

## Darwin Initiative Main Project Annual Report

**Important note:** To be completed with reference to the Reporting Guidance Notes for Project Leaders:

*it is expected that this report will be about 10 pages in length, excluding annexes*

**Submission Deadline: 30 April**

### Darwin Project Information

Project Reference	21-017
Project Title	Community-based conservation for livelihood development in Lake Ossa Manatee Reserve
Host Country/ies	Cameroon
Contract Holder Institution	Zoological Society of London
Partner institutions	Ministry of Forestry and Wildlife (MINFOF) Cameroon, Watershed Task Group (WTG), Cameroon Wildlife Conservation Society (CWCS),
Darwin Grant Value	£297,211
Funder (DFID/Defra)	DFID
Start/end dates of project	April 1, 2014-March 31, 2017
Reporting period (e.g., Apr 2015 – Mar 2016) and number (e.g., Annual Report 1, 2, 3)	April 1, 2014 – March 31, 2015
Project Leader name	Chris Ransom
Project website/blog/Twitter	<a href="http://www.zsl.org/conservation/regions/africa/lake-ossa-wildlife-reserve-cameroon">http://www.zsl.org/conservation/regions/africa/lake-ossa-wildlife-reserve-cameroon</a> ; <a href="http://net-works.com/locations/cameroon/@laurenredmore">http://net-works.com/locations/cameroon/@laurenredmore</a>
Report author(s) and date	Lauren Redmore, Chris Ransom; 30/4/2015

### 1. Project Rationale

Freshwater biodiversity is amongst the most threatened and neglected biodiversity in Africa, yet vital for human communities. Cameroon has amongst the highest number of threatened freshwater species in Africa, and ranks 150 out of 187 countries on the Human Development Index. At 4,000ha, the Lake Ossa wetlands complex and the neighbouring reaches of the Lower Sanaga River Basin are freshwater and terrestrial ecosystems of regional and global importance. Located on the edge of the proposed Douala-Edea protected landscape the complex provides a refuge for endangered West African manatee and freshwater turtles, fish species, migratory birds and ranks 7<sup>th</sup> out of 1,256 catchments that qualify as Key Biodiversity Areas within the Guinean Forest Hotspot based on the number of vulnerable species (IUCN pers. comm.). Lake Ossa also provides a range of vital ecosystem services on which people rely. Over 200 of 1350 households (~15%) are dependent on fisheries, while almost 25% of the total population (~5300 people) carry out subsistence and small-scale agriculture in the decreasingly available land surrounding the lake to support their households. The complex provides additional essential services such as clean water, fish and timber to the nearby urban centre of Edéa and local communities depend on a healthy, functioning and biodiverse ecosystem in the Lake Ossa complex. As these resources are increasingly threatened due to peri-urban encroachment and agroindustry expansion, poverty and food insecurity are becoming of increasing concern.

Lake Ossa’s biodiversity and human population face substantial threats due to severe anthropogenic pressures. The proximity of the 11 Lake Ossa communities to the city of Edéa increases the levels of unsustainable levels of exploitation of the complex’s resources, including fish, timber, and sand. Illegal poaching of wildlife is a significant threat to species like the manatee and soft shelled turtle. Unsustainable fishing practices such as small net size, lack of respect for fishing seasons and ghost fishing by abandoned fishing gear are threats to the diminishing fish resources and other species that depend directly or indirectly on the lake. Poor management of the steep lake shore, particularly due to the intrusion of agroindustry (industrial oil palm and rubber plantations) and associated population growth is contributing to the degradation of the reserve and its resources. Known locally as “the forgotten reserve”, capacity to manage these threats to biodiversity and livelihoods is incredibly low, leaving both people and freshwater biodiversity vulnerable.

These threats were identified during a Darwin Initiative funded scoping trip to the Lake Ossa Reserve and neighboring Doula Edea Wildlife Reserve in June 2013. During this trip discussions and consultations were held with representatives from the Ministry of Forestry and Wildlife (MINFOF), local NGOs and local communities to better gauge interest in and capacity for conservation and development-related activities.

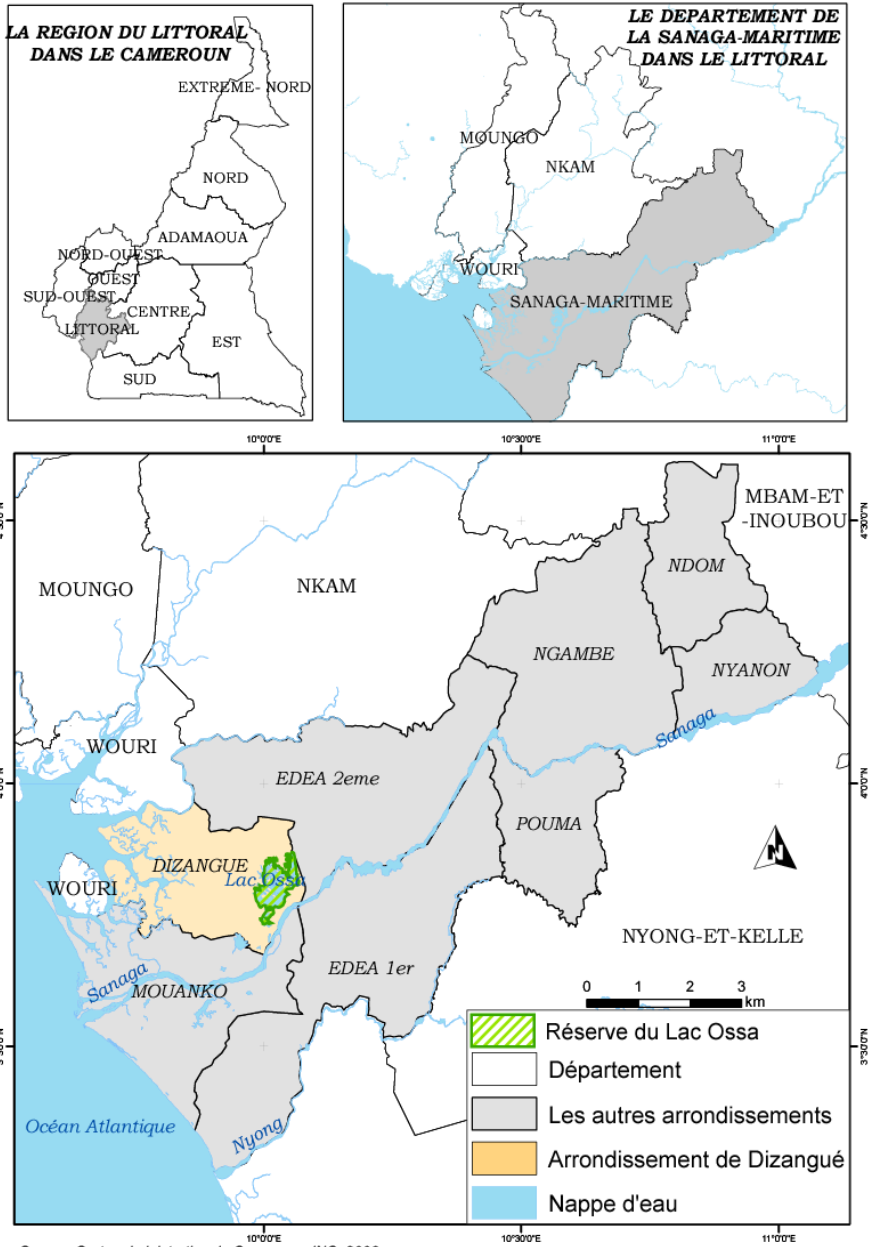


Figure 1. The Lake Ossa Reserve is located in Dizangué, Littoral Region of Cameroon, and situated at the outlet of the Sanaga basin.

