, undated. Pesca de Camarón por Suriperas: Promoción de una Pesquería Mejorada en Centroamérica 2 p				X			
MAREA, undated. Programa Regional para el Manejo de Recursos Acuáticos y Alternativas Económicas. 4 p	X						
MAREA, undated. Promoción de Mejores Prácticas de Pesca en Centroamérica: Alternativas Económicas. 2 p.				X			
MAREA, 2013 *Proposal for an Intersectorial Agenda for Fisheries and Environment in Belize* Chemonics		X		X	X		Working group review of legal co-management setting in Belize. "Belize has 10 marine protected areas which are administered by the Fisheries Department and the Forest Department, in partnership with a number of NGOs, including the Southern Environmental Association, Toledo Institute for Development and Environment (TIDE), the Belize Audubon Society, as well as with smaller community-based organizations such as Sarteneja Alliance for Conservation and Development, Forest and Marine Reserve Association of Caye Caulker and Friends of Swallow Caye" "Government should also invest in capacity building of personnel to ensure

							compliance and adherence to international environmental standards"
MAREA, undated. *Summary of Programmed and Implemented Activities up to January 2014*, Guatemala 2 p – Belice 2 p – Nicaragua 2 p – Costa Rica 2 p – Honduras 2 p – Panama 2 p – El Salvador 2 p	X	X		X			
MAREA, undated. *Transformación de la flota industrial de la pesca de la langosta por buceo a pesca con nasas en la Costa de Misquitos de Honduras y Nicaragua*. 2 p	X		X	X			
MAREA. 2014g. Monitoring and Evaluation Plan, updated Version June 2014		X		X		X	Critical for evaluation report
Morales Ramírez, Álvaro; Margarita Silva Benavides: Carmen González Gairaud, 2009. *La Gestión Integrada de la Zona Costera en Costa Rica: Experiencia y Perspectivas.* Manejo Costero Integrado y Política Pública en Iberoamérica: un Diagnóstico. Necesidad de Cambio. Red IBERMAR (CYTED), Cádiz. pp 42-70	X		X		X		Covers geography, tourism, law, coastal use management. Examines the history of zonal planning commission and inter-disciplinary use of data for coastal management.
Neischmann, Bernard. 1997. "Protecting indigenous coral reefs and sea territories, Miskito Coast RAAN, Nicaragua" In Stans, Stevern Ed. *Conservation through cultural survival*; Indigenous peoples and protected areas, Cultural Survival, Island Press, 242 pp				X			Early study about enlisting local knowledge and buying for property resource management including coastal Honduras
NOAA, 2001. The Fisheries for Mangrove Cockles, ***Andara*** spp, fom Mexico to Peru, with Descriptions of their Habitats and Biology, the Fishermen's Lives, and the Effects of Shrimp Farming. *Marine Fisheries Review.* Mfr6311 Mangrove Cockles.pdf 39 p				X			Life cycle and ecology of cockle fisheries. Mangrove cockles (also called arkshells) of the genus Anadara are harvested for food by large numbers of artisanal fishermen in the Pacific coast lagoons of 10 countries from Mexico through Central America to Peru
NOAA, 2012. Casitas in Florida Keys Sanctuary Endanger Lobsters and their Habitat. www.nmfs.noaa.gov/stories/2012/07/07_30_12casitas.html				X			In addition to concentrating lobsters and enabling the overharvesting of lobster, the casitas, averaging 25 square feet, also destroy the natural habitat—productive seagrass beds or hardbottom habitat. Seagrasses provide many benefits, including unique habitat for aquatic life, playing a major role in the reproductive cycles of many recreationally and commercially important species

