

Project Period	05/01/2010 - 04/21/2012
Award Amount	\$50,000.00
Matching Contributions	\$200,000.00
Project Location Description (from Proposal)	Seaflower MPA (San Andres Archipelago, Colombia) is the largest MPA in the Caribbean, a coral reef biodiversity hotspot, and has globally and nationally important marine ecosystems and biodiversity.
Project Summary (from Proposal)	Develop a demonstration project testing the applicability of marine payment for ecosystem services in San Andres Archipelago as a sustainable financing mechanism for Marine Protected Area management.
Summary of Accomplishments	<ul style="list-style-type: none"> -Conducted formal 3-day training of MPA staff on marine payment for ecosystem services (PES) -Conducted 2 large scale socio-economic studies on the value of beaches and associated ecosystem services to the tourism industry, the main economic driver of the MPA, the results of which were used to engage the tourism industry on PES discussions -Built capacity of staff economists and coordinators on large scale socio-economic survey design and analysis, expanding the scope to include ecosystem services tied to the main economic driver, increasing their target capacity by 10 fold, and informing the overall sustainable financing component -Held 4 formal stakeholder meetings and numerous informal meetings with stakeholders for outreach and education on marine ecosystem services and their importance for supporting livelihoods and on innovative sustainable financing mechanisms for resource management -Disseminated project information to local stakeholders and international community of practice through articles, newsletters, and conference presentations -Assessed the state of scientific knowledge on the key marine ecosystem services around beach and coastal protection and coral reef diversity -Began mapping of key marine ecosystem services in threatened habitats, specifically the eroding beaches -Began negotiations with the largest hotel chain on the island on a long-term PES deal as part of an overall financing strategy for implementing the MPA management plan
Lessons Learned	<ul style="list-style-type: none"> -Proper training of MPA staff was important to get buy-in for the concepts of marine ecosystem services, and more importantly, marine payment of ecosystem services (PES) to be used as a key strategy for MPA financing and management. -Engagement of the stakeholder groups needed to be conducted in phases, beginning with informal discussions to understand their concerns and gain trust, slowly building to outreach and education on the concept of marine ecosystem services, and culminating in the concept of PES. -It is best not to use the word "payment" until much later stages and, better yet, to use other words and concepts, such as investment, partnerships, and sustainable financing. -The potential overwhelming economic impact of the loss of beaches and associated ecosystem services, based on the socio-economic surveys, was a key factor in gaining the attention and interest of the tourism industry which was very eager for the findings of these surveys.

- The identification of a key component of ecosystem service delivery - parrot fish and sand production - played an important role in providing stakeholders a concrete example of the concepts discussed.
- Engagement of the stakeholders required time and patience and proceeded at the comfort level of the stakeholders' understanding and acceptance of the concepts.
- It is important to design the payment schemes along with the stakeholders involved and to listen to their ideas and work with them on the specifics of the schemes.

Conservation Activities and PES	Technical training of CORALINA MPA staff in marine ecosystem services
Progress Measures	Other (% of CORALINA MPA staff trained)
Value at Grant Completion	100%
Conservation Activities	Stakeholder outreach and education in marine ecosystem services and PES
Progress Measures	Other (# of stakeholders attending workshops)
Value at Grant Completion	300
Conservation Activities	Assessment of marine ecosystem services in key threatened habitats on San Andres Island
Progress Measures	Other (% of area of coastal ecosystems assessed)
Value at Grant Completion	50%
Conservation Activities	Assessment of Scientific knowledge and gaps
Progress Measures	Other (# of reports produced)
Value at Grant Completion	1
Conservation Activities	Economic analysis of above identified services and opportunity costs
Progress Measures	Other (# of reports produced)
Value at Grant Completion	1
Conservation Activities	PES deal structured
Progress Measures	Other (# of agreements structured)
Value at Grant Completion	1