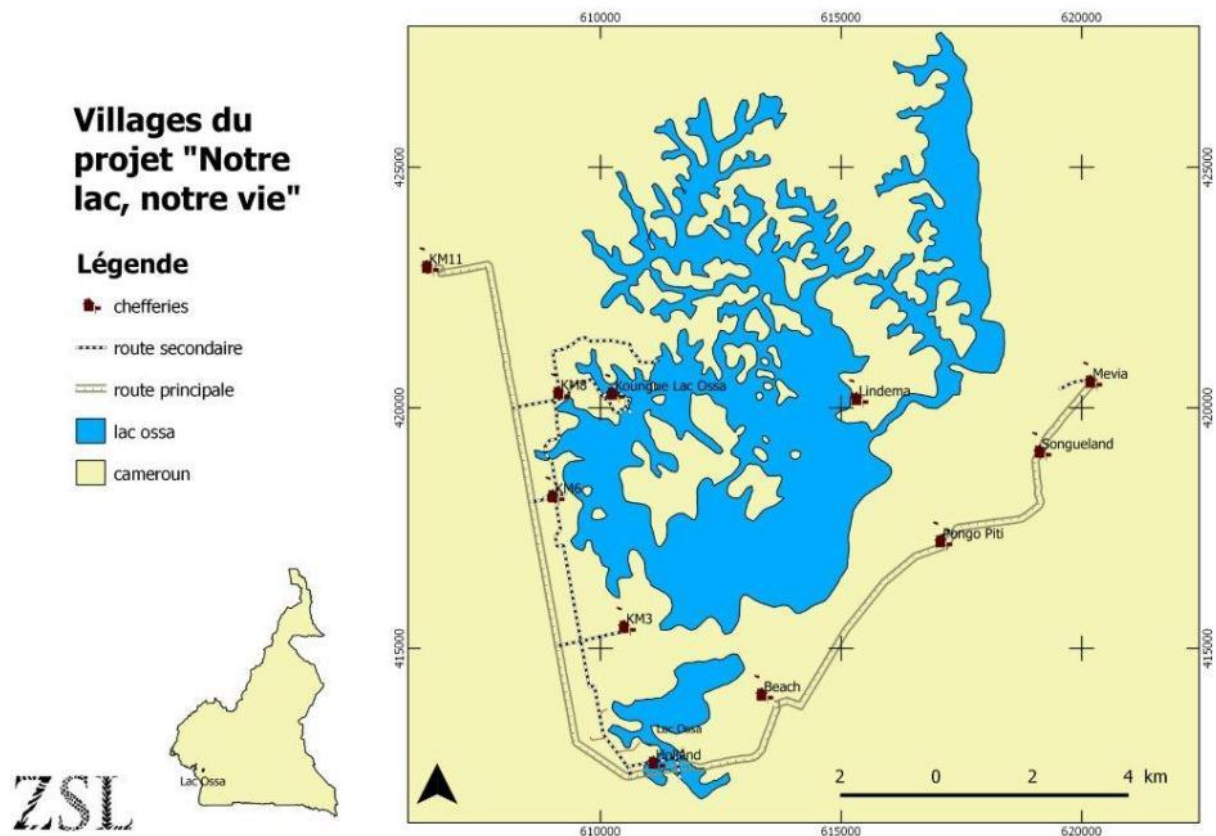


Figure 2. “Our Lake, Our Life” works in 11 villages surrounding Lake Ossa. The project office is located in Beach.

## 2. Project Partnerships

This project was designed in collaboration with the Ministry of Forests and Wildlife (MINFOP), local NGOs, and local communities during a Darwin scoping trip in June, 2013. It was designed to build on work previously carried out in the area by partners, especially the development of freshwater co-management committees. The project initially sought to work with the MINFOP Conservation Service who manage the reserve and three local NGOs, Watershed Task Group (WTG), Cameroon Wildlife Conservation Society (CWCS), and Cameroon-Ecology. However, following the commencement of the project Cameroon-Ecology chose not to participate in the first year and therefore new project partnerships needed to be developed to ensure certain project activities were carried out. In addition it became clear that the existing participating project partners did not have the technical skills to carry out all the project activities so further collaborations were established for specific areas of work most notably Village Savings and Loans and agroforestry and reforestation. Association des Femmes Haoussa pour le Developpement (AFHADEV) have been engaged to carry out VSLA training and build capacity for VSLA establishment locally, due to their extensive VSLA training and establishment experience. Action for Sustainable Development (ASD) have been consulted to support the establishment of a feasibility study/market survey to help guide the project’s approach on tree nursery establishment, and Association pour la Promotion des Actions de Developpement Rurale (APADER) who have extensive experience in agroforestry and tree nursery management, are providing technical training on agroforestry and tree nursery establishment to community members.

In addition, with support from ZSL’s Project Manager, ZSL’s EDGE Fellow and the recently established NGO, African Marine Mammal Conservation Organization (AMMCO), for which he works were awarded a grant from the IUCN’s PPI- FFEM to develop complementary activities to support the project’s goal.

Letters of Agreement have been developed with each partner NGO to clarify individual roles, budgets and other partnership terms to ensure that work stays on task, on budget, and according to the requirements of the Darwin Initiative. These are reviewed on a regular basis to ensure an adaptive management approach, particularly as activities evolve and the project develops further. Weekly reporting and regular meetings have recently been initiated to improve collaboration and communication across project partners, something that was determined to be a weakness of the project towards the end of the first year.

ZSL has also succeeded in establishing a relationship with SAFACAM, the neighbouring agroindustry, and is currently in discussions to develop an MoU to ensure full partnership on certain aspects of the project, including reforestation and Net-Works, where their technical expertise can provide much-needed support.