OSPESCA, 2005. Fisheries and Aquaculture Integration Policy for the Central American Isthmus. 27 p		X		X			
OSPESCA, 2009. Propuesta Plan de Acción de las Mujeres de la Pesca Artesanal del Istmo Centroamericano. 18 p					X	X	
OSPESCA, 2009. Reglamento OSP-01-09 del Sistema Integrado de Registro Pesquero y Acuícola Centroamericano (SIRPAC). 31 p					X		Definitions of data for tracking, commitments for cooperating on fish and aquaculture
OSPESCA, 2011. Adenda al Reglamento OSP-02-09 para el Ordenamiento Regional de la (***Panulirus argus***). 25 p.	X			X	X		
OSPESCA, 2013. Reglamento OSPESCA/OIRSA No. 001-2013, Para la Prevención, Control y Erradicación de Enfermedades en el Camarón de Cultivo en los Países del SICA y OIRSA. 14 p	X						Progress in regional commitments, related to shrimp morbidity
OSPESCA, 2014. Reglamento Regional OSP-08-2014, Para Prevenir, Desalentar y Eliminar la Pesca Ilegal, No Declarada y No Reglamentada en los Países Miembros del SICA. 11 p			X	X			Progress in regional commitments
OSPESCA, undated. Integración Regional, Responsabilidad y Sostenibilidad de la Pesca y la acuicultura. 7 p			X	X			Progress in regional commitments
Smithsonian 2009 Bocas del Toro Research Station FY08-FY09 Biennial Report https://www.stri.si.edu/english/PDFs/bocas_br_08-09.pdf 60 pp	X				X		Increase in scientific visitors and fellows, helps provide extensive monitoring. Mangrove-fringed mainland peninsulas and islands, sea grass beds, and patch reefs delimit two distinct bays: the Bahía Almirante and the Laguna de Chiriquí
Toledo Institute, 2014. http://www.tidebelize.org/page/port-honduras-marine-reserve			X	X			The use of long-lines, gill nets and beach traps is prohibited throughout the reserve. A team of TIDE rangers based at the newly refurbished ranger station at Abalone Caye enforcement throughout the reserve. TIDE introduced Managed Access Fisheries 2011 in response to increasing fishing pressure
USAID, 2006. Coastal and Marine Conservation in Latin America and the Caribbean: Evaluation of Opportunities and Challenges for USAID	X			X			

APPENDIX 13 – DISCLOSURE OF CONFLICT OF INTEREST

Each team member signed a two-page disclosure form. Page one appears on this page. Each signature page (page 2) follows.

Evaluations of USAID projects will be undertaken so that they are not subject to the perception or reality of biased measurement or reporting due to conflict of interest.[4] *For external evaluations, all evaluation team members will provide a signed statement attesting to a lack of conflict of interest or describing an existing conflict of interest relative to the project being evaluated.*[5]

Evaluators of USAID projects have a responsibility to maintain independence so that opinions, conclusions, judgments, and recommendations will be impartial and will be viewed as impartial by third parties. Evaluators and evaluation team members are to disclose all relevant facts regarding real or potential conflicts of interest that could lead reasonable third parties with knowledge of the relevant facts and circumstances to conclude that the evaluator or evaluation team member is not able to maintain independence and, thus, is not capable of exercising objective and impartial judgment on all issues associated with conducting and reporting the work. Operating Unit leadership, in close consultation with the Contracting Officer, will determine whether the real or potential conflict of interest is one that should disqualify an individual from the evaluation team or require recusal by that individual from evaluating certain aspects of the project(s).

In addition, if evaluation team members gain access to proprietary information of other companies in the process of conducting the evaluation, then they must agree with the other companies to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished. [6]

Real or potential conflicts of interest may include, but are not limited to:

1. Immediate family or close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated.
2. Financial interest that is direct, or is significant/material though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation.
3. Current or previous direct or significant/material though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project.
4. Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated.
5. Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated.
6. Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.

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[4] *USAID Evaluation Policy (p. 8); USAID Contract Information Bulletin 99-17; and Federal Acquisition Regulations (FAR) Part 9.5, Organizational Conflicts of Interest, and Subpart 3.10, Contractor Code of Business Ethics and Conduct.*
[5] *USAID Evaluation Policy (p. 11)*
[6] *FAR 9.505-4(b)*

Disclosure of Conflict of Interest for USAID Evaluation Team Members

Name	Bruce Kernan
Title	
Organization	
Evaluation Position?	☒ Team Leader ☐ Team member
Evaluation Award Number *(contract or other instrument)*	
USAID Project(s) Evaluated *(include project name(s), implementer name(s) and award number(s), if applicable)*	
I have real or potential conflicts of interest to disclose.	☐ Yes ☒ No
If yes answered above, I disclose the following facts:	

