

## Darwin Initiative Main Project Annual Report

Submission Deadline: 30 April

### Darwin Project Information

Project Reference	21-011
Project Title	Securing livelihoods and conserving marine biodiversity through rights-based fisheries management
Host Country/ies	Madagascar
Contract Holder Institution	Blue Ventures Conservation
Partner institutions	Direction Régionale de l'Environnement et des Forêts (now DREEF) Melaky; Direction Régionale des Ressources Halieutiques et de la Pêche (DRRH) (formally DRPRH) Melaky
Darwin Grant Value	£251,855
Funder (DFID/Defra)	DFID
Start/end dates of project	Apr 2014 – Mar 2017
Reporting period (e.g., Apr 2015 – Mar 2016) and number (e.g., Annual Report 1, 2, 3)	Apr 2014 – Mar 2015, Annual Report 1
Project Leader name	Alasdair Harris
Project website/blog/Twitter	<a href="http://www.blueventures.org">www.blueventures.org</a>
Report author(s) and date	Florence Pichon, Frances Humber, April 2015

### 1. Project Rationale

The Barren Isles archipelago is among the last productive small-scale traditional fisheries on the west coast of Madagascar, and home to one of the largest intact coral reef ecosystems in the Mozambique Channel. Over 4,000 traditional fishers depend on its resources for their livelihoods, and hundreds more migrate from all over Madagascar to work around these islands, driven by the collapse of their local marine ecosystems. In Madagascar's current open access-fishing regime, these traditional fishers are forced to compete against long liners, trawlers, and other industrial boats that operate around the islands to harvest the pelagic fisheries. Furthermore, the Melaky region where the Barren Islands are located is extremely isolated, and Illegal, Unreported, and Unregulated (IUU) fishing is widespread. In participatory consultations conducted in 2009, fishing communities unanimously identified these external pressures as the single most important threat to their food security and livelihoods.

Without an existing legal mechanism to protect the rights of traditional fishers, pioneering a new model of a rights-based, community-managed Marine Protected Area (MPA) is a critically important method of empowering poor coastal communities to manage marine resources and improving fisheries sustainability. Transferring formal management rights to protect this ecosystem is fundamental to conserving biodiversity, strengthening food security, and ensuring community resilience.

The Barren Isles MPA forbids industrial fishing within its perimeters while protecting traditional fishing communities' right to work in the zone, creating a platform for fisheries management through an MPA management committee and reinforcing it with a Regional Fisheries Management Plan. Without an intervention to involve local communities in resource management and to restrict industrial and IUU fishing, the Barren Isles coral reefs risk facing the same degradation and overexploitation that has plagued the fisheries of the West coast of Madagascar.



## 2. Project Partnerships

Although one local project partner proved to be compromised by mining interests, the project partnerships with DRRHP, Le Centre de Surveillance des Pêches (CSP), and DREEF have progressed to cooperatively accomplish the necessary steps for the creation of an MPA. In June 2014, the DRRHP provided Blue Ventures with advice in drafting a Terms of Reference for a Regional Fisheries Management Plan, and both the DRRHP and DREEF participated in an Orientation and Evaluation Committee in November 2014 to guide the MPA creation process and provide feedback on progress made thus far.

The collaboration with the CSP has increased substantially over the past year, with the CSP regularly calling the Blue Ventures Maintirano office for matters concerning fishing boats or fishing regulations in the Melaky region. In May 2014, the CSP confirmed their support for a community-based Monitoring, Control and Surveillance (MCS) programme, and this support was reiterated in meetings in December 2014 and March 2015. There is no regional CSP office in Melaky, however, which remains a major limitation for fishery regulation enforcement.

## 3. Project Progress

### 3.1 Progress in carrying out project activities

#### Output 1

The creation of a community-managed Marine Protected Area is well underway, with the Government of Madagascar granting the Barren Isles Temporary Protected Status in November of 2014. The “arrêté” was issued after several meetings with the competent authorities, known as the Ministère des Ressources Halieutiques et Pêches (MRHP) and the Direction du Système des Aires Protégées (DSAP) (See Annex 4.1 for evidence of decree, 4.2 for delineation of MPA, Annex 4.3 for a Barren Isles factsheet, and Annex 5.7 for a press release). Regional authorities from DREEF and DRRHP guided the MPA creation process in a regional workshop in December 2014 (See Annex 5.6 for attendance sheet).

Progress was made with these partners in clarifying *dina* (local law recognized in regional courts) structure with the DREEF as part of the Protected Area procedure (The *dina* text is in Annex 4.4, and the tribunal’s ratification document can be found in Annex 4.5). Issuing the arrêté was a necessary step

before progressing with management plan development, and many of Output 1 activities will be undertaken in Y2 now that the arrêté has been validated by national ministries. Without the arrêté, we were not able to proceed with an MPA workshop to determine the management zoning plan (Activity 1.3) nor finish consultations with local/migrant fishers (Activity 1.1).

While waiting for the arrêté to be issued, negotiations were held with private entities Guanomad and the Groupement des Aquacultures, Pêches Crevettières de Madagascar (GAPCM) to discuss the law banning mining and industrial fisheries activities inside it (See Annex 4.6 for meeting minutes with Guanomad). These meetings clarifying the significance of the MPA for the private sector were a precursor to holding a workshop with all MPA stakeholders in Y2 (Activity 1.3).

When the protected status was officialised, many community outreach sessions and consultations were held with fishing communities (Activity 1.1). For each fishers' camp, local leaders, village elders, and Dina enforcement committee presidents attended an educational session, whose objective was to announce this important step in the MPA process and to inform them of the implications for their communities (Activity 1.1). The discussions revealed encouraging signs of community interest, and willingness to learn how to participate in managing their resources (See Annex 4.7 for mission report). In April 2014, two fisher representatives from Maintirano and Soahany participated in national Locally Managed Marine Area (LMMA) conference, representing the Barren Isles MPA and comparing various LMMA models with community representatives from all over Madagascar (Activity 1.2) (See Annex 4.7 for the LMMA Conference report). These fisher representatives gave introductory speeches at the May 2014 workshop on consolidating a *dina* enforcement structure, presenting lessons learned from other LMMAs and possibilities for the Barren Isles MPA (See Annex 4.8 for attendance sheet from dina workshop).