Conservation Outcome(s)	CORALINA staff pursuing management practices to protect marine ecosystem services, e.g., carrying out PES agreements, education activities, monitoring
Conservation Indicator Metric(s)	Other (% of CORALINA MPA staff working to protect marine ecosystem services)
Baseline Metric Value	0
Metric Value at Grant Completion	50%
Long-term Goal Metric Value	100%
Year in which Long Term Metric Value is Anticipated	2014
Conservation Outcome(s)	Private sector stakeholders engaged in PES deals
Conservation Indicator Metric(s)	Other (# of private sector businesses engaged in developing marine PES deal)
Baseline Metric Value	0
Metric Value at Grant Completion	10
Long-term Goal Metric Value	10
Year in which Long Term Metric Value is Anticipated	2014
Conservation Outcome(s)	Targeted protection of marine ecosystem services with private sector money
Conservation Indicator Metric(s)	Other (% of marine ecosystems managed with private sector funding)
Baseline Metric Value	0
Metric Value at Grant Completion	2%
Long-term Goal Metric Value	10%
Year in which Long Term Metric Value is Anticipated	2014
Conservation Outcome(s)	Monitoring condition of ecosystem services and PES scheme
Conservation Indicator Metric(s)	Other (% of relevant indicators (existing and new) being monitored and assessed)
Baseline Metric Value	10%

Metric Value at Grant Completion	50%
Long-term Goal Metric Value	100%
Year in which Long Term Metric Value is Anticipated	2014
Conservation Outcome(s) (Estimated annual operating costs: \$750,000)	Financing implementation of Seaflower MPA through marine PES
Conservation Indicator Metric(s)	Other (% of estimated annual operating costs)
Baseline Metric Value	0
Metric Value at Grant Completion	2%
Long-term Goal Metric Value	10%
Year in which Long Term Metric Value is Anticipated	2014
Conservation Outcome(s)	Marine PES initiative on-going
Conservation Indicator Metric(s)	Other (% of targeted sector businesses supporting PES on a regular basis)
Baseline Metric Value	0
Metric Value at Grant Completion	20%
Long-term Goal Metric Value	80%
Year in which Long Term Metric Value is Anticipated	2014



Final Programmatic Report Narrative

Instructions: Save this document on your computer and complete the narrative in the format provided. The final narrative should not exceed ten (10) pages; do not delete the text provided below. Once complete, upload this document into the on-line final programmatic report task as instructed.

1. Summary of Accomplishments

In four to five sentences, provide a brief summary of the project’s key accomplishments and outcomes that were observed or measured.

Through this project, we were able to build the capacity of the Seaflower MPA staff to embed the concepts of marine ecosystem services and payment for ecosystem services in their MPA management as well as sustainable financing planning over the long term. We have also increased the capacity of the economists and scientists to design and analyze large-scale socio-economic surveys for assessing the value of marine ecosystem services, skills that they can continue to use in future assessments. Through the results of the comprehensive and large-scale socio-economic study, this project was able to quantify and demonstrate the tremendous impact that loss of beaches and associated ecosystem services will have on the economy and livelihoods of residents of San Andres Island and the archipelago. These results have garnered the attention of the tourism industry and have led to their engagement in finding solutions and providing potential support, either monetarily or in-kind, for managing the MPA. Our local partner COARLINA is in the final stages of negotiations with Decameron, the largest hotel chain, on the island to design and enter into a multi-year PES scheme as part of the package for public-private partnership for sustainable financing and resource management of the MPA to commence once the GEF project to Seaflower ends in 2014.

2. Project Activities & Outcomes

Activities

- Describe and quantify (using the approved metrics referenced in your grant agreement) the primary activities conducted during this grant.
- Briefly explain discrepancies between the activities conducted during the grant and the activities agreed upon in your grant agreement.

Activity	Metric	Anticipated Amount at the end of grant period	Actual Amount at the end of grant period
1. Technical training of CORALINA staff in marine ecosystem services and PES	% of CORALINA MPA staff trained	100%	100%
2. Stakeholder outreach and education in marine ecosystem services and PES	# of stakeholders attending workshops	300	150
3. Assessment of marine ecosystem services in key threatened habitats on San Andres Island	% of area of coastal ecosystems assessed	50%	30%
4. Assessment of Scientific knowledge and gaps	# of reports produced	1	1
5. Economic analysis of above identified services and opportunity costs	# of reports produced	1	2
6. PES deal structured	# of agreements	1	0 (in final

	structured		negotiations)
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We were able to conduct many of the activities as planned. In some of the activities, we were able to reach the predicted amount as anticipated at the start of this grant while in others we were able to partially meet the anticipated amounts.