The key partnership for all partners on the project is the MINFOF Conservation Service of Lake Ossa (MINFOF), particularly the Conservator who helped to design the project during planning phases. As the project has progressed it has become apparent that the ecoguards working for MINFOF require significant training in areas such as fisheries, ecology and social engagement to enable them to fully participate in the project as planned. In order to address this, activities in the beginning of year 1 were focused on developing and delivering training courses to the Conservation Service to ensure that all ecoguards understand basic fisheries and ecological principals, as well as Village Savings and Loans development and Net-Works, co-management and social engagement approaches, and reforestation and agroforestry. Seven training courses were delivered by NGO partners for the Conservation Service to enable the ecoguards to carry out project-related activities. These training courses also helped contribute to the project's engagement with local authorities, including the Mayor and the Subdivisional Officer by involving them in delivering training on governance and discussions on co-management and legalization of Community Management Committees. As a result, they have expressed their commitment to facilitating the co-management process.

Finally, the most important partners in this project are the 11 villages around the lake and much effort has been spent on establishing contact and building relationships with them.

The project has been able to foster important relationships across all the stakeholders through frequent communications and the hosting of a multi-stakeholder platform meeting, planned to be held two times per year, which was attended by village chiefs, project partners, local authorities and agroindustry. Trust gained over the first year will facilitate project activities over the next two years.

### Lessons

Relationship building and trust has been a critical component of project development, and frequent community visits have been important to facilitate this. The initial free prior and informed consent meetings proved an important activity for making contact and beginning to establish relationships with the communities [Annex 4]. Through this work we have learn that it is necessary to engage with representatives from across each community, not just self-appointed community representatives, to ensure the engagement of the whole community and their ownership of the project.

The establishment of baseline socioeconomic data has also been very crucial to help refine project interventions. While developing the project proposal, it was clear that the overall population was little known and activities little understood, and the household census carried out during year 1 provided a much-needed base-line understanding of the population and their economic activities. Not only was the quantitative information especially helpful to understand better the fishing practices, and particularly to understand the reliance on agriculture and related activities, but conversations with people during the census provided important qualitative information about natural resource use. Agriculture is more widely practiced than initially thought and the reforestation aspects of the project need to rely on a co-management, strongly participatory approach, just as for fisheries aspects of the project. Further socioeconomic baseline studies will be carried out in year 2 and will strengthen the understanding of our target population.

### Challenges

While the project relies heavily on the Conservation Service to provide field assistance, the limited number of ecoguards (7 in total) makes activity programming quite challenging. In addition, some of the ecoguards split their work time between the Departmental Delegation based in nearby Edea, and the Conservation Service of Lake Ossa, based in Beach. Project partners have tried to overcome this limitation by assigning specific ecoguards to particular activities, which builds technical capacity in a few of the ecoguards who seem particularly motivated to support project activities.

## **3. Project Progress**

### **3.1 Progress in carrying out project activities**

**Output 1.** *Community Management Committees that are representative of lake users and encompass all 11 villages surrounding Lake Ossa are formally established and supported to develop and implement co-management plans with MINFOF for Lac Ossa that includes sanctuary zones for priority species (manatees, freshwater turtles) and sustainable fishing zones.*

Project activities have proceeded as planned but with some delays due to a slow start up of the project and some activities taking longer than anticipated. Free, prior informed consent (activity 1.1) has been completed in all 11 project villages; community perception/biological baseline surveys (activity 1.2) have been completed by AMMCO and results will be available by May 2015, at which time they will be disseminated to communities to facilitate the lake zoning process; CPUE and VPUE surveys (activity 1.3.) have not yet taken place because 1) early studies have shown that VPUE is not a reliable indicator for fisheries management in Lake Ossa because of the way fish is sold in varying quantities and with negotiable prices and 2) a lack of human resources capable of carrying out CPUE surveys, but these are now planned for early year 2 and will be carried out by an experienced masters student in fisheries under the supervision of the PM; six Community Management Committees have been re-established (activity 1.4) across all 11 communities with 197 fishers having participated in the *reglement interieur* establishment process and the general board elections [Annex 5]. Finally a five-day workshop on lake ecology, fisheries management, VSLAs, reforestation and Net-Works was developed and delivered to the Conservation Service (activity 1.5), with a focus on training ecoguards to deliver similar materials to both VSLA groups and Community Management Committees. Games and role playing were important aspects of the workshop and much of the content will be appropriated for use with community groups.

**Output 2.** *VSLAs established and integrated into Community Management Committees, increasing the financial security of poor men and women living around Lake Ossa and acting as a platform for community engagement in the management and conservation of the lake.*

Planned activities for year 1 under this output have all commenced and been completed except activity 2.2 which is still ongoing. Two 3-day VSLA training-of-trainers (activity 2.1) were carried out by AFHADEV for 8 Field Agents (ecoguards), 4 Community Agents (community members) and one AMMCO employee who will assist in the monitoring and evaluation of the VSLA groups throughout the duration of the project. A household census was carried out in all 11 Lake Ossa communities and has provided an important baseline to better understand local livelihood activities, however, the census took longer than expected and, combined with further delays in identifying an appropriate partner to assist with the implementation of socio-economic baseline studies following Cameroon Ecology's decision not to participate in year 1 of the project, has delayed the establishment of socio-economic baselines (activity 2.2) which are now planned for early year 2; three Village Savings and Loans Associations (VSLAs) have been established in three different villages (activity 2.3) around Lake Ossa (Beach, Pongo Pitti, Mevia), with a total of 66 members [Annex 6]; and training modules on lake ecology and management (activity 2.4) were developed as part of activity 1.5 (see above).

**Output 3.** *Three business models assessed, taking lessons from initial pilots, and training provided for potential new sustainable enterprises to diversify the livelihoods of local communities in a) community-based native tree nurseries, b) Net-Works and c) wildlife tourism (migratory birds, manatees and freshwater turtles – building on the existing local government priorities for ecotourism development).*

Much of the work on this output has been delayed by the withdrawal of Cameroon Ecology from the project which necessitated the identification of new partner(s) to carry out the work on sustainable livelihood options. ASD and APADER were only identified in the second half of the year and as a result some of the activities planned for year 1 have not been completed and will carry on into year 2. A feasibility study/market survey has been carried out in all 11 villages to better understand the possibilities of establishing sustainable community tree nurseries (activity 3.1) [Annex 7], and it was determined that a different engagement approach would be needed due to the individual spirit of fishers and farmers in the area. A business model has been developed, providing guidance on materials and other costs for a variety of locally valued tree species, as well as indicating potential purchase value. The business model for Net-Works, developed based on experiences in the Philippines, is currently being adapted to Lake Ossa and will be at an advanced stage following the visit of ZSL's Net-Works coordinator early in year 2 (activity 3.2). Following the finalization of the feasibility study/market survey, a training course was delivered to 18 community members from all 11 villages in the basic principles of tree nursery establishment, including vegetative tree reproduction techniques like marcotting and grafting (activity 3.3) [Annexes 8 and 9]. Site selection for tree nurseries (activity 3.1) is utilising a community-wide approach to increase the chances for success. Participatory mapping of agricultural zones and degraded areas will be carried out with each community and priority zones for reforestation, agroforestry, ecotourism, and traditional/sacred areas will be identified with the larger community to ensure buy-in early on and increase success of any reforestation efforts. However this has been delayed and pilot tree nurseries have not yet been established (activity 3.4).