A consultant specializing in social marketing in conservation conducted a preliminary study of the Barren Isles MPA context to determine avenues for targeted messaging for fisheries management measures, such as reserves or restricted access rules. He led focus group discussions and key informant interviews, gathering data on local perceptions and definitions of key concepts like the state of marine resources, the importance of reserves, and attitudes towards migration. The consultancy yielded a clearer idea on local perceptions and beliefs, and the results of this work will be consolidated into a report identifying social marketing opportunities by end of April 2015 (See Annex 4.9 for first pages of report). The report will feed into training and work planning sessions with the newly formed MPA management committee, as well as shape the implementation plan for the participative Fisheries Management Plan (Activity 1.6) (Activity 2.4).

Finally, a legal consultant undertook a study of legal mechanisms to secure fishing rights for communities and enshrine rights-based management in national laws in February 2015 (Activity 1.7). The Barren Isles was selected as a case study for a wider investigation of current national laws for locally managed rights-based fisheries (See Annex 5.1 for case study). Gaps in the current legal structure were identified, and the legal consultant is currently working with the MRHP to assist in drafting appropriate legislation that allows for formal recognition of community management rights for marine resources, and clarifies the role of the state in supporting rights-based fisheries management, as well as which management tools are available to communities. This report will be finished by the end of April 2015. This work will also support and benefit the wider development of LMMAs throughout Madagascar.

## Output 2

The Fisheries Management Plan has been agreed upon by government authorities, who provided their inputs for the Terms of Reference (Activity 2.1) (See Annex 5.2 for TOR) and helped identify a suitable local scientist with experience in participatory fisheries management to lead the project. Our agenda had to be delayed on this point, as the consultant will not be available until the end of July 2015. Therefore activities 2.2-2.4 will now occur in Y2. The Fisheries Management Plan will follow a participatory methodology pioneered in the Baie d'Antongil region of Madagascar, which allows for communities, the MPA management committee, and the dina enforcement committees to take part in a diagnostic of local fisheries and identify appropriate governance measures.

In February 2015, a fisheries value chain specialist came to the Barren Isles to assess which fisheries had the most commercial potential for the subsistence fishers. He conducted focus groups and key informant meetings to assess local markets and the potential for fishers' cooperatives. He also analysed opportunities to improve incomes and links with the private sector in the absence of a functioning cold chain. His study provides a framework for the future Fisheries Management Plan and will be important for the Social and Environmental Safeguard Plan, a necessary document for the creation of an MPA. His report will be finalized in May 2015, though a first draft has been submitted for review and comments (See Annex 5.3).

### Output 3

Community-based monitoring is being implemented at two levels: national level in partnership with the CSP, and community level through the *dina* (See Annex 5.4 for written confirmation of support from CSP). Meetings with the CSP (Activity 3.1) confirmed the interest for this service to act collaboratively on infractions observed by fishers in the MPA, concerning especially the Illegal, Unreported and Unregulated (IUU) activities led by powerful actors operating in the region (bottle divers bosses, shrimp trawling, etc). At the community level, the *dina* text was elaborated, ratified by the Tribunal on July 8, 2014 and disseminated among the fishing communities (See Annex 4.5 for the *dina* ratification document). *Dina* enforcement committees' structure was decided upon and elections of members were held in July 2014. Enforcement capacity and possibilities of partnership with regional police force, for instance, will be discussed further once the MPA management committee is elected (April 2015).

### Output 4

Catch landing monitoring (CBM) has been ongoing in Maintirano's two fishing villages (Activity 4.1). This activity did not expand to 5 villages in Y1 but is planned for early Y2. These data were presented to communities in quarterly data dissemination community events (Activity 4.4). To prepare for expanding finfish monitoring to 5 villages, a fisheries scientist conducted a review of the finfish monitoring methods to ensure sufficient data were being collected and further training for local staff was carried out in March 2015 (See Annex 5.5 for the report). The review resulted in an updated data collection and entry methods, as well as a report of recommendations for expanding finfish monitoring to new habitats around the islands (Activity 4.1 & 4.3).

In June 2014, a pilot shark monitoring project was launched to record shark captures, a major fishery around the islands and one that has been severely overexploited over the last decade. Using smartphones, fishers working on the islands were trained to record shark captures using an Open Data Kit (ODK) application (See Annex 6.1, 6.2, and 6.3 for screen shots of application). The aim of this activity was to not only gather information on traditional shark fishing through CBM but to also test smartphones as monitoring tools for Activity 3.2. Community-based turtle nest monitoring occurred at 8 sites (Activity 4.2) as we trained four teams who worked on four different isles over the dry season (December-May). Turtle Nest Monitoring teams were also trained to use ODK and began annual monitoring of turtle nesting on the islands in December 2014.

## 3.2 Progress towards project outputs

### Output 1

Despite some bureaucratic delays in receiving temporary protected status for the Barren Isles MPA, this was received in November 2014. The delineation of the protected area was agreed upon between fishers and the private sector, though a more detailed zoning plan will be completed as the management committee is developed (Indicator 1) (See Annex 4.2 for agreed-upon boundaries for MPA). Regional authorities advised Blue Ventures on future direction for the protected status in a workshop in December 2014 (See Annex 5.6 for attendance sheet. Partial progress towards Indicator 2 has been made as a central *dina* committee was established in May 2014 and consultations were undertaken with communities in February and March 2015 to collect ideas for how *dina* committees should be integrated into the MPA management structure, though there are no reports from the Community Surveillance committees as these have yet to be established.

### Output 2

Consultations with the MRHP and the DRRHP in May 2014 confirmed approval for the elaboration of a Regional Fisheries Management Plan. Both branches of the Ministry of Fisheries reviewed a Terms of Reference for the fisheries management plan (Annex 5.2), aided in recruitment of a suitable fisheries scientist to lead the plan, and approved of consultant that will begin working in July 2015. The consultant was not available earlier than this date, so progress towards Indicator 1 has been delayed until he is available to lead community consultations. Indicators 2 and 3 are contingent on completion of stakeholder consultations, which are planned to begin in July 2015.

