

ANNEX C –TERMINAL REPORTS

(For External Projects Only)

Implementing Organization: The Nature Conservancy

Project No: PIMS 2193 PCA2011/DEPI/MCEB-CEP/003

Project Title: Management and Conservation of Reef Biodiversity and Reef Fisheries Pilot Project – Pedro Bank.

1. Project Needs and Results

Re-state the needs and results of the project.

Project Needs

The Pedro Bank is regionally and nationally important because of its history, its socio-economic value and its significant biodiversity. The Bank is Jamaica's largest artisanal and commercial fishing ground, and is the largest and one of the most productive ecosystems in the world for Queen Conch, making it a site of international fisheries importance. This notwithstanding, the Pedro Bank and Cays have suffered from years of severe neglect and weak management characterised by heavy human population density resulting in substandard living and sanitary conditions; poorly organised fishers with limited skills; over-fishing and unsustainable fishing practices; little or no fisheries management and enforcement; limited governance frameworks and legislation to support sustainable management and conservation and no formal biodiversity protection and monitoring.

The Pedro Bank Reef Biodiversity and Fisheries Pilot planned to focus on the development and implementation of an ecosystem-based project which incorporates principles of resiliency and protects and enhances important ecological areas which provide vital ecosystem services and serve as important fish nurseries and feeding grounds. Therefore the project planned to conduct activities for habitat restoration and threat reduction; establishment of Jamaica's first offshore marine protected area(s); capacity-building of government agencies and the fishing community; and developing and implementing a system of collaborative enforcement, and technical (physical, ecological, socioeconomic) and community-based monitoring.

Project results

The results of the project are numerous and far-reaching and though we had implementation challenges we are grateful for the opportunity to have worked with the stakeholders and had the achievements which were in part due to their support of our CLME project.

Habitat restoration and threat reduction activities resulted in an increase in nesting success and survival rate of the Masked Booby chicks on Middle Cay (Masked Boobies are a regionally important seabird thought to be a species distinct from that found in the Pacific). Surveys done indicated over 35% increase in the survival of chicks (i.e. less than an estimated 5% survival in February 2012 to over 40% survival in June 2012). A multi-stakeholder team involving personnel from NEPA, Dr Ann Sutton (ornithologist), TNC staff, led by Dr Pat Jodice (an ornithologist) participated in a week-long training session on seabirds handling, observation of seabird behaviour, measuring nesting success, satellite tagging, bird banding and monitoring training. The result is that there is now a larger team of persons capable of conducting these seabird conservation activities and there is satellite tracking data which continue to be collected until April 2013 and data analysis will continue to be provided by expert ornithologist Dr Pat Jodice from Clemson University. Results are also that the findings

of the satellite data analysis will guide management plans and actions, including better advise which countries we should partner with for transboundary management of the species.

The declaration and subsequent publicity of the establishment of the South West Cay Special Fishery Conservation Area by the Minister of Agriculture and Fisheries set the stage for our results achieved in equipping and staffing of the Pedro Bank Field Station and in achieving significant conservation results also. The provision of the goods and tools and the Pedro Conservation Officer and the 4 wardens hired under this project facilitated the following conservation activities on the Pedro Bank: two seabird workshops, solid waste cleanup of Middle Cay, cat eradication exercises, filming for educational material, management plan consultations, drafting a final management plan, and enforcement of the boundaries of the Special Fishery Conservation Area.

There was significant success in capacity-building of government agencies and the fishing community and developing and implementing a system of collaborative enforcement, and technical (physical, ecological, socioeconomic) monitoring. In addition to the capacity building in terms of seabird conservation; staff of the Fisheries Division, Veterinary Services Division, National Environment and Planning Agency, University of the West Indies, TNC and Living Ocean Foundation scientific team conducted a 9-day long expedition on the Pedro Bank. That expedition included conducting an AGGRA survey on specific sites around the Cays and the wider Bank. Alongside that exercise there was side-sonar scanning done that has allowed benthic mapping and identification of habitat types at those sites and others with similar characteristics. The expedition resulted in greater knowledge about the range of habitats on the Bank, the health of the reefs and surrounding waters of the Cays (including the extent of coral disease), range of species present and including Queen Conch; and thereby providing inputs into planning for and in time executing the zoning of the Bank. The LOF team of world-renown scientists and the Jamaican team shared knowledge and experiences that have built the capacity of the local team.

The demarcation of the boundaries of the special fishery conservation area (SFCA) through the placement of marker buoys was a significant result. The deployment required partnerships with the BREDS Treasure Beach Foundation who had recently deployed similar buoys in the Galleon SFCA, assistance and guidance from NEPA and the Fisheries Division and the Pedro SW Cay wardens. The SFCA at Pedro is particularly significant among the 11 other SFCA's nationally because it is considered the start of a series of MPAs that are intended to assist in the replenishment of fish stocks on the Pedro Bank; which are thought to be a source of the supply some fish stocks, larvae and other marine resources for the south coast of Jamaica and other areas in the Caribbean.

Community-based enforcement is ongoing through 4 wardens that were hired and patrolled the SW Cay special fishery conservation area (fish sanctuary) and environs for 4 months. Though no arrests were made the results were that there is a large increase in awareness of the fish sanctuary and rules about no fishing and other species management through outreach and education activities. There are voices among the community now calling for more sites to be set aside. The men acting as wardens were trained by TNC and the Fisheries Division in 2 separate training sessions and were efficiently conducting and reporting on the patrols. Patrols were not on a set schedule but on some days there were as many as 3 patrols and on others days less. The patrolling has been successful to deter breaches and advise persons of the sanctuary, and TNC will continue to fund the wardens until June 2013 at least.

Through the training of the 4 Pedro wardens and the subsequent position of relative power afforded to those men in their community, and the successful solid waste clean-up efforts that benefited from the labour and good will of almost the entire Pedro community, there have been early signs of a desire by the community members to organize themselves and manage the community in a less informal manner. Many have sought out TNC staff to ask to be a part of the wardens group seeking to be involved in the better management of the natural resources. We have encouraged them towards formal organisation and some community

members have been receptive to the sharing of information with them in that regard by the Jamaica Fishermen Cooperative Union.

