



## Darwin Initiative Main Project Half Year Report (due 31 October 2015)

<b>Project Ref No</b>	22-016
<b>Project Title :</b>	Securing livelihoods, health and biodiversity through seascape-scale sustainable fisheries co-management.
<b>Country(ies)</b>	Madagascar
<b>Lead Organisation</b>	WCS
<b>Collaborator(s)</b>	GRET, Ministry of Marine Resources and Fisheries (MRHP), Ministry of Public Health (MSP), Ministry of Agriculture and Rural Development (MINAGRI), Committee for the Sustainable Development of Antongil Bay (PCDDBA)
<b>Project Leader</b>	Ambroise Brenier, Stéphanie D'agata
<b>Report date and number (e.g., HYR3)</b>	October 31, 2015; HYR1
<b>Project website/Twitter/Blog /Instagram etc</b>	
<b>Funder (DFID/Defra)</b>	DFID

### **1. Outline progress over the last 6 months (April – Sept) against the agreed baseline timetable for the project (if your project has started less than 6 months ago, please report on the period since start up to end September).**

During the first 6 months of the project we were able to: i/ sign the sub-grant agreement with GRET, our Rural Development NGO partner in charge of the implementation of coastal livelihoods diversification activities (Output 2); ii/ secure matching funds from the French Agency for Development (AFD); iii/ hire new field team members including 1 coordinator of livelihoods development activities, 2 marine conservation community-liaison staff, 1 agricultural extension worker, and 10 local research staff to complement the existing team in the project area and two coral reef ecologists to strengthen the WCS scientific team in Antananarivo in July and September 2015; iv/ rent a new project office in Mananara; v/ buy a new boat to facilitate local travel and reef surveys in Antongil Bay; vi/ accomplish the activities detailed below for each output of the project.

#### **Output 1 (Increase enforcement and compliance of marine use policies for a more productive fishery):**

The first annual meeting of Antongil Bay Fisheries Co-Management Plan (ABFMP) Steering Committee was held in Fenerive Est on 15 July 2015 with 26 participants from the Ministry of Fisheries, WCS, Antongil Bay Locally Managed Marine Areas (LMMAs), Madagascar National Parks, Maroantsetra and Mananara Federations of fishers, local authorities and two private sector partners (Réfrigépêche and SPSM). During this event, participants reviewed the progress of implementation of ABFMP and reached the following key decisions: (i) the need for MRHP, with the assistance of WCS, to create a database of all traditional fishers from Antongil Bay; (ii) the need to develop an MoU between WCS and the marine fishery patrol (CSP – Centre de Surveillance des Pêches) to facilitate law enforcement; and (iii) an increase in the number of representatives of small-scale fishers in the Steering Committee.

Strengthen the ability of coastal communities to more effectively manage the network of 24 LMMAs through capacity building activities: We helped local fishers to develop a 'Dinabe' (a

local social convention between all villages bordering Antongil Bay), which consists of a set of rules and regulations on sustainable management of Antongil Bay small-scale fisheries. This Dinabe was validated by local communities and government authorities during a workshop in Maroantsetra in June 2-3 2015. The final step for the formalization of the Dinabe is its approval by the Court. Unfortunately the Court rejected the Dinabe due to the pressure of illegal fishers, and we are now working with the MRHP to find a solution to this issue through the Malagasy judicial system, notably through the launching of an appeal by the MRHP in the regional court. In the short-term the rejection of the Dinabe will not have an impact on the project or the timeline as the enforcement and resource management provisions included in the Dinabe are already included in the ABFMP and are being implemented by the CSP and local communities. The approval of the Dinabe will be important to the sustainability of these actions in the long-term. We also started working with MRHP and local communities managing LMMAs to record all fishers and their fishing gears, to empower the local association managing LMMAs to officially be authorized to participate in local fishery management, and to start issuing official traditional fishers licenses (884 distributed to date). This traditional fishers license gives privileged access to Antongil Bay marine resources to its owner. In addition, volunteer rangers from local communities from each 25 of the LMMAs have been trained in law enforcement best practices by the CSP and received guidelines and an official ranger badge to facilitate their work. This formalization of local rangers in strong collaboration with government authorities will sustain this pilot community-led law enforcement model. In August 3-6, a training session in fishery management was offered to all WCS field staff in Antananarivo by a senior fisheries expert. Specific guidelines have been developed to facilitate the work of WCS field staff in supporting the implementation of community-based fisheries management. Several meetings were organized to facilitate discussions, sharing of best practices and cross learning among Antongil Bay LMMAs communities. Three meetings regrouping LMMAs from the same municipality were held in Mananara Nord, Antanambe and Manambolosy and the annual forum of Antongil Bay LMMAs was held in September 18-19 in Mananara with the participation of 65 community representatives, PCDDBA, WCS, local authorities and MRHP. An important topic of discussion was the preparation of Madagascar LMMA network forum that will be hosted in Antongil Bay in October 2015.