Real or potential conflicts of interest may include, but are not limited to:

2. *Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated.*
3. *Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation.*
4. *Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project.*
5. *Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated.*
6. *Current or previous work experience and/or organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated.*
7. *Preconceived ideas toward individuals, groups, organizations, or beliefs of the particular projects and organizations being evaluated that could bias the evaluation.*

I certify (1) that I have completed this disclosure form fully and to the best of my ability and (2) that I will update this disclosure form promptly if relevant circumstances change. If I gain access to proprietary information of other companies, then I agree to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.

Signature	Bruce S. Kernan
Date	Sept 19, 2014

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Name	Julio Guzmán
Title	Market Economist
Organization	IBTCI
Evaluation Position?	☐ Team Leader ■ Team member
Evaluation Award Number *(contract or other instrument)*	
USAID Project(s) Evaluated *(Include project name(s), implementer name(s) and award number(s), if applicable)*	
I have real or potential conflicts of interest to disclose.	☐ Yes ■ No
If yes answered above, I disclose the following facts: *Real or potential conflicts of interest may include, but are not limited to:* 1. *Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated.* 2. *Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation.* 3. *Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project.* 4. *Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated.* 5. *Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated.* 6. *Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.*	

I certify (1) that I have completed this disclosure form fully and to the best of my ability and (2) that I will update this disclosure form promptly if relevant circumstances change. If I gain access to proprietary information of other companies, then I agree to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.

Signature	Julio Guzman
Date	September 5th, 2014

Name	ROBIN RACKOWE
Title	FISHERIES EXPERT
Organization	
Evaluation Position?	☐ Team Leader ☒ Team member
Evaluation Award Number *(contract or other instrument)*	
USAID Project(s) Evaluated *(Include project name(s), implementer name(s) and award number(s), if applicable)*	
I have real or potential conflicts of interest to disclose.	☐ Yes ☒ No
If yes answered above, I disclose the following facts: *Real or potential conflicts of interest may include, but are not limited to:* 1. *Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated.* 2. *Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation.* 3. *Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project.* 4. *Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated.* 5. *Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated.* 6. *Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.*	

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Signature	Robin Rackow
Date	19 September 2014

Disclosure of Conflict of Interest for USAID Evaluation Team Members

Name*	Virginia Reyes Gatjens
Title*	Logistic Coordinator
Organization*	IBCTI
Evaluation Position?*	☐ Team Leader ☐ x Team member
Evaluation Award Number *(contract or other instrument)*	
USAID Project(s) Evaluated *(Include project name(s), implementer name(s) and award number(s), if applicable)*	MAREA Program
I have real or potential conflicts of interest to disclose.*	☐ Yes ☐ xNo
If yes answered above, I disclose the following facts:* *Real or potential conflicts of interest may include, but are not limited to:* 1. *Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated.* 2. *Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation.* 3. *Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project.* 4. *Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated.* 5. *Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated.* 6. *Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.*	

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Signature*	

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Disclosure of Conflict of Interest for USAID Evaluation Team Members

Name	Elif Senvardarli
Title	Project Coordinator
Organization	IBTCI
Evaluation Position?	☐ Team Leader ☐ Team member
Evaluation Award Number *(contract or other instrument)*	AID-596-O-14-00006
USAID Project(s) Evaluated *(Include project name(s), implementer name(s) and award number(s), if applicable)*	USAID/El Salvador Regional Program for the Management of Aquatic Resources and Economic Alternatives (MAREA)
I have real or potential conflicts of interest to disclose.	☐ Yes ■ No
If yes answered above, I disclose the following facts: *Real or potential conflicts of interest may include, but are not limited to:* 1. *Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated.* 2. *Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation.* 3. *Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project.* 4. *Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated.* 5. *Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated.* 6. *Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.*	

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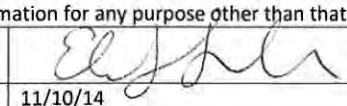
Signature	
Date	11/10/14