We gave technical and regulatory advice for fisheries matters, namely for the development and drafting of regulations for management of sea cucumbers and other marine invertebrates; and the prohibition of shark finning. Further, we participated in and supported the promotion of the need for Lobster harvesting needing a fee/cess that would facilitate better management of the species, similar to the cess imposed on conch harvesting. The existing regulations under the Fishing Industry Act, 1975, were used to prepare technical information and educational materials with the aim of public awareness material to promote sustainable conservation and fishing practices for Pedro Cays community and the fishing community at large; including the production of posters, videos and other outreach materials that we plan to share with the Pedro community, our partners and other stakeholders in Pedro discussions and deliberations, the national fish sanctuary managers' network, with CAMPAM; and have been shared with participants at the WildAid MPA Enforcement – an international meeting of persons involved in conservation enforcement. The activities have resulted in greater information being made available about the seabirds and fish resources at Pedro and have bolstered the regulations for managing fishery resources.

The sharing and receiving best practices and lessons learnt through attending the CAMPAM MPA managers workshop, and local and regional seabird workshops resulted in the increased capacity of TNC staff, served to build relationships with other managers and foster collaboration and coordination among those involved in MOA management. Also the project facilitated the creation of various types of printed educational material for conservation, creation of training videos that focus on the establishment of the SW Cay SFCA and the connectivity of seabirds, and the continued showing and sharing of DVD documenting the Jamaica/Belize fisher exchange in 2009 called “Massa God Fish Can Done” which was inspiring and a call to action.

2. Project activities

Describe the activities actually undertaken under the project, giving reasons **why some activities were not undertaken, if any**.

Most of the outputs that were outlined in the logic framework of the project document were completed. Activities that led to the achievement of those outputs were as follows and are listed under the headings below:

1.1 Management Plan - Management Plan for Pedro Cays and Surrounding Waters

- Hire experienced contractor for the drafting of the plan and would lead the consultative process.
- Create Management Plan Advisory Committee using members from Pedro Bank Project Management Committee and agree to their scope of work.
- Two fisher consultations on the Pedro Cays
- Meetings and interviews with key stakeholders and partners
- Create two draft management plans and present at national stakeholder consultation involving all stakeholders.
- Identification of early actions under management plan and begin execution.

There was a request made of TNC at the start of the project for TNC to create a management and zoning plan for the entire Pedro Bank. However, though TNC also would have desired to conduct the related activities and achieve that output, the project had neither the requisite timeline nor the budget that could properly facilitate those activities.

1.2 Establish, Equip and Staff Field Station

- The Field Station was established in 2010, prior to the start of this pilot project.
- Procurement of equipment to enable conservation and management activities on the cays.
- Hiring of staff for community education, outreach, enforcement and management activities.

1.3 AGRRA Survey of the Pedro Bank to inform management

- Coordinated meetings with local Pedro project partners to determine information needed and areas to focus on for survey; and to ensure Loving Oceans Foundation (LOF) requirements met by all partners/participants.
- Coordinated meetings with LOF personnel to relay findings of local meetings and coordinate events.
- 10 day expedition on the Pedro Bank that included AGRRA surveys, benthic mapping, plankton sampling, meetings with Pedro Cays community members.
- Coordinated and participated in follow-up public awareness activities and gathering of information and footage from fish vendors in order to document demand for marine products and unsustainable fishing practices.

1.4 Establish Pedro Cays Fish Sanctuary

- Scoping of area to be declared and request for the declaration was done as far back as 2005 and 2009 respectively
- Consultation meetings held with fishers
- Ground truthing of boundaries with Fisheries Division and community members
- Survey of sanctuary boundaries, create and install buoys.

1.5 Using EBM Approach, continue managing, monitoring and begin habitat restoration

- Establishment of fish sanctuary/ Special Fisheries Conservation Area (SFCA) with blessing and participation of community.
- Meetings to coordinate cleanup of Middle Cay, procurement of equipment and execution of cleanup
- Cat eradication exercises to increase nesting success of Masked Boobies.
- Seabird workshops, tagging and tracking exercises to monitor movements and behaviour of Masked Boobies.
- LOF survey

TNC had the intention to plant vegetation as part of habitat restoration activities on Middle and South West Cays. After close consultation with partners and experts, the decision was made not to interfere with South West Cay as it is close to its natural state and the wildlife appears to thrive in the current state. The decision was also made not to plant vegetation on Middle Cay but for the opposite reason: This cay is very disturbed and would require a great deal of management intervention before we could consider planting vegetation as part of a habitat restoration activity. Additionally, the Masked Booby is the main type of wildlife on Middle Cay and it requires little to no vegetation for successful nesting.

2.1 Inform and support government to pass new fisheries bill and policy

- This activity evolved into the Fisheries Division asking TNC to assist with the redrafting of regulations that would accompany the new Bill which was stated as being so far advanced that there would not be any role for TNC assisting with the passage of the Bill and Policy. Then, meetings were held with Fisheries Division and Minister of Agriculture and Fisheries to inform them of TNC's willingness to assist with the regulations and to request a letter inviting TNC to do so.
- TNC Participated in discussions with government partners and other stakeholders to restrict/manage shark fishing, harvesting of sea cucumbers, sea urchins and other invertebrates. The suggestion was made to look at the Asian list of alternative medicine derived from marine products to help guide management steps as it is this

market that has driven the high demand for certain marine products leading to their unsustainable removal. E.g. Sea Cucumbers.

- TNC coordinated Pedro governance meetings to assist with the regional CLME governance aims with a view to determine the governance gaps for the Pedro Bank and make recommendations for change.

TNCs Standard Operating Procedures do not allow participation in laws and regulations and related government affairs without a formal request from government to do so. Despite many early requests (as far back as February 2012) for a letter inviting TNC to assist in this matter, the letter was not sent to TNC until September 17, 2012. This did not leave sufficient time to conduct the revision of the regulations. Despite that the activity will not take place under CLME we still intend and have the resources to conduct this activity and have the TOR for the hiring of an attorney to draft the regulations.