### Output 3

A pilot shark monitoring project was launched to record shark captures in July 2015, which is simultaneously serving as a test for using smartphones as a monitoring tool (Activity 3.1). Eight fishers have been trained in data collection using smartphones with software called Open Data Kit (ODK),

marking early progress towards Indicator 1 of Output 3, to decrease the incidence of industrial and illegal fishing within the MPA. These fishers will help train 10 community monitors participating in the MCS programme in Y2. Indicator 3 of Output 3 assumes political will from the CSP to enforce violations recording through community based MCS. The CSP has verbally confirmed their intention to collaborate for this project (Email from Annex 5.4). However, there is no regional CSP office close to the Barren Isles, which may prove to be a serious limitation on the CSP's capacity to reduce illegal fishing infractions.

#### **Output 4.**

Ecological monitoring in the Barren Isles MPA is on track, with on-going CBM, shark captures monitoring, and turtle nest monitoring projects. Community outreach sessions were conducted to disseminate data and explain next steps in the MPA process. In March 2015, a fisheries scientist visited catch landing sites in March 2015, evaluating the current methodology and data recording techniques to improve accuracy and ensure appropriate data are being collected for later stock assessments. The fisheries scientist put together an action plan for Indicator 2, paving the way for an additional 4 MPA communities to be involved in weekly participatory fisheries monitoring and contributing data to a quarterly resource status dashboard. These sites will be monitored beginning in May 2015.

#### **Progress towards the project Outcome**

The Barren Isles MPA was granted temporary protected status in November 2014, thanks to the support of the Minister of Fisheries, and has generated a lot of interest within the Ministry and among high-level politicians. A legal study of the legislative framework for rights-based fisheries management has also been conducted, and Blue Ventures' Policy Officer attended a conference on rights-based fisheries management in March 2015. The lessons drawn from this conference and the legal report will be used for creating the structure of the MPA management committee and for training committee members to understand the necessary steps to enforce a rights-based fishery. This also forms the basis for legal recognition of rights-based fisheries management at the national level, which will form the architecture for expanding this model elsewhere in Madagascar. Therefore the project has completed the first important step towards achieving Indicator 1.

### **3.3 Monitoring of assumptions**

**Assumption 1** – The assumption that sufficient political will exists for a Barren Isles MPA and development of a Fisheries Management Plan has not yet been challenged, though the local fishers that negotiated the first delimitation have since mentioned that the corridor in front of Maintirano that is outside the protected area remains a source of conflict. Small-scale fishers set their nets in this area and often claim that fishing boats passing through their fishing ground pull and destroy their nets. An agreement will need to be reached with the GAPCM in order to avoid this constant and recurrent issue once the Status of Definitive Protection is obtained.

**Assumption 2** – Illegal bottle diving for sea cucumber is a recurrent complaint among the fishers. However, they are often reluctant to denounce the divers they see, because they are often from the same fishing village and share social and cultural ties. There is a widespread perception, however, that the definitive protected status will generate the political will from CSP and regional authorities to stop illegal bottle diving, bringing outside enforcement. This assumption has not yet been tested, though the CSP has reiterated their support to stop illegal fishing around the Barren Isles (See email from Annex 5.4).

**Assumption 3** – The Fisheries Management Plan will be elaborated as part of a participatory process with as many fishing villages as possible. Its success depends on the assumption that fishers are aware of threats to resource and are prepared to take management action. Because some of these villages are outside the MPA and thus Blue Ventures has never worked with before, there is a risk that these villages may be less involved and less aware of declining fisheries, and potentially less willing to participate in management action than communities with which we have established relationships.

**Assumption 4** – Finfish monitoring will be expanded to the isles and in one more coastal village during Y2. As stated in progress towards Output 4, early discussions with fisheries scientists have suggested that a ParFish stock assessment methodology is not suitable for the Barren Isles fisheries like mackerel or tuna, as they are highly migratory species. This means Indicators 2 and 3 may need to be revised in Y2, depending on what type of stock assessment methodology may be applied to the key fisheries within the MPA. A major assumption for Output 4 is that an appropriate stock assessment methodology will be identified in Y2.

### **3.4 Impact: achievement of positive impact on biodiversity and poverty alleviation**

This project aims to empower 4,000 traditional fishers to manage gain formal rights over their fishing grounds. With the new protected status, this has been achieved; the Government of Madagascar has formally recognized the fishers' right to manage their own fishing grounds (Annex 4.1). Furthermore, a mining operation has been prevented from exploiting on the islands through organized opposition at town hall meetings in August 2014 with Blue Ventures, fishers, and regional authorities that recognized the long-term benefits of supporting fisher's rights over the short-term economic benefits the project might bring (See Annex 4.6). Preventing mining operations was key to improving food security for the fishers working around the isles that depend on the highly biodiverse reef fisheries that were predicted to suffer from sedimentation from mining operations.

A strong management plan should also aim to improve biodiversity of the marine resources through protection of key habitats and species. Zoning plans will be elaborated in Y2, though the initial delimitation of the protected area that has been gazetted by the Government of Madagascar includes a wide variety of habitats, from mangroves, coral reefs, seagrass beds, and small islands.

## **4. Project support to the Conventions (CBD, CMS and/or CITES)**

The project's outcomes are contributing to all three main objectives of the CBD, in particular Articles 6, 8, 10 and 11. By establishing the largest MPA in Madagascar (and the largest community-managed MPA in the Indian Ocean), protecting critical marine ecosystems, including some of the largest and healthiest coral reefs and associated habitats in the Mozambique Channel region, the project will make the largest contribution of any protected area in Madagascar towards CBD Aichi target 11; to protect at least 10% of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, by 2020. This goal was reiterated by the President of Madagascar in his Sydney Promise in November 2014, when he announced his intention to triple Madagascar's marine protected area coverage by 2020.

The project also contributes to the Bonn Convention objectives of the CMS through its turtle nest-monitoring component, in which community-based monitors track and protect marine turtle nests on the Barren Isles. These nests are highly susceptible to poaching by local fishers, and the project has had a demonstrable success in protecting these nests. Since the start of the project, no nest that has been demarcated by community-based monitors had been disturbed.