Site selection for the implementation of Net-Works (activity 3.1) was carried out taking into account interest and engagement from particular communities and geographic factors such as proximity to the lake and distance from other Net-Works collection groups. The 3 to 4 initial VSLA groups established will serve as priority Net-Works hub communities for net collection in and around Lake Ossa. Net-Works training modules are currently being developed (activity 3.3) by the Net-Works coordinator in collaboration with experiences from the Philippines Net-Works team. These should be available in the near future and will be translated into French to ensure a good understanding by the ecoguards who will employ the modules with the three already established VSLA groups. The Net-Works coordinator will also be visiting Cameroon in April/May 2015 to assist with the establishment of community management, payment and benefit sharing mechanisms (activity 3.5). Meanwhile we have begun meeting with communities and local authorities and disseminating information about Net-works prior to initiating net collection (activity 3.6), and have been working with the neighbouring palm oil company, SAFACAM, to understand the exportation process (activity 3.8) through which it has been determined that a 2% charge on waste fishing nets will have to be paid to duty and customs officers and SAFACAM has volunteered to assist with the process where they can.

**Output 4.** *A multi-stakeholder management committee established by year 1 that includes agro-industry (palm oil companies), Community Management Committees, MINFOF and NGOs to agree the boundaries of the reserve and develop and implement a Reserve Management Plan; and 30ha of the Reserve's lake shore is restored in priority areas of lake shore habitat to reduce siltation/runoff through the development of community-based native tree nurseries and replanting of native species.*

The workshop on lake ecology and fisheries management for SAFACAM and the Community Management Committees (activity 4.1) has yet to be held because the Committees have only recently been re-established, but the materials delivered to the Conservation Service (see activity 1.5) will be adapted for this workshop early in year 2.

With the re-establishment of Community Management Committees, a multi-stakeholder platform meeting was held in March (activity 4.2), with representation from SAFACAM, all six Community Management Committees, VSLA representatives, village chiefs, local administration including the Subdivisional Officer and the mayor, and MINFOF including the Conservation Service of Lake Ossa and Departmental and Regional representatives. Platform meetings will be held twice a year to ensure open communication about project interventions and outcomes.

Work has commenced to map the land in and around the reserve to identify degraded areas around the lake shore. Participatory mapping will be carried out in each community early in year 2 to help establish a zoning system that will feed into the development of a reserve map. Once a proposition can be made, a multi-stakeholder platform meeting will be called to discuss and agree upon the boundaries of the reserve (activity 4.3).

**Output 5.** *Community-based lake clean-ups of abandoned fishing gears is undertaken regularly with local communities generating income from the sale of old fishing nets collected during the lake clean-up for recycling into carpet tiles as part of ZSL and Interface's proven Net-Works project.*

Delays in establishing the VSLAs and Community Management Committees have resulted in associated delays in activities under this output. However, now these are established activities have commenced and will be completed in the first half of year 2. Training modules on lake ecology and the impact of discarded fishing gears have been developed (activity 5.1) and used to train MINFOF ecoguards in conjunction with activity 4.1. Support modules for Net-Works implementation are currently being developed by the Net-Works coordinator and will be available in the first quarter of year 2. Delivery of training modules to VSLA groups and Community Management Committees has not yet taken place but is planned for early year 2 (activity 5.2). Due to delays in the importation of the project boat due to the recent Ebola outbreak in West Africa, plans for carrying out the participatory mapping and inventory of abandoned fishing gears had to be put on hold but the boat has now arrived in Cameroon so this activity (activity 5.3) will take place early in year 2. In conjunction with national 'Volunteer Day' activities, one lake clean-up took place (activity 5.4) and was broadcast over two national television stations.

### **3.2 Progress towards project outputs**

**Output 1.** *Community Management Committees that are representative of lake users and encompass all 11 villages surrounding Lake Ossa are formally established and supported to*

*develop and implement co-management plans with MINFOF for Lac Ossa that includes sanctuary zones for priority species (manatees, freshwater turtles) and sustainable fishing zones.*

Six Community Management Committees have been re-established and incorporate all 11 Lake Ossa villages. Although originally planned to be 7 Committees, previous work to establish these had begun the creation of 6 so rather than begin again the project continued with these 6. The Committees have established their own bylaws and held elections, ensuring democratic and transparent foundations. Gender equality was an important aspect of the elections, and women comprise a minimum of 30% of the representatives on all Committee boards. Paperwork has been submitted to the Subdivision Officer in Dizangué (the local government representative) to ensure legalization of the Committees. Once approved and legally recognised the Committees will have the authority to represent the communities in a co-management arrangement with the Conservation Service for the Lake. A participatory map of Lake Ossa has also been developed to help guide the lake zoning process and will be used to help define sanctuary zone limits [Annex 10]. Progress towards achieving this output is therefore on track and we expect to achieve this output by the end of the project.

**Output 2.** *VSLAs established and integrated into Community Management Committees, increasing the financial security of poor men and women living around Lake Ossa and acting as a platform for community engagement in the management and conservation of the lake.*

Three Village Savings and Loans Associations (VSLAs) have been established in three different villages around Lake Ossa (Beach, Pongo Pitti, Mevia), with a focus on fishers and ensuring gender representation [details on gender found in section 6]. Two of the three groups are already saving money, while Mevia is still in the development phase. The formation of one additional VSLA group is being discussed with the village of Kongue Lac Ossa/8KM. In total, there are 66 members belonging to the first three VSLA groups. All members are encouraged to also participate in the Community Management Committees, and members of the Community Management Committees from both Beach and Mevia have expressed interest in establishing their own VSLAs, citing the innovation of savings and loans as providing a welcome support to their current fishers groups. A number of other fisher groups in the same villages have also expressed an interest in establishing VSLAs. These will be supported through the Village Agent model once the Field Officers (ecoguards) are able to provide support for the identification and training of village agents.

Training modules have been developed to support co-management and conservation of the lake and will be delivered to both VSLAs and Community Management Committees. Additionally, VSLA members who initially considered their participation in the savings group as sufficient participation in project interventions have been encouraged to participate in Community Management Committees, either directly as a member, or indirectly through collaboration with other Community Management Committee members.