2.2 Train and develop personnel for management and enforcement

- Conservation Coordinator completed:
 - MPA Training of Trainers Workshop coordinated by CAMPAM Network in Belize.
 - Seabird workshop in San Salvador, Bahamas coordinated by the Society for the Conservation and Study of Caribbean Birds (SCSCB).
 - Rescue Diver, Enriched Air Diver and AAUS certification courses.
 - Buoy installation training coordinated by NEPA and executed by Halas Mooring Systems
- Conservation Coordinator and Conservation Officer completed MPA Enforcement workshop in San Francisco coordinated by WildAid.
- Pedro wardens participated in Wardens workshop coordinated by Fisheries Division in May 2011.
- Conservation Coordinator coordinated workshop for wardens of the Pedro cays and the wardens of the Galleon Beach Fish Sanctuary in February 2012. The workshop focused on the science behind MPAs, biodiversity, gathering of data, Fisheries and Wildlife laws and enforcement.
- Conservation Coordinator coordinated a local and a regional seabird workshop that looked at handling, tagging, tallying, tracking and monitoring of seabirds of the Pedro Cays. Participants learned to observe behaviour, determine nesting success, stresses, predators etc.

2.3 Assist community to organize themselves

- Coordinated cleanup of Middle Cay with community members and in doing so discussed through associated community meetings, the importance of community members organizing themselves in order to force improvements to governance arrangements, standard of living on the cays and protection of natural resources.

More emphasis was intended to be placed on this activity. A contractor was hired by TNC to provide conservation education and outreach activities as well as hold meetings with the community focusing on the importance of community self-organization. Unfortunately, the contractor did not produce early deliverables and the decision was made to terminate the contract. With less personnel available to complete project activities, this activity did not receive as much focus as initially planned. However we were able to share information provided by the Jamaica Fishermen Cooperative Union with the fishermen in this regard.

3.1 Public awareness and outreach materials activities:

- Hired videographer, education and outreach contractor, and graphic artist; reviewed proposals, shortlisted, interviewed, selected and hired contractors.
- Coordinated obtaining footage for the SW Cay SFCA and seabird connectivity training videos.
- Coordinated interviews and narration for videos.

- Conceptualized and finalized educational material on topical issues facing Jamaica's fisheries after liaising with the Fisheries Division and members of the Jamaica Fish Sanctuary Network.
- Sourced print company to print educational materials and material printed.

Educational material should have been created, disseminated and awareness activities conducted centered on these materials, by the education and outreach contractor. Because of the failed contract, materials were created late (by another contractor) and dissemination and awareness activities suffered as a result. TNC will disseminate the material created and conduct education and outreach activities in the upcoming months after the CLME project.

4.1 Share best practices and lessons learned activities:

- Creation and dissemination of training videos
- Coordination and execution of MPA wardens' workshop including Galleon Sanctuary staff and stakeholders such as National Environment and Planning Agency (NEPA), Jamaica Constabulary Force Marine Police Division (MP), Fisheries Division (FD) and The Nature Conservancy (TNC).
- Coordination and execution of seabird workshops hosted by TNC but part funded by the Society for the Conservation and Study of Caribbean Birds (SCSCB) and led by Dr. Patrick Jodice of Clemson University. Participants were from TNC Jamaica, NEPA and the University of the West Indies (UWI) Mona Campus for the first workshop and then included conservationists from US Virgin Islands, British Virgin Islands, Mexico, Guadeloupe, Colombia and TNC Jamaica for the second.
- Participation in Jamaica Fish Sanctuary Network meetings, meetings with government partners regarding issues facing the Pedro Bank, local and international workshops.

5.1 Conservation measures framework and monitoring and evaluation plan activities:

- Review of relevant documents, draft document and circulate to colleagues for review

3. **Project outputs**

Compare the outputs generated with the ones listed in the project document.

The table below compares the outputs generated in the project document prior to the start of the CLME Project, to what was actually achieved during the project.

1. Project Outcome = Expected Accomplishment or PoW Output	ACTUAL OUTPUT
1.1. Continue implementation of 'early actions' (necessary activities for phase 1 of plan) of the Pedro Cays Biodiversity and Conservation Management and Zoning Plan and complete a first draft	<ul style="list-style-type: none"> • Pedro Cays Biodiversity and Conservation Management and Zoning Plan (MP) completed. - Project data entered into Miradi prior to start of project and included into the management plan. - GIS mapping and creation of database not done, however, benthic habitat classification completed. - Consultations with community members and stakeholders in preparation of MP held and meeting notes taken.
1.2. Establish, Equip and staff the Pedro Bank Field Station	<ul style="list-style-type: none"> • Staff hired and patrols started. • Field Station used for conch survey, management plan consultations, cleanup activities, buoy deployment, seabird workshops etc. • Monitoring plan or sheets were not created during the project.
1.3 Conduct Atlantic and Gulf Rapid Reef Assessment (AGRRA) survey to update the 2005 AGRRA to inform and adapt the Pedro Cays management plan.	<ul style="list-style-type: none"> • AGRRA survey done by Living Oceans Foundation with participation from UWI, TNC, Fisheries Division, NEPA, Vet Services. • Field report completed • Full report that has analysis of data is being done by the Living Oceans Foundation and is not yet complete. • Recommendations from Field Report incorporated into MP • Benthic data collected around the cays using side scan sonar technology. Analysis also done and report submitted to TNC.
1.4 Establish a Pedro Cays Fish Sanctuary (including no-take areas)	<ul style="list-style-type: none"> • South West Cay Special Fisheries Conservation Area (sanctuary) declared under the Fishing Industry Act. • Conservation Officer hired to manage wardens. • Buoys installed to demarcate boundaries of sanctuary. • Wardens hired for patrolling of the sanctuary and infractions (with details) being recorded.