For activity, we conducted two informal training sessions and one formal three-day session that included all of the MPA staff at the time the training workshop was held. For the formal training workshop, the staff was taught the concepts of ecosystem services, PES, and market mechanisms, was guided through a scenario exercise to follow the first two steps of designing a PES scheme, and led through initial assessment exercises in the field.

For activity 2, we were able to conduct many formal (4) and informal stakeholder meetings, but were only able to meet half of the number of stakeholders engaged. The reasons are two-fold. First, we were taking a cautious approach as advised by our collaborating partner CORALINA to move slowly and carefully; hence, we followed their lead in reaching out to stakeholders. Second, many of the stakeholders we did engage were self-selected – they came to our meetings of their own free will after invitations and public announcements. As such, although we did not engage as many as we anticipated, we engaged ones who were strongly interested in these issues and demonstrated the willingness to discuss their participation.

For activity 3, we relied on working with scientists hired by CORALINA. Because of the initial delay in hiring the full complement of the MPA staff, including one of the key biologists, there was a delay in commencing this assessment. Nonetheless, the staff is continuing to conduct these assessments, to develop the monitoring protocol and indicators and to conduct the quantification and characterization of such parameters as water quality, beach profiles, coral reef health, fish population, and seagrass coverage in key habitats areas that have experienced the most erosion.

For activity 4, in addition to conducting an analysis of the state of scientific knowledge around the biological, social and legal aspects of ecosystem services and PES, we were also able to help contribute to the electronic archiving of information previously available to the staff in limited hard copies and thereby helped with future dissemination and use of the existing information.

For activity 5, we conducted through our socio-economic consultant (then graduate student) Juliana Castaño, who was based in San Andres Island with close supervision and advising by MARES Program Manager and Director, a socio-economic survey of the value of beaches and coral reefs for the tourism industry. This survey also involved capacity building of the staff to conduct large-scale surveys, increasing their sampling capability from 200 respondents to over 2000 respondents. After Juliana's departure, the MPA staff led a subsequent study aided by another consultant hired by Forest Trends to assist the MPA staff.

For activity 6, although we were not able to complete the signing of an agreement, our partner CORALINA is in the final stages of discussions with the Decameron Hotel chain to negotiate a multi-year PES scheme that will provide sustainable financing to the management of the MPA resources contributing to the sun, sand and beach tourism. Not only is Decameron Hotel working with CORALINA to design the contract agreement, they have also indicated their willingness to lead the hotel industry in San Andres Island and bring in other hotel operators to participate in this sustainable financing mechanism. Other smaller tour operators have indicated their willingness to contribute in-kind, through the donation of their boat use and time, to help with the monitoring activities. CORALINA staff is in discussion with them now.

Outcomes

- Describe and quantify progress towards achieving the project outcomes described in your grant agreement. (Quantify using the approved metrics referenced in your grant agreement or by using more relevant metrics not included in the application.)
- Briefly explain discrepancies between what actually happened compared to what was anticipated to happen.
- Provide any further information (such as unexpected outcomes) important for understanding project activities and outcome results.

Outcome	Metric	Base-line value	Value at grant completion	Long-term goal value	Year in which long term value is anticipated	Status of outcome achievement
1. CORALINA staff pursuing management practices to protect marine ecosystem services, e.g., carrying out PES agreements, education activities, monitoring	% of CORALINA MPA staff working to protect marine ecosystem services	0	50%	100%	2014	Achieved 100% goal
2. Private sector stakeholders engaged in PES deals	# of private sector businesses engaged in developing marine PES deal	0	10	30	2014	In negotiations, target achievement anticipated by 2014
3. Targeted protection of marine ecosystem services with private sector money	% of marine ecosystems managed with private sector funding	0	5%	10%	2014	In negotiations, target achievement anticipated by 2014
4. Monitoring condition of ecosystem services and PES scheme	% of relevant indicators (existing and new) being monitored and assessed	10%	50%	100%	2014	25%, target achievement anticipated by 2014
5. Financing implementation of Seaflower MPA through marine PES (Estimated annual operating costs: \$750,000)	% of estimated annual operating costs	0	2%	10%	2014	In negotiations, target achievement anticipated by 2014
6. Marine PES initiative on-going	% of targeted sector businesses supporting PES on a regular basis	0	20%	80%	2014	In negotiations, target achievement anticipated by 2014