Raise knowledge and awareness about existing fishing regulations, unsustainability of destructive fishing practices and benefits of LMMAs: In May, in partnership with UNDP and PCDDBA, a video was produced to highlight community-based fishery management in Maintimbato and Rantohely LMMAs (<https://www.youtube.com/watch?v=6ikTP2VPyKI>). On June 2 in Maroantsetra, a public meeting with representatives of Antongil Bay LMMAs communities and MRHP was held to communicate about ABFMP and fisheries regulations in Antongil Bay. On June 4, a special meeting with representatives of artisanal fishers (different from traditional fishers as artisanal fishers use motorized boats and target specifically sharks) was also held with MRHP to communicate about shark fishing ban in Antongil Bay.

Organize joint community and local authority patrols: Two joint patrols were organized by WCS technical staff in collaboration with the community Committee of Control and Surveillance (CCS). Each patrol covered all seven LMMAs. The patrols led to the confiscation of 6 illegal nets. In addition, a Memorandum of Understanding between WCS and CSP (Marine Fishery Patrol) was signed in September and will facilitate the collaboration between the two institutions regarding fishery law enforcement in Antongil Bay.

Conduct reef surveys and fish catch monitoring to assess impacts of LMMA on coral reef health and fisheries: Participatory fish catch landing monitoring was carried out around Antongil Bay, with 748 surveys conducted over the past six months by local fishermen who are members of the Catch Per Unit Effort (CPUE) committee. In addition, reef surveys were conducted in 4 LMMAs in April by WCS technical staff. For each site, surveys were conducted within the no-take area and just outside of the no-take area, in the restricted fishing area. The surveys revealed very positive results on the impact of LMMAs: LMMAs have reef fish biomasses well over the regional average for fished areas (760 kg/ha in the Antongil Bay vs. a regional average of 314 kg/ha). Finally, 53 interviews with fishers from 7 LMMAs were conducted in April to assess the level of poaching and by-catch of endangered marine species (sharks and marine turtles).

## **Output 2 (Diversify coastal village livelihoods):**

A first round of expression of interests was launched by the technical team from GRET among the 12 LMMAs supported by the project in Mananara Nord for rehabilitation of Micro-irrigated-Perimeters (MIP) for rice culture. Three of them sent a request: Antsirakivolo (MIP of ~13ha), Mandrisy (~20ha), Antanambao Mandrisy (30ha). The selection process will be carried out during the second semester, based on several technical, financial and organizational criteria. In Hoalampano, where a first MIP was rehabilitated during the first phase of the project called FIAVOTANA, which was implemented from 2012 to 2015, the water users association (WUA), called Lovasoa, was trained to elaborate its first annual working plan and 10 people, including 1 woman were trained on Manual Management and Maintenance of the irrigation scheme.

Regarding rice cultivation, 37 people from this WUA were trained by GRET technicians on Intensive Rice cropping system (SRI) and Ameliorated Rice cropping System (SRA), including 9 women. Four rice plots (including 3 women-owned plots) were supervised and monitored during the main rainy season in 2015. The estimated average rice yields were 4.3 t/ ha. Six plots were then prepared to be grown during off-season 2015-2016, all transplanted rice with SRA method.

In 8 LMMAs, 2 poultry vaccination campaigns were organized by trained villager vaccinators with the support of GRET technicians. 79 bottles of avichol and 79 bottles of pestavia were distributed, allowing them to vaccinate 3,950 chickens against avian pasteurellosis, also known as "avian cholera" and 3950 against New Castle disease.

The next season of vegetable gardening (starting in March 2016) is being prepared for. So far 396 sachet of seeds were distributed to 12 LMMAs. Beneficiaries will be trained in market gardening techniques before the start of the season in March 2016.