<p>1.5 Using an ecosystem-based management approach, continue and expand management and monitoring activities and begin habitat restoration</p>	<ul style="list-style-type: none"> • Monitoring of marine species has not begun due to delays in hiring staff and the subsequent limited time to get staff hired, patrols started and buoys deployed. • Some data on seabirds was collected during the June and October 2012 seabird workshops. Monitoring was also done for the preparation of the Seabird Conservation and Monitoring Plan. Reports and plan available. • Cat eradication (resulting in an increase in Masked Booby chick survival by about 35%), rat baiting and cleanup of solid waste all completed as part of habitat restoration activities. Incinerators handed out to community members and JDF Coast Guard as part of activity. Improvement of nesting success of masked boobies on Middle Cay noted.
<p>2.1 Inform and support Government of Jamaica (GoJ) with efforts to pass new National Fisheries Bill and Policy</p>	<ul style="list-style-type: none"> • TNC finally received correspondence from the GoJ through its Fisheries Division in September 2012 requesting its technical assistance in getting regulations to support the new National Fisheries Bill and Policy drafted. We have since drafted a contract to hire legal personnel that will provide this support to the Fisheries Division. The drafting and accepting of the regulations was not completed before the end of the CLME project.
<p>2.2 Train and develop an effective management and enforcement presence on the Pedro Cays comprised of government, NGO and community representatives</p>	<ul style="list-style-type: none"> • TNCs Conservation Coordinator attended: <ul style="list-style-type: none"> - MPA management workshop in Belize coordinated by CAMPAM Network. - Seabird workshop in San Salvador, Bahamas - WildAid MPA Enforcement workshop in San Francisco (also attended by Conservation Officer) • Fish Sanctuary Workshop held for members of Pedro Cays, Treasure Beach and Galleon Beach communities. Patrols now in effect and data being collected on infractions committed. • Seabird Training workshops held for TNC, NEPA, UWI and regional conservationists and birders. • Reports on all activities submitted to UNEP and available.
<p>2.3 Continue efforts to assist the Pedro Cays fishing community to organize themselves, and assist them to seek to revise governance arrangements on the Bank and Cays for better, more sustainable management of the Bank's resources.</p>	<ul style="list-style-type: none"> • Not accomplished. This aspect of the project was to be completed by the Education and Outreach contractor. Due to non-performance, this contract was terminated. Production of community educational material was taken on by TNC as priority over the community organization meetings as it was felt that to accomplish true organization, far more time was required.
<p>3.1 Develop public awareness and outreach materials and activities (newsletters, internet materials, etc.) to promote education and awareness and develop conservation leaders among the fishing community.</p>	<ul style="list-style-type: none"> • Outreach materials were created <ul style="list-style-type: none"> - Outreach material included posters, training videos and signs.

<p>4.1 Share best practices and lessons learnt from activities with the wider national and regional community through the use and dissemination of print and video materials, and web-based methods among others</p>	<ul style="list-style-type: none"> • Print materials created but yet to be distributed. • Video material created and shared with partners including FD, NEPA, Jamaica Fish Sanctuaries Network, Fisheries Advisory Board, CAMPAM Network etc. • Training workshops done to share knowledge and techniques/practices and reports created. • Meetings attended with government partners to try to find a solution to solid and human waste, and fisheries management issues that face the Pedro Bank.
<p>5.1 Develop a conservation measures framework and monitoring and evaluation plan to provide inputs to a robust adaptive management regime based on TNC's and the Conservation Measures Partnership (CMP) methodologies.</p>	<ul style="list-style-type: none"> • Framework completed
<p>2. Project Outputs:</p>	
<p>1.0. Support and improve the governance of Jamaica's reef fisheries and marine biodiversity management through piloting community-derived governance recommendations, investment in resource monitoring and management, establishment of marine protected areas, and building enforcement and surveillance capacity necessary to abate threats to fisheries and biodiversity.</p>	<ul style="list-style-type: none"> • Management plan created with input from community members and stakeholders. Meeting records taken. • Field Station operational and has hosted many groups for many activities including conch survey, consultations, buoy deployment, cleanup activities, cat eradications, workshops etc. • Biological survey data collected through LOF expedition and seabird surveys
<p>2.0. Promote behavioural changes and attitudes towards resource-extraction and conservation through education and sensitization, as a means to begin reducing fishing pressure and the rate of extraction on the Pedro Bank.</p>	<ul style="list-style-type: none"> • Public awareness and outreach materials produced. • Activities being developed. This has not been completed within the lifespan of the project due to the lateness in producing educational materials. This was late because of the termination of the education and outreach contract.
<p>3.0. Share lessons learnt and facilitate the transfer of best practices for application and adaptation to sites in-country and throughout the region facing similar challenges.</p>	<ul style="list-style-type: none"> • Reports and conservation measures framework completed. • Sharing of lessons learned and project activities done through preparation of management plan and consultations; workshops on Pedro Cays and in Treasure Beach; workshops/conferences attended in Belize and Colombia. • Monitoring plan delayed; however, aspects have been completed in the Management plan and the Seabird Conservation and Monitoring Plan.
<p>3 Project Milestones</p>	
<p>M1. Pedro Cays Biodiversity and Conservation Management and Zoning plan developed.</p>	<p>Completed</p>
<p>M2. Pedro Bank Field and Research Station fully equipped and staffed.</p>	<p>Completed</p>
<p>M3. Pedro Cays Fish Sanctuary established</p>	<p>Completed</p>

List the actual outputs **produced but not included in previous Progress Reports** under the following headings:

(Please tick appropriate box)

(a) **MEETINGS** (UNEP-convened meetings only) NOT UNEP MEETING
 Inter-governmental (IG) Mtg. Expert Group Mtg. Training Seminar/Workshop
 Others
 Title: WildAid Global MPA Enforcement Conference

 Venue and dates: Hotel Kabuki, San Francisco, USA, November 25 – 28, 2013
 Convened by: WildAid Organized by: WildAid
 Report issued as doc. No/Symbol: NA
 Languages _____ Dated _____
 For Training Seminar/Workshop, please indicate: No. of participants >150 and attach annex giving names and nationalities of participants. **See Appendix A**

(b) **PRINTED MATERIALS**
 Report to IG Mtg. Technical Publication Technical Report **Others**
 Title: Fisheries Conservation Posters: Conch Regulations, Fishing Regulations, Spiny Lobster Regulations, Trigga and the Law, Night Spearfishing is Illegal, South West Cay Fish Sanctuary.
 Author(s)/Editor(s) The Nature Conservancy
 Printers: Lithographic Printers Ltd.
 Symbol(UN/UNEP/ISBN/ISSN): NA
 Date of publication: NA
 (When technical reports/publications have been distributed, attach **distribution list**)

(c) **TECHNICAL INFORMATION** **PUBLIC INFORMATION**
 Description : Training videos created that speak of seabird connectivity in the region as well as the establishment of the South West Cay Special Fisheries Conservation Area.
 Titles : ‘Connecting the Caribbean with Seabird Conservation’ ‘Protecting Pedro – South West Cay Fish Sanctuary’.
 Videographer : Esther Figueroa
 Dates: November 29, 2012.