For outcome 1, we were able to achieve ahead of time our 2014 goal of 100% of the MPA staff working to protect marine ecosystem services because of the training, engagement, embedding of our consultant, and buy-in from the leadership (CORALINA Executive Director).

For outcomes 2, 3, 5 and 6, although we were not able to meet the anticipated value at completion, through our local partner's CORALINA's continuing efforts, the project is at the final stages of designing and signing PES agreements with the Decameron Hotel chain which has 6 hotels on San Andres Island and a similar numbering islands. Decameron has also expressed interest in leading the effort to bring other hotels on board. In addition through MARES engagement, other independent hotel owners and small-scale tourism operators have also expressed interest in engaging in PES schemes. As a result, even though we could not meet the interim goal at project completion, the project is on track to meet the long-term goal of 30 private sector stakeholders engaged in PES deals, with at least 10% of the ecosystem services protected by such schemes through 10% of the MPA management costs financed by this mechanism and with nearly 80% buy-in from the tourism sector by 2014. The reasons for these discrepancies are that these concepts are still new and there are not many examples (hence the need for this and other similar projects) and that the unfortunate timing of the global economic crisis took away the (profit) margins with which our targeted stakeholders could use to test out new approaches. Despite these facts, the enthusiasm, receptivity and willingness to begin to pilot these ideas by the tourism sector, we believe that as the global economic conditions improve, there will be increasing participation in marine PES schemes in both the Seaflower MPA and elsewhere.

For outcome 4, we were able to achieve half of our anticipated goal at project completion. Our partner CORALINA is now actively monitoring, with increased frequency, seagrass bed health, water quality, beach profile and beginning to expand their sampling of coral reef health to include key fish species associated with beach production. Because of the delay in hiring the full complement of biologists for the MPA, the implementation of expanded monitoring activities was also slightly delayed. Nonetheless, the CORALINA staff recognizes the importance of monitoring ecosystem services through the relevant indicators and is rapidly ramping up their activities.

3. Lessons Learned

Describe the key lessons learned from this project, such as the least and most effective conservation practices or notable aspects of the project's methods, monitoring, or results. How could other conservation organizations adapt their projects to build upon some of these key lessons about what worked best and what did not?

In order to get systemic change in the management plans and implementation, proper training of the MPA staff is necessary for buy-in of the concepts of marine ecosystem services, and more importantly, marine payment of ecosystem services (PES) to be used as a key strategy for MPA financing and management. Despite previous informal training, we learned during the formal training session that there were still lots of confusion around how to monitor ecosystem services and what payment for ecosystem services mean and how to design PES schemes. Through the formal training, we were able to both answer questions and clarify any confusion by having the staff put into practice these concepts in exercises they went through. It was particularly enlightening for the staff when the exercises centered around the habitats and ecosystem services on their island with which they were familiar.

We knew from the beginning that having robust socio-economic data was important for demonstrating the value of the ecosystem service of beach production given the predominance of the sun, sand, and beach tourism industry. We were pleasantly surprised at our results when we found the potential overwhelming economic impact of the loss of beaches and associated ecosystem services, based on the socio-economic surveys. These results were a key factor in gaining the attention and interest of the tourism industry members, who definitely paid attention to the findings. Moreover, we found that they were very eager for more information and were looking for some guidance on how they could get involved in protecting what they knew was important for their livelihood.

However, engaging this and other stakeholder groups, such as the fishing and local communities needed to be conducted in phases, beginning with informal discussions to understand their concerns and gain trust, slowly building to outreach and education on the concept of marine ecosystem services, and culminating in the concept of PES. We also found that it was best not to use the word "payment" right away as that implies a cost to them without them first understanding the potential losses or gains. It was better to use other words and concepts, such as investment, partnerships, and sustainable financing, at least initially if not entirely.