**Output 3.** *Three business models assessed, taking lessons from initial pilots, and training provided for potential new sustainable enterprises to diversify the livelihoods of local communities in a) community-based native tree nurseries, b) Net-Works and c) wildlife tourism (migratory birds, manatees and freshwater turtles – building on the existing local government priorities for ecotourism development).*

We have completed a feasibility study and business plan for the establishment of community-based tree nurseries, and a business model is currently being adapted from the Philippines Net-Works model to ensure its appropriateness in Cameroon. One training course has been delivered for the establishment of community-based tree nurseries, and 6 sites have been selected based on the establishment of early-phase nurseries (two in Beach, and one each in KM11, KM3, Pongo Pitti, and Songueland). Net-Works sites have also been selected based on interest and engagement from communities, as well as geographic factors, specific to the proximity of the communities to the lake and distance from other Net-Works collection groups. Once the Net-Works training modules are completed, three early-established VSLA groups, and potentially a fourth, will be trained on net collection in year two.

**Output 4.** *A multi-stakeholder management committee established by year 1 that includes agro-industry (palm oil companies), Community Management Committees, MINFOF and NGOs to agree the boundaries of the reserve and develop and implement a Reserve Management Plan; and 30ha of the Reserve's lake shore is restored in priority areas of lake shore habitat to reduce siltation/runoff through the development of community-based native tree nurseries and replanting of native species.*

A general multi-stakeholder meeting was held at the end of year 1 on March 31, 2015, with representation from the neighbouring agroindustry SAFACAM, all six Community Management Committees, VSLA representatives from all 3 VSLA groups, village chiefs, local administration including the Subdivisional Officer and the mayor, and MINFOF including the Conservation Service of Lake Ossa and Departmental and Regional representatives. The meeting provided a good opportunity to present project development over the first year and discuss directions for the second year. An important next step will be the establishment of a formal terms of reference to ensure that the Committee is meeting regularly and is advancing on the establishment of a Reserve Management Plan.

Reforestation will be supported through locally-established tree nurseries and six have already been identified and are already producing seedlings. Contracts will be established and signed with these community groups to ensure delivery of specific tree saplings by the end of year 2 and into year 3, and replanting efforts will be established through participatory mapping and establishment of relationships with model farmers to ensure tree establishment by the end of year 3.

**Output 5.** *Community-based lake clean-ups of abandoned fishing gears is undertaken regularly with local communities generating income from the sale of old fishing nets collected during the lake clean-up for recycling into carpet tiles as part of ZSL and Interface's proven Net-Works project.*

Net-Works outreach programmes/ training modules on the impact of discarded fishing gears have been developed and used to train MINFOF ecoguards. Support materials (specifically posters) have also been developed and distributed in all 11 project villages, plus neighbouring coastal areas where project partners intervene [Annex 11]. Support modules are currently being developed by Net-Works coordinator. Due to delays in the importation of the project boat due to the recent Ebola outbreak in West Africa, plans for carrying out the participatory mapping and inventory of abandoned fishing gears is planned for early year 2. One lake clean-up was undertaken for the national Volunteer Day activities [Annex 12], and was an important sensitization event to discuss the impact of discarded fishing gears on the environment and human health. Some nets were collected during this event, and because of the day's events being broadcast on two national television channels, awareness was raised around Cameroon.

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

*Outcome: Local communities and MINFOF Conservation Service are implementing a clear co-management plan for Lake Ossa Manatee Reserve to enhance livelihoods and reverse declines in food fisheries, endangered species, and habitats.*

Year 1 of the project has laid the foundations for achieving the project outcome. The establishment of the first three VSLA groups and the re-establishment of the six Community Management Committees across all 11 villages have been key successes that will continue to be built upon for the establishment of co-management in Lake Ossa. Net-Works fishing gear removal and sanctuaries and other fishing regulations will ensure improvements in the sustainability of Lake Ossa fisheries, endangered species, and habitats. Enhanced livelihoods will be ensured through the development of local tree nurseries that will be supplying trees for erosion control of the lake, and an agroforestry approach to reforestation will help diversify agricultural practices and subsequently, local food security.

The socioeconomic and biophysical indicators are adequate for ensuring that the project outcome is being met, and despite delays in carrying out some of the baseline surveys, we still believe that we will be able to see improvements in indicators because the majority of project interventions will begin in year 2.

### **3.4 Monitoring of assumptions**

#### Outcome assumptions

Assumptions 1 and 3: During project proposal review, these assumptions received feedback as being "killer assumptions". When reviewed by project partners prior to project approval, it was determined that through good and frequent communication, and because of some initial interest shown by the industry in moving towards ISO certification, we could be assured that it would be in their interest to engage with the



project. Through this dialogue, the Social Officer for SAFACAM has expressed initial interest in managing issues related to land tenure, but this has proven more difficult to address at the higher level of the company. While we have found that our contacts acknowledge the role the agroindustry plays in community development and conservation, it has been challenging to move forward to the formalization of a partnership. Discussions have been held with the Adjunct General Director about ZSL's due diligence procedures to ensure that collaboration is in ZSL's best interest as an organization, but formal progress has yet to be made. ZSL and project partners have been discussing ways to achieve project outputs related to reforestation in more innovative ways that do not depend on the agroindustry's participation for change. In the coming months, ZSL may decide to re-evaluate outputs related to the agroindustry if no further progress is made.

Assumptions 2 and 5: Communities and local administration have been very receptive to project activities so far, particularly in aspects concerning fisheries management. For aspects related to developing a zoned map of the reserve, interest is high, and recently it was discovered that the land tenure system is managed out of the commune, not out of the national land administration. This increases the likelihood of success for managing reserve border establishment, as well as reforestation efforts, as we can work directly with the local administration to formalize any decisions.

Assumption 4: Currently this risk still exists, though the project has focused on capacity building of the Conservation Service in general, and where special trainings are supported, ZSL seeks to train at least two Conservation Service members to ensure continued progress.

Assumption 6: During the height of the ebola crisis in West Africa, import/export became an issue, however this no longer poses an issue as ebola is under control. ZSL has worked closely with SAFACAM's exportation officer to determine likely costs associated with net export to Slovenia, and it is currently not an issue to export fishing nets for recycling.

### Output assumptions

Assumptions 1 and 2: Both of these assumptions are being monitored on a regular basis and have thus far not proven to be issues. Stakeholders, particularly local communities and government authorities are on-board with project interventions and have provided constructive dialogue to ensure that we are moving forward together.

Assumption 3: Collaboration with the neighbouring agroindustry of SAFACAM has proven to be more challenging than initially expected. Discussions have been carried out to understand the impact of their villages on the Reserve and SAFACAM recognises their impact through the immigration of workers. Formalization of a relationship has been slow, though more progress may be made in year 2 through the formalization of a partnership.

Assumptions 4 and 5: Sustainable business models for both Net-Works and tree nurseries will likely depend on the existence of extended markets, for Net-Works with the incorporation of neighbouring coastal towns with excessive nets, and for tree nurseries with the need for sale of trees to neighbouring urban markets. The tree nursery business model takes into account the need to establish a network of tree nurseries from Dizangué to improve both production and sale, and the Net-Works model, still in progress, will focus on lake clean-ups and purchase from neighbouring coastal towns. Concerning VSLAs, they are of high interest in the zone, and where the project has already introduced the model, there has been expressed interest to form new groups. As a result of such high levels of interest, we will be expanding our efforts in year two.