(d) **TECHNICAL COOPERATION**
 Grants and Fellowships Advisory Services
 Staff Missions Others (describe)
 Purpose _____

 Place and duration _____
 For Grants/Fellowships, please indicate:

<u>Beneficiaries</u>	<u>Countries/Nationalities</u>	<u>Cost(in US\$)</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

(f) OTHER OUTPUTS/SERVICES

For example, Networking, Query-response, Participation in meetings etc.

TNC presented at a meeting on December 20, 2012 with the Fisheries Advisory Board of the Ministry of Agriculture and Fisheries to share CLME project successes and to discuss the Advisory Board's role in the management of the resources of the Bank going forward. They agreed to set up a forum where TNC could make a presentation to the Fisheries Management and Development Fund Board and hold similar discussions with that entity for the longer-term management of the Pedro Bank's resources, specifically requesting them to participate by providing financial resources to cover basic management costs

TNC also participated in recent meetings with the Fisheries Division and Pedro Bank stakeholders to discuss solutions to solid and human waste management and disposal on the Pedro Cays. These were held in January 2013. Technical advice from TNC regarding our current human and solid waste management practices utilised at the Field Station were provided, as well as TNC reports prepared in 2005 and 2006 by consultants with expertise in these matters.

4. Use of outputs

State the use made of the outputs.

1.1. Management Plan

- Forming part of national discussions on governance of the Pedro Bank including types of Protected Areas to be designated and roles and responsibilities of government stakeholders.
- Used by partners to inform management decisions on the Pedro Cays such as solid and human waste disposal and carrying capacity.
- Used by TNC and project partners to guide work on the ground including research, awareness, monitoring, management and enforcement activities.

1.2. Field Station

- Has been used by TNC and other partners such as National Environment and Planning Agency (NEPA), Fisheries Division, National Solid Waste Management Authority (NSWMA), Jamaica Defence Force (JDF), Regional seabird experts and conservationists, University of the West Indies, among others, for research, conservation and management activities.

1.3. AGRRA Survey

- Used to confirm value of area around South West Cay as one ideal for protection
- Used as an opportunity to do benthic mapping of the MPA and areas around the other two cays
- Used to inform of other areas that could be offered protection in the future

1.4. Establish Fish Sanctuary

- Used as replenishment area for fish, lobster, conch, coral and other marine resources
- Used to introduce community members to alternative livelihood options as well as MPA management
- Used as Pilot in order to show at local and regional level how an offshore MPA can be managed successfully

1.5. Management, Monitoring and Habitat Restoration

- Used as opportunity to engage and educate community
- Used to improve conditions on Middle Cay for wildlife and the community

2.1. Passing of new Fisheries Bill – Yet to be done

2.2. Training of enforcement Personnel

- Used for capacity building to empower community members to manage the resources that they depend on in a more sustainable way.

- Used to better enable enforcement agencies and personnel to execute their duties
 - Used to better enable TNC to execute its duties in office and on site.
- 2.3. Assistance in organizing the Pedro Cays Community
- Has enabled cleanup efforts and cooperation with TNC as it relates to conservation activities.
 - Has created more awareness and care in community members about their surroundings
- 3.1. Public Awareness material
- Has been used to sensitize community members on the rules and regulations associated with their livelihoods in an attempt to bring about acceptance and adherence to sustainable practices.
 - Has been used to remind enforcement personnel of the regulations and the role they play in natural resource management.
 - Has been used to promote the work of the project locally and internationally.
- 4.1. Share Best Practices
- Has been used to promote the work of the project locally and internationally.
 - Has been used in order to give confidence and ideas to other practitioners as well as allow feedback to improve our operations.
- 5.1. Conservation Measures Framework and Monitoring and Evaluation Plan
- A tool has been created to track our success, the success of our partners and the success of the Project on a whole beyond the CLME.

5. Degree of achievement of the objectives/results

On the basis of facts obtained during the follow-up phase, describe how the project document outputs and their use were or were not instrumental in realizing the objectives/results of the project.

The major objective of the CLME Reef Biodiversity and Fisheries Pilot Project, according to the project document, is to promote the ecosystem-based approach and strengthen the assessment, management, and governance frameworks required to promote the ecological integrity of Caribbean reef systems and their ability to withstand environmental shocks and stresses.

Further Objectives/Results were stated in the project document as follows:

Result 1. Result 1: Integrated ecosystem-based management needs assessed and management frameworks strengthened.

The outputs stemming from Objective/Result 1 were instrumental in the project team realizing the assessment of ecosystem-based management needs and strengthening of management frameworks. The following describes how:

- Management plan being used by government stakeholders to address issues that have plagued the Pedro Bank and Cays for decades. Among these are:
 - proper disposal of solid and human waste
 - improved natural resource management through increased enforcement (patrols of the SW Cay SFCA by Coast Guard and Marine Police), plans to assign two fisheries officers to the Pedro Bank to assist in enforcement, monitoring and awareness
 - identification of a source of funds to improve management of the Pedro Cays and Bank (Fisheries Management and Development Fund)
 - increased involvement in management discussions by NGOs and experts such as TNC and Jamaica Environment Trust (JET)
- Community engaged and empowered to manage their resources through:
 - Cleanup activities where community members have seen how thought and effort impacts their care for the environment, and have seen the benefits to themselves (less flies, rodents, cockroaches, better aesthetics) and the wildlife (more boobies).

- Cat eradication activities where community members have seen marked improvement in the survival of booby chicks.
- Buoy installation and enforcement activities of the SW Cay SFCA.
- Field Station has greatly increased the capacity of TNC and stakeholders of the Pedro Bank Management Programme to do work on the Pedro Bank. It has facilitated:
 - Lionfish workshop
 - Seabird workshop
 - Community consultations
 - Cleanup of Middle Cay by TNC followed by Fisheries Division and National Solid Waste Management Authority
 - Conch survey
 - Government led census activities
- Purchase of a boat engine for the JDF Coast Guard has greatly increased their capacity to conduct patrols of the SW Cay SFCA and monitor unsustainable and illegal fishing practices around the cays. Since receiving the engine, they have begun patrols and are preventing night spearfishing from the Pedro Cays.

It became necessary to facilitate the participation of the JDF Coast Guard in enforcement activities to bolster the enforcement efforts of the community wardens. The JDF had the appropriate vessel but had no reliable engine. The additional enforcement provided brings with it the presence of the Marine Police as well as the Coast Guard officers who can arrest persons, if necessary, for any breaches of Jamaican laws.