The project is supporting CITES by reducing illegal fishing of sea cucumbers, which are listed on the 2014 CITES appendix of species susceptible to overexploitation. The communities of the Barren Isles MPA included restrictions on scuba diving for sea cucumbers in their community-based *dina* law. The practice is widely recognized as unsustainable and it is illegal in national laws. In meetings with fishers in 2014, they expressed the desire to use an MCS programme to provide proof of illegal scuba diving for sea cucumbers, stopping the practice and thus reducing illegal exports of these creatures to China. This is planned to begin in Y2.

## **5. Project support to poverty alleviation**

In the Melaky region, fishing communities are hyper dependent on the sea for food security and income. In socio-economic surveys conducted in 2012, over 90% of fishers surveyed said that fishing was their only source of income. The region of Melaky is among the poorest in Madagascar, and the health of marine ecosystems is critical to sustaining the livelihoods of 4,000 traditional fishers that live along the Melaky coast.

By putting in place management measures to conserve biodiversity and sustainably manage fish stocks, traditional fishers will be able to continue to practice their customary trade and participate in decision-making regarding their occupation. When fishers elect an MPA management committee in April 2015, local communities will have a platform where fishers can work directly with government authorities. Currently, fishers are rarely, if ever, consulted on any major decisions regarding their livelihoods, and putting in place the MPA management committee was emphasized as a community priority in consultations in March 2015.

In February and March 2015, a consultant came to Melaky to undertake a study on the existing value chain for traditional fisheries and to identify opportunities to improve incomes or links with the private sector. The results of this study will be incorporated into the Social and Economic Safeguard Plan (PSSE), a necessary document for the creation of an MPA in Madagascar, and is an important input for the Fisheries Management Plan. However, this study will also serve as a guide for future conversations

with private sector operators that may be able to buy products from fishers for a higher price than what is offered locally. Currently, there is no cold chain in place that could offer traditional fishers a better price for their captures, and many high value pelagic species are salted, dried, and sold in local markets for a fraction of their value in the capital. The study will be finalized and validated at a local workshop in May 2015, and its findings will inform future income generating activities.

## **6. Project support to Gender equity issues**

There are no direct gender equality activities in the project, but the project contributes to gender equality by improving the decision-making capacity of women in fisheries management. Women fishers have traditionally taken a supporting role to male fishers; in Maintirano, they are principally responsible for sorting their husbands' catches. However, women also make up the vast majority of fish collectors on the beach and in town. Their knowledge of fish markets is important for management decisions, and women are an important asset for fisheries enforcement, as they witness most fishing activities while their husbands are out. By including them in local *dina* committees, which are comprised of 11 women, women are actively involved in fisheries management enforcement.

Gender equality will also be improved indirectly, by focusing on including women in ecological monitoring activities. A fisheries scientist's study of Blue Ventures' current landings monitoring programmes revealed that there was a key opportunity for increasing women's participation when expanding this finfish monitoring onto the islands and in coastal villages in Y2, as women living on the islands often have long, unoccupied hours waiting for fishers to come back to shore with their catches. As ecological monitoring expands in Y2 of this project, women will be targeted for recruitment of community-based monitors. Women fishers are often regarded as secondary to men in decision-making about fishing and natural resource management, and increasing their participation and understanding of ecological monitoring is a key step for empowering them further in their participation in village level meetings about the Barren Isles MPA.

## **7. Monitoring and evaluation**

A major socio-economic survey was undertaken this October 2014, designed to provide the baseline information about fishers' perceptions of marine resources, fishing techniques, knowledge of fisheries management, the general economic situation, and inter and intra-village social cohesion. A representative sample of fishers was surveyed in 4 coastal villages and on 4 islands. Blue Ventures' M&E specialist is reviewing the data in March and April 2015, and results will be used to measure participation and engagement with the project, perceptions of how fish stocks have changed, and allow for a better understanding of fisher migration within and around the Barren Isles (See Annex 5.8 and 5.9 for individual and household surveys). These socio-economic data will contribute to the goal of Output 1, as we will be able to identify communities that have similar profiles to fishing communities elsewhere in Madagascar for a community exchange visit (Activity 1.2). The results will also be presented to the MPA management committee (Activity 1.5) to demonstrate reported declines in captures and help inform resource management decisions. It is also important for the Fisheries Management Plan (Output 2), as presenting this information in early community consultations (Activity 2.2) will allow communities to understand the state of fishing, the generally perceived threats, as well as knowledge of existing laws about natural resource management. Using this information, communities will be able to participate meaningfully in a diagnostic of the current state of fisheries.

In addition to socio-economic monitoring, community monitors collect data on fish captures and turtle nesting. These data are analysed and disseminated back to communities in quarterly outreach sessions (Activity 4.4). When an MPA management committee is elected, trained, and functional, these results will complement the qualitative data collected from communities to help inform resource management decisions. Additionally, the fish landings and ecological data will be used for stock assessments for certain key fisheries, which is the primary input for Output 3. These stock assessments will allow us to identify Maximum Sustainable Yield (MSY). As mentioned earlier, we've found that the ParFish stock assessment methodology may not be appropriate for the Barren Isles pelagic fisheries. In Y2, Blue Ventures staff will investigate this further to find an appropriate methodology for estimating fish stocks in a data poor fishery.

## **8. Lessons learnt**

Bureaucratic delays were a major impediment to advancing the MPA creation process in this reporting year. Without a decree declaring the Barren Isles to be a protected area, communities, government partners, and other stakeholders were reluctant to move forward on management measures (establishment of an MPA, zoning regulations, etc.). By asking for meetings with functionaries and politicians whenever possible, Blue Ventures was able to secure a high profile for the project at the



national level and ensure that the Barren Isles MPA received a protected status. In the end, a special 'accelerated' decree was drafted by the Direction of the System of Protected Areas (DSAP) and Blue Ventures, and validated by the Minister of Fisheries, Minister of the Environment, and Minister of Mining. This was the first New Protected Area in Madagascar to receive this distinctive 'accelerated' interministerial decree.