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

*Impact: Lake Ossa Reserve communities benefit from enhanced livelihoods and ecological protection associated with Ramsar designation, and the Reserve becomes an important site for freshwater biodiversity within the Douala-Edea protected landscape.*

This project has so far contributed to raising the profile, locally, nationally, and internationally, of the Lake Ossa Wildlife Reserve as an important freshwater ecosystem vital for biodiversity and community livelihoods. The project has begun to support the development of livelihood possibilities compatible with biodiversity conservation, particularly tree nursery establishment and Net-Works, as well as overall community resilience through the establishment of VSLAs. Fisheries management is becoming an important area of conversation because of the recent re-establishment of the Community Management

Committees, and members have expressed their desire to implement best practices that are compatible with sustainable fisheries management, as well as ecotourism, particularly as it relates to the West African manatee.

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

This project is supporting Cameroon to meet their objectives under the CBD, CMS and CITES. Specifically:

By supporting the protection and conservation of the project's flagship species, the West African manatee (*Trichechus senegalensis*) which is listed on Appendix II of CMS COP7 (2002), the project is assisting Cameroon with delivering on its obligations under the UNEP-CMS Action Plan for the Conservation of the West African Manatee. The project is contributing directly to Objective 2 (Improve understanding of the West African Manatee and use information for its conservation management) and Objective 3 (Reduce pressures on the West African Manatee through the restoration and safeguarding of its habitats). The manatee is also listed on Appendix I of CITES so the project supports Cameroon with information on this species to assist them with CITES reporting requirements.

The project is also contributing towards Millennium Development Goal 7, targets 7A and 7B, and supporting CBD's Aichi Strategic Goals by 1) raising awareness of the Lake Ossa Reserve, both locally, nationally, and internationally, particularly as a key freshwater habitat through the creation of national media, international websites, and local awareness-raising events (Targets 1-4), and 2) by providing improved data to support national policies and plans by providing data and reports to the MINFOF on a regular basis (Targets 17-20). Work in year 2 will address targets 6, 7, and 8 through the introduction of sustainable fisheries and agriculture practices in and around Lake Ossa and reducing pollution, as well as targets 11 and 12 by improving management and enforcement of the reserve's threatened species and targets 14 and 15 by improving wellbeing through ecosystem service and habitat restoration.

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

One of the key project goals is to support poverty alleviation through the creation of new business opportunities, support for the establishment of VSLA groups, and through the improvement of fisheries-related food security through improved lake and lakeshore management. As the project is still in an early phase it has not yet had an impact on poverty levels, however we expect the project to have had direct positive impacts on poverty by the end of Darwin initiative funding. When the VSLAs are fully established and are able to advance beyond savings to the distribution of loans we expect this to result in support being provided to small businesses and the local generation of funds through loan repayments which will contribute to poverty alleviation in the communities. VSLAs will not only have a significant impact on the lives of the poorest families, but they will also have a positive impact on the national culture of international aid, which is often seen locally as providing hand-outs, rather than hand-ups. VSLA groups are being closely monitored to ensure that they are only having a positive impact on the socioeconomic well-being of VSLA members and that members avoid problematic debt.

In addition to VSLAs, the project also focuses on the creation of sustainable enterprises, some of which will be significantly addressed during the course of this project, especially tree nurseries and Net-Works. Both of these interventions are still in their early stages and will be further developed over the course of year 2.

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

Gender equity has been a challenging issue to address thus far. Participation from women in lake management issues is low because they are not the ones fishing and as a result do not see management issues as their role. Despite efforts at seeking out knowledge leaders who are women, the project has only recently started to see positive engagement with women, particularly through the VSLA establishment and tree reforestation programs. Within the Community Management Committees, a rule that was approved and applied across all six committees was the election of a minimum of 30% women across each Committee board. In order to ensure that women participate fully the project partners are working to engage three other women from each Committee who do not play roles within the board as communication officers to improve engagement of women in meetings and activities. Currently, 3 out of 13 board members are women in Kongue Lac zone (KM11, KM8, and Kongue Lac Ossa), 3 out of 13 board members are women for the Plantation zone (Holland, KM3, KM6), 2 out of 9 board members are women for Pongo Pitti zone (Pongo Pitti), 3 out of 13 board members are women for Lindema zone

(Lindema), 3 out of 13 board members are women for Mevia zone (Mevia and Songueland), and 4 out of 14 board members are women for Beach zone (Beach).

Because of women's roles in money saving, however, they have been very active in the VSLA development. For the two VSLA groups that have finalized their member lists and started on money savings, the group from Beach has 9 members out of 25 who are women, the group from Pongo Pitti village has 6 members out of 16 who are women and for the third VSLA in Mevia, 5 members out of 25 are women.

Importantly, while ecoguards in other national parks and reserves across Cameroon tend to be men, of the seven ecoguards in Lake Ossa, three of them are women. This presents an opportunity for the project because it has resulted in the participation of more than anticipated women in meetings and trainings delivered by the project.

Through this project, ZSL has also support International Woman's Day activities on March 8 in the locality and has established a relationship with the Ministry for the Promotion of Woman and Families, a relationship that in the future could be leveraged to improve the ways the project engages with women.

## **7. Monitoring and evaluation**

Monitoring and evaluation takes place both in-country by the Lake Ossa Project Manager and ZSL Country Director, as well as through the Project Leader and other technical staff based at ZSL in London, via skype calls, email and annual evaluation visits. Detailed monthly field reports are sent around to ZSL's support team, and financial reporting is carried out on a regular basis to ensure careful budget monitoring. The Lake Ossa Project Manager has recently started a weekly reporting system with project NGO partners to ensure that activities are carried out within the agreed-upon timeframe, and newly-instated bi-monthly meetings will ensure improved communication amongst all project partners.

We are using the Before-After-Control-Impact (BACI) design to monitor the biodiversity and socioeconomic indicators, and are currently performing at or below target in regards to monitoring and evaluation of the biodiversity and socioeconomic impacts of the project. Some of the challenges to the implementation of the BACI project design relate to a lack of expertise within the project team to monitor fisheries CPUE. Due to the relatively low technical skills of project partners and the challenge of identifying endemic freshwater fishes, we are currently formalizing a partnership with an experienced fisheries student who can assist in the establishment of a fisheries database and development of a CPUE protocol. This student will also train project partners, ensuring that shared knowledge can benefit past the life of the project.