Result 2. Result 2: Existing regulations analysed, with new regulations in place and collaborative enforcement mechanisms identified.

This objective was not fully met in the lifespan of the project despite TNC's efforts. TNC remains committed to supporting the Government of Jamaica, beyond the CLME Project, with efforts to pass the new National Fisheries Bill and Policy. Despite delays in the passing of the bill however, the following were critical towards identifying and implementing collaborative enforcement mechanisms:

- TNC has facilitated community patrols of the SW Cay SFCA (within the CLME Project) where wardens document and report on patrols done and offenses committed. Reports are made to TNC, Coast Guard and Marine Police.
- TNC facilitated the training of community wardens to enable them to carry out these duties.
- Through the project's provision of a boat engine to the JDF Coast Guard, patrols and enforcement activities are being conducted on the Pedro Bank. Both the Coast Guard and the Marine Police will share patrol records with TNC and the Fisheries Division and vice versa as it relates to TNC's records of the patrols that it facilitates.

Result 3. Result 3: Public awareness, education, and outreach focused on regulations and enforcement enhanced.

The outputs stemming from Objective/Result 3 allowed the enhancement of public awareness, education and outreach materials focused on regulations and enforcement:

Note that all educational material was created having factored in the views of members of the Jamaica Fish Sanctuaries Network, the Fisheries Division and other project partners and stakeholders.

- Production of posters that speak to the following regulations:
 - Spearfishing at night
 - Unsustainable fishing practices
 - Taking of undersized, berried and out of season lobsters
 - Taking of undersized and out of season conch
 - Fishing in the SFCA/Fish Sanctuary
- Production of training videos that focus on seabird connectivity in the Caribbean and the importance of protecting them, and on the SW Cay SFCA rules, regulations, purpose and its value to the fishing community.

- Media coverage for public health, environmental and fisheries related issues on the Pedro Cays and Bank, first through the Living Oceans Foundation and again through highlight of solid waste on Middle Cay.

Result 4. Result 4: Best practices transferred between partners with lessons learnt disseminated locally, nationally, and regionally.

Through the outputs stemming from Objective/Result 4, material that documents the project's best practices and lessons learned is now available to the public via dvd and internet.

Additionally the following workshops were held where best practices and lessons learned were shared:

- Marine Protected Area workshop for wardens of the SW Cay SFCA and those of the Galleon Beach Fish Sanctuary.
- Seabird workshop on the Pedro Cays for local partners that included the University of the West Indies and the National Environment and Planning Agency. It focused on the work that TNC has been doing with the seabird colonies of the Pedro Cays, the problems we have been facing, as well as ways to track and monitor movements of the birds.
- Seabird workshop on the Pedro Cays for regional personnel that focused again on the work that TNC has been doing with the seabird colonies of the Pedro Cays, the problems we have been facing, successes we had from the local workshop and how we could improve tracking and monitoring the movements of the birds. Methods were tested during the workshop and these technologies may be used by participants in their area. Participants came from Colombia, US Virgin Islands, British Virgin Islands, Mexico and Guadeloupe.

Result 5. Result 5: Adaptive management improved through the introduction of best management practices.

Through the creation of a conservation measures framework and monitoring and evaluation plan, TNC is in a position to drive its implementation beyond the CLME Project. We have received commitments from partners to provide the necessary inputs.

6. Conclusions

Enumerate the lessons learned during the project execution. Concentrate on the management of the project, indicating the principal factors, which determined success or failure in meeting the objectives set down in the project document.

Outlined below are the Critical Success Factors as outlined in the project document:

Critical Success Factors

Result 1: Integrated ecosystem-based management needs assessed and management frameworks strengthened.

Result 1 will be achieved by successfully completing the following actions:

- 1.1. *Continue implementation of 'early actions' of the Pedro Cays Biodiversity and Conservation Management and Zoning Plan and complete a first draft.*
- 1.2. *Establish, equip and staff the Pedro Bank Field and Research Station*
- 1.3. *Conduct Atlantic and Gulf Rapid Reef Assessment (AGRRA) survey to update the 2005 AGRRA to inform and adapt the Pedro Cays management plan.*
- 1.4. *Establish a Pedro Cays Fish Sanctuary (including no-take areas and a wildlife reserve).*
- 1.5. *Using an ecosystem-based management approach, continue and expand management and monitoring activities and begin habitat restoration.*

Result 2: Existing regulations analysed, with new regulations in place and collaborative enforcement mechanisms identified.

Result 2 will be achieved by successfully completing the following actions:

- 2.1 *Inform and support Government of Jamaica (GoJ) efforts to pass new National Fisheries Bill and Policy*
- 2.2 *Train and develop an effective management and enforcement presence on the Pedro Cays comprised of government, NGO and community representatives.*
- 2.3 *Continue efforts to assist the Pedro Cays fishing community to organize themselves, and assist them to seek to revise governance arrangements on the Bank and Cays that they would recommend to the GOJ for better, more sustainable management of the Bank's resources. (This would facilitate community-based work & collaborative enforcement & compliance targeting previously engaged fishers).*

Result 3: Public awareness, education, and outreach focused on regulations and enforcement enhanced.

Result 3 will be achieved by successfully completing the following actions:

- 3.1 *Develop public awareness and outreach materials and activities (brochures, training materials, newsletters, internet materials, etc.) to promote education and awareness and develop conservation leaders among the fishing community.*

Result 4: Best practices transferred between partners with lessons learned disseminated locally, nationally and regionally.

Result 4 will be achieved by successfully completing the following actions:

- 4.1 *Share best practices and lessons learned from activities with the wider national and regional community through the use and dissemination of print and video materials, workshops and web-based methods among others.*

Result 5: Adaptive management improved through the introduction of best management practices.

Result 5 will be achieved by successfully completing the following actions:

- 5.1 *Develop a conservation measures framework and monitoring and evaluation plan to provide inputs to a robust adaptive management regime based on TNC's and the Conservation Measures Partnership (CMP) methodologies. The CMP is a partnership of conservation organizations (including TNC) that seek better ways to design, manage, and measure the impacts of their conservation actions. For more information, see: <http://www.conservationmeasures.org/>.*

Lessons Learned

1.1 Management Plan

- i. The process chosen for creating the management plan was a good one. It involved all stakeholders and tied in with national and regional conservation objectives.
- ii. This management plan will be best implemented through a small but targeted committee where each member commits to a role.
- iii. Management plan implementation is affected very much by governance structure. In this case, we see that many of the government stakeholders have overlapping roles and responsibilities making the one that is to drive actions unclear. This reduces efficiency.