We also found that when we were able to provide a concrete example of one component of the ecosystem contributing significantly to delivering the ecosystem service of interest to them, namely sand production/beach maintenance, the stakeholders increased their understanding and became much more engaged. For example, through our scientific assessment we found that parrot fish can produce 6-7 tons of sand (on average) over its lifetime. When we conveyed this story to the stakeholders, they immediately understood the linkage and importance in protecting parrot fish, not as a conservation measure, but as a way to maintain the service delivery of sand production provided by these fish.

Although we identified the various lessons learned above, the most important lesson is one of patience. Engagement of the stakeholders required a lot of time and many repeated encounters. It proceeded at the comfort level of the stakeholders' understanding and acceptance of the concepts. It is better to present in smaller digestible amounts of information and let the stakeholders grasp them before building on with increasingly more complex concepts. Ecosystem services and PES are somewhat abstract ideas and requires lots of time and patience to convey.

Lastly, as with all efforts that involve multiple stakeholders, it is important to listen to their ideas and work with them on the specifics of the schemes. Currently, CORALINA is working with Decameron to design the payment schemes together such that the agreement will be acceptable to both parties involved. The chance of success and compliance will be much greater through this effort and the potential for truly long-term sustainable financing more ensured.

4. Dissemination

Briefly identify any dissemination of lessons learned or other project results to external audiences, such as the public or other conservation organizations.

We have distributed the project concept, design and research results thus far through several avenues. First, we have published articles by MARES staff and partner CORALINA staff in newsletters and publications, such as the widely

distributed Katoomba Group-Latin America newsletter Sinergia (http://www.forest-trends.org/documents/newsletters/sinergia_en.php?newsletterID=243) and the Columbian publication La Timonera (in Spanish and attached in final report).

We have also presented this work at numerous conferences, training workshops and seminars to both the international community as well as to other donors. Examples of the venues we have presented at are: Bundling and Stacking Payments for Ecosystem Services (PES) Workshop sponsored by (USAID Translinks, Wildlife Conservation Society, and Forests) in 2012, Private Sector and Government Stakeholder Meeting on San Andres Island in 2011, the 2nd International Marine Conservation Congress in 2011, the Marine Katoomba Private Meeting in 2010, the United States Agency for International Development (USAID) Biodiversity and Forestry Seminar, and the RedLac (Latin American and Caribbean Network of Environmental Funds) Meeting in 2010.

MARES consultant Juliana Castaño, (former) MARES Program Manager Winnie Lau, Dr. Brian Roach of Tufts University, and CORALINA MPA Chief Economist Rixcie Newball are working together to produce a scientific article on the results of the socio-economic surveys. This effort is supported by an award to Juliana to attend the “Caribbean Regional Writeshop to Support Developing Country Publications on Adaptation to Climate Change and Disaster Risk Reduction” sponsored by the Centre for Resource management and Environmental Studies (CERMES), University of the West Indies (UWI), Cave Hill Campus, Barbados, The Stockholm Environment Institute (SEI), and the UN International Strategy for Disaster Reduction (ISDR). We anticipate manuscript submission by the end of 2012.

5. Project Documents

Include in your final programmatic report, via the Uploads section of this task, the following:

- 2-10 representative photos from the project. Photos need to have a minimum resolution of 300 dpi and must be accompanied with a legend or caption describing the file name and content of the photos;
- report publications, GIS data, brochures, videos, outreach tools, press releases, media coverage;
- any project deliverables per the terms of your grant agreement.

POSTING OF FINAL REPORT: *This report and attached project documents may be shared by the Foundation and any Funding Source for the Project via their respective websites. In the event that the Recipient intends to claim that its final report or project documents contains material that does not have to be posted on such websites because it is protected from disclosure by statutory or regulatory provisions, the Recipient shall clearly mark all such potentially protected materials as “PROTECTED” and provide an explanation and complete citation to the statutory or regulatory source for such protection.*