The establishment of socioeconomic indicators and baseline data has also been delayed, however ZSL's out-going project manager has an expertise in social science and, with support from ZSL's Dr. Nick Hill, will carry out focus groups before May to develop relevant socioeconomic indicators, and will design a survey that can be administered after her departure. She will be assisted by the in-coming project manager and partner NGO AMMCO to ensure capacity development. A household census, however, has been carried out and will enable project partners to understand important economic activities before and after the implementation of project interventions, of which we hope Net-Works, tree nurseries, and wildlife tourism will stand out.

## **8. Lessons learnt**

### What worked well

The establishment of open and inclusive dialogue is a critical aspect of the project, particularly with community members and local administration, to ensure buy-in and long-term results. As such, work is designed to be as participatory as possible. Because the long-term success of the project relies on relationships with stakeholders, much of the time spent early on was focused on creating an atmosphere of collaboration which has facilitated project activities.

Despite cultural challenges to establishing new groups, particularly VSLAs and Community Management Committees, their establishment has been a major success of the project, and work will be facilitated through these key entry points in the future.

### What could be improved

Coordination with the multiple project partners was a weakness of the project at the beginning. This has recently been improved through the instigation of more frequent communications including weekly reporting and regular meetings.

### Recommendations for others

For co-management focused projects, it is critical to take time to strategically build relationships and trust with key stakeholders to improve the chances of success. Work should be as collaborative as possible, encouraging dialogue and challenging pre-conceived ideas, to ensure that progress towards project outcomes occurs is made together with key stakeholders. This is particularly true for community members who may not necessarily have the same understanding of how they can feed into project activities.

Additionally, an adaptive approach needs to be taken for work with communities, particularly for those who do not have a complete understanding of all of the dynamics found within the communities. Conflict is more likely to happen when community facilitators assume that they know best, and it is critical that community facilitators think on their feet to adapt readily to the unique context of each community.

Legalization of all community groups, including VSLAs and Community Management Committees, formed throughout the duration of this project is also an important lesson learned that was brought to light by group members. This is something that must be considered with both VSLA groups and Community Management Committees, and helps group members to ensure that their groups are guaranteed past the life of the project.

### Building lessons learned into future plans

Reflecting on challenges in establishing and maintaining good communication, project partners will use key focal points found within each VSLA and Community Management Committee to ensure that messages for group meetings or other tasks are reaching the ground. By diversifying who we speak with, we will increase the possibilities for successful communication and community mobilization.

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

N.A.

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

### Project design

Building on experiences gained over the first year, the project team is refining some of the project design, particularly those related to reforestation efforts. Although the neighbouring agroindustry SAFACAM has expressed interest in accounting for the agricultural land required by their employees as a part of their agroindustry operations/concessions, the process of moving forward on this is slow and likely requires a different approach to ensure that the results can be sustained after the life of the project. As such, one approach that the project is examining is the use of extensive participatory mapping to create different land-use zones that are compatible with Reserve management around the lake. These zones will include direct reforestation, ecotourism, and conservation agriculture with the goal of seeking alternative available land, etc. Despite this, the activities and outputs remain the same.

Other aspects of the project retain their original plan however we may need to reconsider in the near future to what degree the project focuses on developing close collaboration with the neighbouring agroindustry, SAFACAM. While in-depth discussions have been on-going since August, 2014, little advancement has been made on formalizing a relationship and SAFACAM has yet to express what they want from a formal relationship with the project. More discussions are planned for the first week in May, and ZSL should have a better idea on how to engage with SAFACAM.

### Difficulties and risks

One of the major challenges in the first months was the establishment of relationships, both at the community level, and at the administrative level. The project experienced some delays due to these challenges, as well as determining the best resource people for communication, activity development, etc. It was particularly challenging at the community level because of previous projects working in the area that generated inflated expectations about project outcomes. ZSL and the Conservation Service invested much time early on managing expectations about the outcomes of the project in order to ensure that community members are fully supported by project partners, and to create dialogue around the project. This has contributed to a positive working environment of mutual learning between stakeholders and project partners.

One issue on budget management is a government-inflicted 10% overnight inflation on vehicle fuel that occurred in Cameroon shortly after the project began. This increased all expected fieldwork travel expenses, though fortunately did not have much of an impact beyond fuel expenses. Efforts have been

made to maximize the amount of time spent in the field to ensure that fuel costs remain as low as possible.

Cameroon has experienced much instability this past year due to Boko Haram terrorism and counter-Boko Haram efforts from the government. There has been some travel warnings issued in and around Douala, as well as reports of Boko Haram being arrested in the neighbouring city of Edea. Additionally, the Ebola virus outbreak reached neighbouring Nigeria, but was fortunately controlled before it could become a real threat to Cameroon. These risks have thus far not hampered the project, but have been extensively monitored on the FCO website by ZSL within Cameroon and in London to ensure the security of all project partners and staff.

## **11. Sustainability and legacy**

The project team has made significant efforts to raise the profile of the Lake Ossa Reserve and the project, at local, national and international levels. Frequent village-level meetings are held to establish good communication with key stakeholders and communicate the project and its progress. The extensive door-to-door work carried out during the household census and the process of re-establishing Community Management Committees have enabled the partners to communicate and discuss the project's goals with local communities and the local administration and ensure buy into a longer term vision of co-management of the Reserve. Media has been a key part of increasing visibility of the project, and project staff and partners have been featured several times on national TV stations and three times in a local newspaper. In addition, ZSL's websites (zsl.org and net-works.org) have been critical for increasing the visibility of Lake Ossa and are accessed by tech-savvy community members, as well as Cameroonian authorities, and international audiences. A logo for the project has been developed and the local project name "Notre lac, notre vie" (Our lake, our life) has been adopted across project stakeholders and contributed to a sense of pride for their contributions to Lake Ossa management.

This first year, there has been a significant contribution to capacity development of the Conservation Service ecoguards. Firstly, because of the concrete objectives of the project and frequent activities in the field, some ecoguards spend up to five days a week in Lake Ossa communities. In the early stages of project interventions, the ecoguards would often speak about the project as supporting suppression-based activities. Currently, the ecoguards explain the project in a more nuanced way, and are able to speak confidently about co-management approaches and the importance of freshwater conservation. Currently, a good platform of collaboration has been established, and the Conservation Service has established very strong working relationships with VSLA groups, Community Management Committees, and other community groups with whom they are in frequent communication.

Overall, the Conservation Service has benefited from multiple workshops and training sessions, seven in all, including basic swimming lessons, VSLA establishment and monitoring, tree nursery development, and co-management approaches for freshwater conservation. In addition, the project has supported increased capacity of partner NGOs and the ZSL EDGE Fellow. Support has been provided to the EDGE Fellow and AMMCO on social survey development and analysis and poster design. AMMCO has also participated in two extensive trainings, supported by the project, to establish them as key partners on VSLA establishment and monitoring. Other partners have benefited from increased technical capacity, mostly so far in areas related to reporting and activity planning, but also in terms of mapping and agroforestry techniques. Specifically, the project supported two Conservation Service members and the ZSL EDGE Fellow to participate in a 4 day QGIS course to assist with mapping [Annex 13], and partner NGO CWCS has been trained in agroforestry/improved tree nursery techniques to ensure their capacity to assist in follow-up in the field. This focus on capacity building and empowerment will help ensure that there are strong sustainable institutions in place at the end of the project to be able to continue managing the reserve and ensure sustainability of the project as intended in the exit strategy.