1.2 Establish, Equip and Staff Field Station

- i. It was very beneficial to have had the Field Station built before the start of the CLME project. Given the lengthy delays and high costs associated with that activity, it would have been impossible to give that activity the attention it needed in addition to everything that the project accomplished.
- ii. The difficulties associated with a harsh and remote site like the Pedro Cays were driven home constantly and must be taken into consideration when planning every activity there and in the marine environment on a whole.

1.3 AGRRA Survey of the Pedro Bank to Inform Management

- i. This was another activity that would have been exceedingly difficult without the funding and expertise provided by The Living Oceans Foundation. It was a good strategy to push for the expedition during the lifespan of the CLME. The time, professionalism, expertise and experience provided by LOF were priceless and it showed the local participants what to aspire to when conducting similar studies.
- ii. The actual activity confirmed the area around South West Cay to be an ideal area for a fish sanctuary and indicated other areas that have been stated by fishers to be good areas for protection as well.

1.4 Establish Pedro Cays Fish Sanctuary

- i. As much as we thought that we would have had the declaration of the SW Cay SFCA fairly early in the project, it did not materialize until very late showing us that we should be more conservative in developing objectives that depend on government decisions and timelines.
- ii. We have been speaking of the need for a declaration of the sanctuary for years with the Pedro fishing community and because of the length of time the declaration took, a great deal of scepticism arose from community members. Getting it done and installing the buoys showed us the belief the community still had and their willingness to participate and be guided.

1.5 Using EBM approach to continue managing and monitoring and begin habitat restoration

- i. As before, the willingness of the community to work with us, to be guided, take and give advice, were all encouraging. We learned the importance of community involvement and doing small but essential things in order to foster good relationships. Eg. The cleanup of the cay and rodent eradication exercises.
- ii. We learned about the resilience of the Masked Boobies on Middle Cay. Mere months after the cat eradication exercises, the nesting survival had increased significantly with over 40 chicks seen in various stages of development in June 2012 – over 35% increase in survival when compared to less than 5% in February 2012.
- iii. Learned of new areas on the Bank that the fishing community will support for protection.
- iv. We learned of the differences in attitude between Middle Cay and North East Cay (Top Cay) fishers. Top Cay fishers tend to be more proactive and supportive of conservation efforts. Additionally, they are more inclined to adopt sustainable practices because these practices are “right” rather than because they are being told to do so or because they will earn from any associated activities.

2.1 Inform and support Government to pass new fisheries bill and policy

- i. Despite the many discussions with the Fisheries Division about this and the best of intentions, TNC did not receive a letter of invitation to conduct this activity until September 17, 2012. TNC learned of the institutional limitations of the Fisheries Division.

2.2 Train and develop personnel for management and enforcement

- i. Trainings were highly successful. In each instance that a workshop was coordinated, a competent team was put together consisting of committed experts, ample time was set to coordinate the event, regular planning meetings were held and we had an ample budget for the activity.
- ii. In administering the MPA training we learned of the need for training of enforcement personnel on environmental laws.
- iii. We were told repeatedly that the magistrates need more sensitization as they do not do what they can to thwart persons in breach of environmental laws.

2.3 Assist community to organize themselves

- i. The value of such an exercise was firmly driven home. Earlier and more activities could have resulted in more participation by community members, earlier attempts by government to assist the marginalized community and better coordination of government activities to assist and manage the community and its issues.

3.1 Develop public awareness and outreach materials

- i. Developing this material was very time consuming. Contracting someone dedicated to this aspect of the project was a good decision. It is unfortunate that the contract had to be terminated.
- 4.1 Share best practices and lessons learned
- i. It is critical to document all activities every step along the way. Activities and results do not often occur in the way and within the timeline planned. When there is regular adaptation in many different aspects of the project – all in the same timeframe, information and full details of occurrences can easily be lost.
- 5.1 Develop Conservation Measures Framework and Monitoring and Evaluation Plan
- i. We have learned the value of planning every move with the view to monitor these activities and evaluate successes.
 - ii. We have also learned the value of involving stakeholders in the project every step of the way, making them feel valued. In the end, they are the ones that will make the project a success. They will be the ones charged with part(s) of the monitoring and evaluation. This process can be seamless if they commit to the project and accept ownership.

7. **Recommendations**

Make recommendations to:

- i. Improve effect and impact of similar projects in the future;

Build community interest, participation/involvement, trust – Select community need/s, whether project related or not, that will take minimal time, effort and resources to provide/resolve, and work with community to do so. The selected activity/ies should be a genuine need that has long-lasting impacts for all. For this project, the cleanup activity on Middle Cay and the making and installation of demarcation buoys for the SFCA were crucial in garnering community support, trust, involvement and acceptance of our activities. We have since seen increased interest and efforts by community members in caring for their surroundings, greater concern for the protection of marine resources (specifically, persons interested in becoming wardens and numerous suggestions of more areas on the Bank that should be protected) and greater participation in meetings to learn about and discuss conservation issues.

Funding that supports procurement of major/non-expendable equipment at the site level – There is a critical need for this from most NGO's, especially those that work in remote locations like the Pedro Bank. An example would be a patrol boat for the Pedro Bank. In the absence of regular patrols by the authorities, the ability of an NGO to facilitate patrols in whatever way would have gone a long way. If funders could be more flexible with what it allows NGOs and community based groups to procure a lot more could be accomplished.

Overcome government bureaucracy – Most things involving government decisions and documentation took an exceptionally long time for the project. Seek all government commitments, support letters, permits etc. prior to the start of the project if possible, or very early in the project. Discuss stakeholders' understanding of their roles and seek support from ministers, where necessary and as early as possible. Involve government partners in the drafting of proposals and keep them apprised of same.