This experience is very instructive for the second stage of the project, achieving permanent protected status for the Barren Isles MPA. Keeping high-level contacts informed of progress and aware of the status of documents pending approval at national ministries is critical for ensuring the project adheres to a reasonable timeline. The DSAP is overworked and lacks capacity for the 100+ protected areas that it manages, so reaching out regularly to keep the Barren Isles MPA in national-level discussions is very important for making progress in the creation of a New Protected Area and for validating the Regional Fisheries Management Plan.

## **9. Actions taken in response to previous reviews (if applicable)**

Not applicable.

## **10. Other comments on progress not covered elsewhere**

In July 2014, the MPA creation process faced a potential threat from mining interests. Guanomad, a phosphorous mining company that produces fertilizer, bought the rights to remove 500 tonnes of phosphorous off the Barren Isles. The company had not yet acquired an environmental permit, however. Without the official MPA status, the fishing communities had little recourse to fight against the mining that would potentially damage coral reefs around the islands, disrupt turtle nesting, and disfigure the topography of these fragile island habitats.

Blue Ventures organized meetings with fishers, regional authorities, Guanomad representatives, and national politicians to make a case for protecting the islands from mining interests (See Annex 4.6 for meeting minutes). We were able to delay any delivery of an environmental permit until receiving the Temporary Protection. Now that the Barren Isles are legally protected, they should be exempt from industrial exploitation. In the uncertain political climate of Madagascar, however, this depends on political will. There remains a risk that MEEF will grant Guanomad an environmental permit in spite of the newly established MPA status.

There was also increased insecurity in the Melaky region. Travel between Maintirano and the capital Antananarivo became unsafe after reports of car attacks. Blue Ventures staff began taking flights for travel between the capital and Maintirano. This was covered in more depth in the Y1 half-year report.

## **11. Sustainability and legacy**

The sustainability of this project is strongly tied to the participatory approach to managing the Barren Isles MPA. By integrating local fishing communities and regional authorities into the MPA management committee, and ensuring lessons learned are transmitted through fisher-fisher education and build on the exchanges within the nascent network of Madagascar's Locally Managed Marine Areas (LMMAs), the project will cultivate a tradition of environmental stewardship and fisheries management for fishing communities living and working around the Barren Islands.

The local fishing communities' sense of ownership over the MPA has proven to be strong, demonstrated by the ratification of their marine 'dina', or community-based law recognized in regional courts, regulating exploitation in the Barren Isles. In March through July of 2014, local and migrant fishers worked together to draft the content and create a village-based enforcement structure. For the communities implicated in the project, the marine dina is the first step towards sustainable management of their fisheries and its' enforcement structure will be integrated into the MPA management procedures.

At the regional level, the Barren Isles MPA is a source of pride, as it is perceived as a means of attracting tourism to an isolated and often overlooked region of Madagascar. By carefully building on this momentum, community participation and regional institutional support will ensure that the Barren Isles MPA functions well beyond the lifetime of the project.

## **12. Darwin Identity**

This project has referenced the Darwin Initiative when publicising major project accomplishments. The Darwin Initiative was mentioned in a press release on the MPA creation (See Annex 5.7), as well as on fact sheets detailing the profile of the Barren Isles habitats and communities. The Darwin goals have



been discussed with project partners DREEF and DRRHP, specifically at the workshop in December 2014 (See Annex 5.6 for attendance sheet for workshop).

On social media, Blue Ventures regularly tweets updates on the status of the Barren Isles project and includes the Darwin twitter handle, showcasing the project's day-to-day work and the island's incredible biodiversity. The Blue Ventures' twitter account has over 2,875 followers, and is a primary communication tool with the public.

### 13. Project Expenditure

**Table 1 Project expenditure during the reporting period (1 April 2014 – 31 March 2015)**

Project spend (indicative) since last annual report	2014/15 Grant (£)	2014/15 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)				
Consultancy costs				
Overhead Costs				
Travel and subsistence				Project Coordinator needed to leave unexpectedly due to unforeseen personal reasons and therefore their successor needed to travel to Madagascar for a handover at short notice.
Operating Costs				Due to the delay in being able to hire the required consultant for the fisheries management plan, less fieldwork was carried out this than anticipated.
Capital items (see below)				Items were less expensive than budgeted.
Others (see below)				
<b>TOTAL</b>	71,650	69,071		

### 14. OPTIONAL: Outstanding achievements of your project during the reporting period (300-400 words maximum). This section may be used for publicity purposes

I agree for the Darwin Secretariat to publish the content of this section.

The Barren Isles MPA made national headlines this year as a model for community based protected area, attracting the attention of national politicians and policy makers alike. At the 2014 World Parks Congress in Sydney last November, the President of Madagascar pledged to triple the country's marine protected areas, highlighting their importance for food security and biodiversity conservation. The Barren Isles MPA was the first big marine area to receive protection before the announcement, and subsequently was placed in the centre of much discussion. Later that day, the Ministry of the Environment made a speech reinforcing this commitment and mentioning the Barren Isles as an example of establishing legal protection for a community managed marine area. The political will generated by the announcement is vital to moving forward this project's overarching goal to replicate the creation of rights-based small scale fisheries all over Madagascar.

Shortly following the conference that bolstered the Barren Isles into an international spotlight, Blue Ventures organized a national-level press conference with project partner MRHP to announce the Barren Isles' newfound protected status and to discuss its implications for local communities. The Minister of Fishing attended the conference, hosting questions at the end and affirming the Ministry's commitment to biodiversity conservation. When asked about short-term mining interests that had previously threatened the project, the Minister dismissed the question, repudiating the idea that the protected area would be open to environmentally damaging commercial interests. The announcement made the national papers, highlighting the project's focus on defending the interests of small scale fishers and their right to their traditional fishing grounds.

## Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2014-2015

Project summary	Measurable Indicators	Progress and Achievements April 2014 - March 2015	Actions required/planned for next period
<p><b>Impact</b></p> <p>Community-managed MPAs form a strong foundation for the broad scale establishment of rights-based fisheries management for small-scale fishers in Madagascar, protecting the fishing resources and livelihoods of small-scale fishers.</p>		<p>The decree establishing temporary protection for the Barren Isles, obtained in November 2014, raises the profile of the archipelago's unique biodiversity and will culminate in decisions by the local management body about protecting key species and habitats. Plans for a Participatory Fisheries Management Plan have been drawn up with advice from the national and regional branches of the Ministry of Fishing, and the Minister of the Environment highlighted the Barren Isles MPA as an example of a community managed marine area during the Sydney World Parks Congress in November 2014. These steps have set the stage for the Barren Isles to become a model for rights-based fisheries management, and communities affirmed their commitment to putting in place an MPA management committee so they could set up reserves and begin zoning their fisheries over the course of consultations in February and March 2015. In the meantime, a legal consultant is investigating options for creating a legal framework to recognize the rights of small-scale traditional fishers, working in conjunction with the Ministry of Fishing and the Ministry of the Environment, the results of which will be published in April 2015.</p>	
<p><b>Outcome</b></p> <p>The Barren Isles MPA empowers</p>	<p>1. Barren Isles MPA receives definitive</p>	<p>In November 2014, the Barren Isles MPA received Temporary Protection status. This was a key step for moving</p>	<p>Next year, we plan on elaborating and ratifying a fisheries management plan, electing a local MPA management</p>

<p>traditional fishers to secure and manage their fishing resources, leading to a decrease in overexploitation by industrial and itinerant fishing.</p>	<p>protection status by Y2, including a boundary that protects traditional fishing grounds from industrial fishing.</p> <ol style="list-style-type: none"> <li>2. 50% decrease in the incidence of industrial fishing and illegal scuba diving for sea cucumbers within the MPA from Y1 to Y3</li> <li>3. Stock assessments of coral reef fisheries in all five participating villages show fisheries within the MPA are not overexploited and below maximum sustainable yield (MSY)</li> </ol>	<p>the project forward, as we were not able to establish a management committee or begin zoning workplans until the Barren Isles secured protection.</p> <p>In July 2014, local and migrant fishers worked together to ratify a marine 'dina', a type of community-based local law that is recognized in regional courts. The new dina regulates fishing and social life around the islands, and provides the enforcement structure that will be adopted by the MPA management committee for future fisheries management measures.</p> <p>Ongoing catch data are being collected at two village sites, and this is being expanded to four more sites to capture the coral reef fisheries around the islands and the mangrove fisheries along the coast.</p> <p>In May 2014, the CSP agreed to collaborate on a MCS programme that will create a direct link between traditional fishers and national authorities, complimenting the local fisheries regulations and increasing traditional fishers' capacity to enforce IUU fishing.</p>	<p>committee, conduct trainings and fisher-fisher exchanges with MPA management committee members and community leaders, and launching an ICT-based MCS programme to regulate illegal and industrial fishing around the islands.</p>
<p><b>Output 1.</b> The proposed Barren Isles MPA, with a zoning plan which protects traditional fishing grounds, is gazetted as a protected area by the government of Madagascar</p>	<ol style="list-style-type: none"> <li>1. Stakeholder agreement on zoning plan for Barren Isles MPA by end Y1</li> <li>2. Representation of all key stakeholders groups in management committee with &gt;90% attendance by nominated representatives</li> <li>3. 80% of villages elected representatives to fishing association and management committee by Y3</li> </ol>	<p>Due to bureaucratic delays in receiving the Temporary Protected status for the Barren Isles MPA, a management committee has not yet been elected. Regional authorities from the DRRHP and the DREEF have advised us to wait to begin zoning plans until after an MPA management committee has been established, as the management committee should steer the zoning plan process. As a result, the limits of the protected have been agreed upon by communities, but the inner zoning will be decided upon in consultations following a workshop to create the MPA management committee (planned for April 2015).</p>	