**Output 3 (Demonstrate the health and livelihood benefits of sustainable fisheries co-management):**

Over the last six months, co-PI Golden co-developed a new survey instrument with local researchers and local people to best obtain information concerning fishing behaviors, dietary intake, food security and dietary diversity. More recently, co-PI Golden trained the ten local Malagasy staff (two per community in five communities) working on the Darwin project in the survey protocols for the social and health dimensions of research. In August and September 2015, this team installed permanent research staff in each of five communities and a total of 230 households into this research and intervention. Two of the five communities are LMMAs, two follows traditional management, and one community is a controlled occupation zone.. We will be surveying the households monthly over the course of the 3-year project to understand longitudinal changes in income access, fishery behavior and dietary intake and how these changes influence nutrition and health.

We have also begun working with the Maroantsetra region medical inspector to identify the appropriate health care professionals for clinical sampling of our enrolled human subjects. This part of the intervention will likely begin in June/July 2016.

**2a. Give details of any notable problems or unexpected developments/lessons learnt that the project has encountered over the last 6 months. Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.**

At a project level, the municipal election campaign that occurred between May and July 2015 had a negative yet manageable impact on the project as in order to gain votes many candidates made promises about fictive development project that would not require beneficiary contributions or made false promises about their capacity to suspend rules on natural resources management. These promises discouraged community involvement in some aspects of the project or raised opposition in some quarters to the application for natural resource management regulations. Such problems are common in Madagascar and the project addressed them by maintaining consistency in its messages before, during and after the campaigns.

The main issue for poultry vaccination (Output 2) was the supply of the thermo-sensitive vaccines from Antananarivo to Mananara Nord, as the only airline, Air Madagascar, suspended its flights for three months following a strike and financial crises. Some Village Vaccinators kept the vaccines out of the refrigerator too long, which spoiled the products. In the following trainings, we will insist on this matter. WCS, through co-PI Golden is working with IMVAVET (Madagascar Institute for Veterinary Vaccinations) to support development of a thermostable I-2 ND vaccination for Newcastle disease which does not require refrigeration and which can be applied with an eye dropper as opposed to a syringe. With funding from a private donor, field trials of this vaccination are planned in the Maroantsetra district in early 2016. Based on the results of these field trials it will be evaluated whether the I-2 ND vaccine can be rolled out in future vaccination activities in the project.

An issue for the CPUE monitoring activity is that each community has more than one landing site for fish landings. This is a cultural context very different from East Africa and collecting CPUE data presents difficulties with limited staff and several landing sites requiring coverage. In collaboration with the newly recruited WCS scientific advisor, traditional methods for estimating CPUE are being adapted to this cultural context. Having households follow a daily dietary intake calendar was too much effort for each of these households. Thus, we have decided to collect 24-hour and one-week dietary intake recall data once per month throughout the course of the project. This change in methodology will improve overall results as it will ensure more accurate reporting by household participants.

**2b. Have any of these issues been discussed with LTS International and if so, have changes been made to the original agreement?**

Discussed with LTS: Yes/No

Formal change request submitted: Yes/No

Received confirmation of change acceptance Yes/No

**3a. Do you currently expect to have any significant (e.g., more than £5,000) underspend in your budget for this year?**

Yes  No  Estimated underspend: £

**3b. If yes, then you need to consider your project budget needs carefully as it is unlikely that any requests to carry forward funds will be approved this year.** Please remember that any funds agreed for this financial year are only available to the project in this financial year.

If you anticipate a significant underspend because of justifiable changes within the project and would like to talk to someone about the options available this year, please indicate below when you think you might be in a position to do this and what the reasons might be:

**4. Are there any other issues you wish to raise relating to the project or to Darwin's management, monitoring, or financial procedures?**

n/a

**If you were asked to provide a response to this year's annual report review with your next half year report, please attach your response to this document.**

**Please note: Any planned modifications to your project schedule/workplan can be discussed in this report but **should also** be raised with LTS International through a Change Request.**

Please send your **completed report by email** to Eilidh Young at [Darwin-Projects@ltsi.co.uk](mailto:Darwin-Projects@ltsi.co.uk) . The report should be between 2-3 pages maximum. **Please state your project reference number in the header of your email message e.g., Subject: 20-035 Darwin Half Year Report**