Budget ample time and personnel, if possible, for commonly overlooked activities that often take up a lot more time and/or experience more delays than expected – Start these activities early. For example:

- Staff hires – It takes considerable time to advertise for a position, sieve through résumés, coordinate interviews etc. Once the hiring process is complete, training is a must in order to get the selected employee up to speed with project activities.
- Report writing – It is crucial to document all of your activities in very detailed, well filed reports. As intimate as one gets with a project, one does not always remember the fine details of all activities. It is critical to have these reports when preparing to share these experiences and for fundraising activities as well.
- Sharing of experiences and best practices and drafting of associated documents – It is often easy to get caught up in everyday project activities and forget to promote and share the accomplishments and good work being done. Take a moment to promote project activities, the accomplishments in particular. It is just reward for your efforts and those of your team and could result in fundraising opportunities.
- Media Involvement – Be sure to involve media as much as possible and as early as possible; they are always busy and environmental work/issues are not always a high priority.
- Procurement of large equipment – Sourcing of the ideal items, competitive quotes, tax waivers, collection of these and their storage are all time and labour intensive.
- Event planning – Community activities, workshops and events on a whole take up a lot of time and resources.

Partnerships – Foster good partnerships with as many persons, entities, networks as possible. Resources are often very limited in conservation and it makes no sense starting from scratch when others have done it.

ii. Indicate what further action might be needed to meet the project objectives/results.

Make good use of Top Cay fishers – Top Cay fishers on the Pedro Bank have a very refreshing attitude to conservation. In the near future, when more protected areas are being deliberated for the Pedro Bank, an area around Top Cay should be seriously considered so that this group could manage it; so too any alternative livelihood and sustainable development projects.

The management plan needs a government entity to drive its implementation – Many government stakeholders participated in the development of the management plan and many of them agreed and contributed to the strategies. There must now be an entity to drive the implementation of the plan that will have the necessary stakeholders commit to their role.

Education of community members – This is an activity that must be continued on a regular basis to capture as many of the community members as possible, especially given the fact that the population is not yet fixed i.e. there are different persons coming and going constantly. Areas of focus are rules and regulations, how to dispose of human and solid waste, sustainable fishing practices, general information on the resources of the Pedro Bank and the studies that Pedro Bank project partners have done.

Education of the general public – Education of the public on a whole must augment work being done on the Bank and the fisheries sector. Everyone including our visitors should know when close seasons are for our marine products and the significance of same. They should know not to purchase or consume these products and who to report breaches to. Similarly, establishments such as restaurants, hotels and supermarkets should be targeted for education and held accountable for breaches, with fines going directly towards the management of Jamaica's fisheries.

Organizing Community Members – This task is key for the implementation of measures on the Pedro Bank and Cays. The community needs to have a unified body that speaks to its needs and can negotiate management decisions on its behalf and report back to it. It is equally important for decision makers to be able to liaise with this body as it should result in strategies being discussed and implemented with the confidence that the community has been consulted with and is in agreement.

Increased sensitization of enforcement personnel and magistrates through workshops and similar activities.

Continue efforts to pass new fisheries bill and supporting legislation – This will provide the legislative framework to implement better management strategies for the natural resources and the people that rely on those resources.

Use the momentum of the CLME project to implement effective, longterm management of the Pedro Bank and its resources

8. Non-expendable equipment (value over US\$1,500)

Please attach to the terminal report a **final** inventory of all non-expendable equipment (if any) purchased under this project, indicating the following:

Date of purchase, description, serial number, quantity, cost, location and present condition, together with your **proposal** for the disposal of the said equipment.

See Appendix B – Inventory of non-expendable equipment purchased under CLME Project

**Appendix A – Global MPA Enforcement Conference
Attendee Contact List (see attachment).**

Appendix B - Inventory of non-expendable equipment purchased under CLME Project

Only one item of non-expendable equipment was purchased under the CLME Project, a boat engine. The engine was provided by The Nature Conservancy (TNC) through a grant to the Jamaica Defence Force (JDF) Coast Guard. The total value of the Grant was Ja\$700,000.00. The Coast Guard used these funds to purchase an engine for their small vessel on the Pedro Cays that would be used to conduct patrols of the South West Cay Fish Sanctuary. Remaining funds were used to buy fibreglass material to repair the hull of the said vessel.

Date of purchase:	December 13, 2012
Description:	Yamaha, Enduro, 65 Horsepower, outboard engine.
Serial Number:	L100757
Quantity:	1
Supplier:	Yamaja Engines Ltd.
Cost:	Ja\$602,250.00
Location:	Middle Cay, Pedro Bank
Present Condition:	Brand new, broken in on January 10, 2013 and delivered to the Pedro Cays on January 15, 2013 to begin patrols
Disposal of Equipment:	The Coast Guard will follow its procedures for handling boat engines when they are no longer serviceable. When this time comes, hopefully after long years of effective use, engine parts will be recycled and the rest will be stored with other similar items until handed over to the scrap metal industry.

ANNEX D- GUIDELINES FOR FINANCIAL REPORTS

Format of Project Expenditure Accounts for Supporting Organizations


October 1, 2012..... toDec. 31, 2012.....

Project No. Supporting Organization ..The Nature Conservancy.....

Project title:..Pedro Bank Management
Project.....

Project commencing: ..May 4, 2011..... Project ending: ..Dec. 31, 2012.....

Object of expenditure by UNEP budget code	Project budget allocation for year		Expenditure incurred		Unspent balance of budget allocation for year			
			for the quarter	Cumulative expenditures this year				
	m/m (1)	Amount (2)	m/m (3)	Amount (4)	m/m (5)	Amount (6)	m/m (7)	Amount (2)-(6)
1100 Project personnel		72,753.00	40,516.05	80,306.83				
1200 Consultants		39,500.00	78,972.02	92,906.02				
1300 Administrative Support								
1400 Volunteers								
1600 Travel		0.00	3,109.80	11,520.17				
2100 Sub-contracts								
2200 Sub-contracts								
2300 Sub-contracts								
3100 Fellowships								
3200 Group training		28,274.00	2,748.00	8,757.98				
3300 Meetings & conferences								
4100 Expendable equipment								
4200 Non-expendable equipment		47,600.00	0.00	0.00				
4300 Premises		0.00	1,450.66	1,662.52				
5100 Operation		99,170.00	44,324.75	61,401.55				
5200 Reporting Costs								
5300 Sundry		10,800.00	7,860.66	8,154.67				
5400 Hospitality								
99 GRAND TOTAL		298,097.00	178,981.94	264,709.74				

Signed: 
Duly authorized official of supporting organization

NB: The expenditure should be reported in line with the specific object of expenditures as per project