<p>Activity 1.1 Consultation of local and migrant fishing communities for management plan development</p>	<p>Consultations about establishing management committee were carried out in February and March 2015, with communities expressing strong will to put in place an MPA management committee before moving forward with a management plan.</p>		
<p>Activity 1.2 Community exchange visit (build fishing community support for management)</p>	<p>One community exchange visit was carried out in Q1 of Y1, with two local leaders invited to participate in a forum on local management of marine resources in Diego-Suarez, Madagascar. Another community exchange visit is planned for next year, to exchange knowledge and best practices with the fishing communities in the Baie d'Antongil that have already established a local management structure, put in place reserves, and elaborated a participatory Regional Fisheries Management Plan.</p>		
<p>Activity 1.3 Workshop with all MPA stakeholders to determine management plan, zoning and management association</p>	<p>Following the advice of the regional Ministry of the Environment, this activity is planned for after a management committee has been established and received basic training in Q2 of Y2.</p>		
<p>Activity 1.4 Follow-up community consultations and final management plan validation workshop</p>	<p>Following the advice of the regional Ministry of the Environment, this activity is planned for after a management committee has been established and received basic training in Q2 of Y2.</p>		
<p>Activity 1.5 Creation of MPA management committee</p>	<p>Consultations in February and March 2015 culminated in communities agreeing to move forward with MPA management committee elections in April 2015 before the rainy season ends and fishers leave again for the islands.</p>		
<p>Activity 1.6 Training and work planning sessions with newly formed MPA management committee</p>	<p>Following the advice of the regional Ministry of the Environment, this activity is planned for after a management committee has been established and received basic training in Q2 of Y2.</p>		
<p>Activity 1.7 Assessment of legal mechanisms to secure fishing rights for communities and enable rights-based management, lessons learned and policy recommendations</p>	<p>In November 2014, The Minister of Environment heralded the importance of using an MPAs as a legal means to secure local communities' rights to managing their fishing resources, stressing its importance as a model for ensuring better conservation of biodiversity and citing the Barren Isles as an example. In March 2015, a legal consultant began a study on building a legal framework for community managed marine areas, which will highlight the management tools available to communities and different avenues by which management rights can be transferred to local communities.</p>		
<p><b>Output 2.</b> A fisheries management plan is developed and implemented by the fishing communities in collaboration with the regional fisheries authorities (DRRHP)</p>	<table border="1"> <tr> <td data-bbox="604 1238 1088 1453"> <ol style="list-style-type: none"> <li>1. Stakeholder consultations show approval for fisheries management plan by end Y1</li> <li>2. Key fisheries and habitats covering at least &gt;80% of protected area envelope are included in</li> </ol> </td> <td data-bbox="1088 1238 2080 1453"> <p>Regional and National authorities were consulted on the steps for undertaking a Regional Fisheries Management Plan from September 2014 to November 2014. Authorities have expressed their collaboration and guided inputs for the Terms of Reference for a consultant. In May 2014, Blue Ventures staff sought advice from other NGOs who have undertaken Regional Fisheries Management Plans, and in November 2014 a suitable consultant was identified. The consultant will be available to begin this work in July 2015, and a timeline has been drawn up for</p> </td> </tr> </table>	<ol style="list-style-type: none"> <li>1. Stakeholder consultations show approval for fisheries management plan by end Y1</li> <li>2. Key fisheries and habitats covering at least &gt;80% of protected area envelope are included in</li> </ol>	<p>Regional and National authorities were consulted on the steps for undertaking a Regional Fisheries Management Plan from September 2014 to November 2014. Authorities have expressed their collaboration and guided inputs for the Terms of Reference for a consultant. In May 2014, Blue Ventures staff sought advice from other NGOs who have undertaken Regional Fisheries Management Plans, and in November 2014 a suitable consultant was identified. The consultant will be available to begin this work in July 2015, and a timeline has been drawn up for</p>
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	management plan draft 3. Fisheries management plan is approved in collaboration with DRRHP by Y2 and ratified by Y3	initial stakeholder consultations, data collection, and the delivery of a first draft.
Activity 2.1. Consult with Ministry of Fisheries at national and regional levels to develop fisheries management plan terms of reference		The National and Regional Ministry of Fisheries were both consulted on the Terms of Reference for the Fisheries Management Plan, and a consultant was identified in November 2014. A workplan has been drawn up, and the elaboration of the Fisheries Management Plan will begin in July 2015.
Activity 2.2. Conduct stakeholder consultations		This activity is scheduled for July 2015, and will be held with regional Ministry of Fishing.
Activity 2.3 Hold validation workshops		This activity is scheduled for November 2015, and will be held with the regional Ministry of Fishing.
Activity 2.4 Develop implementation plan with DRRHP and Barren Isles MPA management committee		This activity is scheduled to begin after the Regional Fisheries Management Plan has been elaborated and validated.
<b>Output 3.</b> A system of community-based monitoring, control and surveillance of illegal fishing activities in the Barren Isles MPA is developed and implemented in partnership with the CSP	<ol style="list-style-type: none"> <li>1. Minimum 10 community members trained in ICT for use in MCS by Y2</li> <li>2. ¼ participating communities filing monthly reports on industrial and fishing activity (including negative observations within the MPA limits by Y3.</li> <li>3. CSP effectively provides support/responds to reports of illegal fishing by community by Y3.</li> </ol>	This initiative was presented to the CSP in Tana in May 2014, and authorities confirmed their support for direct collaboration with fishing communities. Although this activity is scheduled to begin in Y2, 10 community members have been trained in ICT using Open Data Kit applications on their phones to collect data, which may be used for MCS when the pilot programme begins. Community members have expressed interest in such an initiative during consultations in February and March 2015, as they often witness IUU fishing activities and have no means of alerting the CSP.
Activity 3.1 Liaise with CSP to develop plan for improved community-based MCS		After a presentation at the CSP in Antananarivo in May 2014, CSP officials confirmed their support for a community-based MCS programme. A similar initiative is being piloted in the southwestern coast of Madagascar in collaboration with the CSP, and this project intends to draw from best practices and lessons learned from the early stages of the other project.
Activity 3.2 Develop ICT system for MCS (with IT consultant)		This activity is scheduled to begin in Y2.
Activity 3.3		Although this activity is scheduled to begin in Y2, 10 community members have been trained to use smart phones for data collection through an Open Data Kit

Conduct trainings and field trials in ICT with community members		application. These community members will be guiding the trainings and field trials for a future MCS programme.
<b>Output 4.</b> Community-based monitoring of the key fisheries within the Barren Isles MPA is carried out, enabling reliable stock estimates and providing a basis for sustainable management and improvement of the fisheries	<ol style="list-style-type: none"> <li>1. 5 MPA communities involved in weekly participatory fisheries monitoring and contributing data to quarterly resource status dashboard</li> <li>2. Workshop on monitoring and stock assessment results held with stakeholders by Y3</li> <li>3. Fisheries management plan is updated annually to include findings and recommendations of stock assessments.</li> </ol>	Community-based monitoring of key fisheries in 2 villages within the Barren Isles MPA is ongoing, with plans to expand this data collection to three islands and an additional coastal village by May 2015. In March 2015, a fisheries scientist evaluated the current methodology and worked to train local staff on improving data collection accuracy. Results are disseminated on a quarterly basis to communities, followed by question and answer sessions about resource management and upcoming activities.
Activity 4.1 Participatory fisheries monitoring established in 5 villages		Participatory fisheries monitoring is established and ongoing in two fishing villages, and a fisheries scientist is working with local staff to expand capacity to monitor fisheries on three islands and one additional fishing village, ensuring that 6 sites total will be monitored by community members.
Activity 4.2 Community-based turtle nest monitoring at 8 sites		Between December 2014 and May 2015, community-based turtle nest monitoring is being carried out on four different islands. There are plans to expand this to an additional coastal site in Y2. In November 2014, community monitors were retrained to use ICT for data collection, allowing nesting data to be uploaded directly onto a results dashboard.
Activity 4.3 Community-based monitoring of marine habitats at 10 sites		Reef surveying is scheduled for Y2.
Activity 4.4 Disseminate monitoring results to communities and stakeholders (presentations, resource status dashboard, etc.)		Outreach sessions to disseminate data are conducted on a quarterly basis. Community monitors participate to explain their role in monitoring, and Q&A sessions and games are held with communities to increase engagement with and understanding of results.
Activity 4.5 Incorporate results of fisheries monitoring into MPA and fisheries management planning		In Y2, the MPA committee will be trained to understand fisheries monitoring data and how to incorporate results into decision-making processes. As of yet, an MPA committee has not been established.



## Annex 2 Project's full current logframe

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p><b>Goal:</b> Effective contribution in support of the implementation of the objectives of the Convention on Biological Diversity (CBD), the Convention on Trade in Endangered Species (CITES), and the Convention on the Conservation of Migratory Species (CMS), as well as related targets set by countries rich in biodiversity but constrained in resources.</p>			
<p><b>Outcome:</b>  The Barren Isles MPA empowers traditional fishers to secure and manage their fishing resources, leading to a decrease in overexploitation by industrial and itinerant fishing.</p>			
<p><b>Outputs:</b>  1. The proposed Barren Isles MPA, with a zoning plan which protects traditional fishing grounds, is gazetted as a protected area by the government of Madagascar</p>	<p>1. Stakeholder agreement on zoning plan for Barren Isles MPA by end Y1 2. Representation of all key stakeholders groups in management committee with &gt;90% attendance by nominated representatives 3. 80% of villages elect representatives to fishing association and management committee by Y3</p>	<p>1. Government decree and map showing the gazetted MPA boundary; 2. Meeting minutes from consultations and validation workshops</p>	<p>Sufficient political will exists for the creation of the Barren Isles MPA and development of a fisheries management plan  Through using the formal process to gazette the MPA, local fishers are able to negotiate a MPA boundary that protects their fishing grounds against industrial fishing</p>
<p>2. A fisheries management plan is developed and implemented by the fishing communities in collaboration with the regional fisheries authorities (DRRHP)</p>	<p>1. Stakeholder consultations show approval for fisheries management plan by end Y1 2. Key fisheries and habitats covering at &gt;80% of protected area envelope are included in management plan draft 3. Fisheries management plan is approved in collaboration with DRRHP by Y2 and ratified by Y3</p>	<p>1. Fisheries management plan document 2. Meeting minutes from consultations and validation workshops.</p>	<p>With the support of CSP (the Malagasy government agency for the enforcement of fishing laws) the community is able to enforce an industrial fishing ban within the MPA and decrease illegal scuba diving for sea cucumbers</p>
<p>3. A system of community-based monitoring, control and surveillance of illegal fishing activities in the Barren Isles MPA is developed and</p>	<p>1. 50% decrease in the incidence of industrial fishing and illegal scuba diving for sea cucumbers within the MPA from</p>	<p>1. Reports of the community surveillance committee 2. CSP data showing the movements of</p>	<p>Local fishing stakeholders are able to agree on an effective fisheries management plan</p>

<p>implemented in partnership with the CSP</p>	<p>Y1 to Y3</p> <p>2. Minimum 10 community members trained in ICT for use in MCS by Y2.</p> <p>3. 3/4 participating communities filing monthly reports on industrial and illegal fishing activity (including negative observations) within the MPA limits by Y3.</p> <p>4. CSP effectively provides support/responds to reports of illegal fishing by community by Y3.</p>	<p>industrial vessels based on satellite monitoring</p>	<p>Sufficient political will exists for the creation of the Barren Isles MPA and development of a fisheries management plan</p>
<p>4. Community-based monitoring of the key fisheries within the Barren Isles MPA is carried out, enabling reliable stock estimates and providing a basis for sustainable management and improvement of the fisheries</p>	<p>1. Stock assessments of coral reef fisheries in all five participating villages show fisheries within the MPA are not overexploited and below maximum sustainable yield (MSY)</p> <p>2. 5 MPA communities involved in weekly participatory fisheries monitoring and contributing data to quarterly resource status dashboard</p> <p>3. Workshop on monitoring and stock assessment results held with stakeholders by Y3</p> <p>4. Fisheries management plan is updated annually to include findings and recommendations of stock assessments</p>	<p>1. Analyses of catch data of key fisheries using Spawning Potential Ratios (SPR) based stock assessments</p>	<p>Catch data collected is sufficient to assess the sustainability of key fisheries using Parfish and other tools for data-deficient fisheries stock assessments</p>
<p><b>Activities</b> (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)</p>			

## Annex 3 Standard Measures

**Table 1 Project Standard Output Measures**

Code No.	Description	Gender of people (if relevant)	Nationality of people (if relevant)	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
7	Comic books on marine reserves and MPA creation	N/A	Malagasy	1			1	2
13B	Turtle nest monitoring data and shark captures monitoring to be shared with DREEF, with access to dashboard	N/A	Malagasy	2			2	2
14A	Data dissemination outreach events with MPA communities	N/A	Malagasy	3			3	11
21	Creation of MPA management committee	N/A	Malagasy	0	1	0	1	1
23	MacArthur Foundation funding	N/A	N/A					

**Table 2 Publications**

Title	Type (e.g. journals, manual, CDs)	Detail (authors, year)	Gender of Lead Author	Nationality of Lead Author	Publishers (name, city)	Available from (e.g. website link or publisher)
The Barren Isles archipelago: Establishing the Indian Ocean's largest locally managed marine protected area	Factsheet	BV, 2015	Female	USA	BV, London	<a href="http://www.blueventures.org">www.blueventures.org</a>
Analyse de la chaîne de valeur des produits de la pêche et valorisation des pêcheries traditionnelle dans la zone Maintirano – Îles Barren	Report	Etienne Prolhac	Male	French	BV, London	Not yet available

## Checklist for submission

	Check
<b>Is the report less than 10MB?</b> If so, please email to <a href="mailto:Darwin-Projects@ltsi.co.uk">Darwin-Projects@ltsi.co.uk</a> putting the project number in the Subject line.	X
<b>Is your report more than 10MB?</b> If so, please discuss with <a href="mailto:Darwin-Projects@ltsi.co.uk">Darwin-Projects@ltsi.co.uk</a> about the best way to deliver the report, putting the project number in the Subject line.	NA
<b>Have you included means of verification?</b> You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	X
<b>Do you have hard copies of material you want to submit with the report?</b> If so, please make this clear in the covering email and ensure all material is marked with the project number.	NA
Have you involved your partners in preparation of the report and named the main contributors	NA
Have you completed the Project Expenditure table fully?	X
Do not include claim forms or other communications with this report.	