## **12. Darwin Identity**

All documents produced for the project include the Darwin Initiative logo, including all those that are distributed to government officials and published online. Reports produced under the grant include the Darwin logo. Posters distributed to community members, as well as maps produced for distribution all include the logo. Additionally, ZSL Cameroon's trimester bulletins include the Darwin logo and consistently mention Darwin as the funder for work in Lake Ossa, which provides a good opportunity to describe the focus on poverty alleviation and biodiversity conservation. The newly launched Net-Works website also uses the Darwin logo to showcase its support to both projects in the Philippines and Cameroon.

Funding from the Darwin is the main driver of activities within Lake Ossa, and this funding has created the critical identity for all project activities. While many people, both locally and within the administration, were unaware of the Darwin Initiative, the project has made much effort to present the goals of the Initiative through focusing on the connections between biodiversity conservation and poverty alleviation. Social media, specifically Twitter, is an important tool for ZSL to communicate about the project, though often slow internet connection in the field limits its use. Cameroon recently upgraded to support 3G network, and this may be something that is used more in the future as accessibility increases.

### 13. Project Expenditure

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

<b>Project spend (indicative) since last annual report</b>	<b>2014/15 Grant (£)</b>	<b>2014/15 Total Darwin Costs (£)</b>	<b>Variance %</b>	<b>Comments (please explain significant variances)</b>
Staff costs (see below)				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs (A)				
Capital items (see below) (B)				
4x4 vehicle and insurance				
Gas and maintenance				
Laptop				
Bailing machine				
GPS units				
Scientific fishing gear				
Laptop (partner)				
Patrol boat and motor				
Others (see below) (C)				
Communications – phone/internet				
Waterproof notebooks & consumables				
Printing and postage				
Field equipment & supplies				
MINFOF Dizangue office refurb				
Consumables (partners)				
Waterproof notebooks and consumables (partners)				
Printing and postage (partners)				
<b>TOTAL</b>	<b>£111,038</b>	<b>£111,038</b>		

**(A) Operating Costs:** The main underspend on this budget category was on fuel for the patrol boat. We had budgeted for £4,000 but due to difficulties in shipping the boat to Cameroon and getting it through customs we only took possession of it late in year 1 so we did not need so much fuel. As a result only £1,400 was spent.

**(B) Capital items:** We have overspent on capital items primarily because the patrol boat cost us significantly more than anticipated. This was because we had to purchase it from abroad and were charged over £3,500 to get it through customs, despite an official letter from MINFOF to the Ministry of Finance requesting a dispensation. The cost of the boat itself and its transportation to Cameroon was also higher than anticipated because shipping costs were increased as a result of the Ebola outbreak in West Africa and only one company being prepared to ship to Cameroon.

**(C) Others:** The underspend on this budget category was primarily due to the increased amount of funds required to purchase the boat and therefore funds were reallocated to boat purchase budget line under capital items.

**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 (please leave this line in to indicate your agreement to use any material you provide here)

## Annex 1:

Project summary	Measurable Indicators	Progress and Achievements April 2014 - March 2015	Actions required/planned for next period
<p><b>Impact</b></p> <p>Lake Ossa Reserve communities benefit from enhanced livelihoods and ecological protection associated with Ramsar designation, and the Reserve becomes an important site for freshwater biodiversity within the Douala-Edea protected landscape.</p>		<p>This project has so far contributed to supporting raising the profile of the Lake Ossa Wildlife Reserve as an important freshwater ecosystem vital for biodiversity and community benefits. The project has begun to support the development of livelihood possibilities, including through community tree nurseries, Net-Works, and particularly considering the support to local community resiliency through VSLA development. The project has also begun to put in place mechanisms for co-management of the lake, through capacity building of communities and the local government.</p>	
<p><b>Outcome</b></p> <p>Local communities and MINFOF Conservation Service are implementing a clear co-management plan for Lake Ossa Manatee Reserve to enhance livelihoods and reverse declines in food fisheries, endangered species, and habitats.</p>	<p>Indicator 1: Decreasing trends in populations of fish and freshwater turtles (e.g. African softshell turtle, <i>Trionyx triunguis</i>, status unknown) and manatee (<i>Trichechus senegalensis</i>, IUCN Red List VU; upgraded to CITES Appendix I in March 2013) are halted or reversed within the sanctuary zones by year 3.</p> <p>Indicator 2: Achieve an average of at least 20% improvement in locally-defined wellbeing scores and material style of life indices for 400 fishing households surrounding Lake Ossa by year 3 (baselines set in year 1 through household baseline surveys). Well-being will be assessed using subjective</p>	<p>Year 1 of the project has laid the foundations for achieving the project outcome. The establishment of the first three VSLA groups and the re-establishment of the six Community Management Committees across all 11 villages have been key successes that will continue to be built upon for the establishment of co-management in Lake Ossa. Net-Works fishing gear removal and sanctuaries and other fishing regulations will ensure improvements in the sustainability of Lake Ossa fisheries, endangered species, and habitats. Enhanced livelihoods will be ensured through the development of local tree nurseries that will be supplying trees for erosion</p>	<p>Finalising work on establishing baselines is a priority for the next period of the project. A baseline fisheries and manatee survey will be carried out, alongside the establishment for a CPUE protocol, and the training of ecoguards to carry out CPUE measurements. Participatory mapping will be carried out to better understand important habitat for freshwater species to develop sanctuary zones for protection of freshwater species. Focus groups will be carried out in April to establish well-being indicators and the baseline socio-economic survey completed by July.</p> <p>Training modules on Net-Works will be</p>



	<p>quality of life approaches applied to fisheries (Britton and Coulthard 2013, Coulthard et al 2011) and locally defined quantitative indicators (e.g. the proportion of households with tin roofs).</p> <p>Indicator 3: Boundaries of the Reserve are clearly demarcated, understood and endorsed by local communities and agroindustry, with &gt;30ha of lake shore vegetation successfully rehabilitated (illegal farms/plantations cleared and native tree species planted and protected) by year 3.</p> <p>Indicator 4: 15% of lake area established as refuges (no-take sanctuary zones) for fish, manatees and freshwater turtles (nesting sites) and 70% of lake area effectively implementing sustainable fishing practices, actively enforced with watch-towers and enforcement protocol in place by year 3 (from a baseline of 0%).</p> <p>Indicator 5: Decreasing trends in fisheries indicators (Catch or Value Per Unit Effort – CPUE/VPUE) of fishers from local communities (baseline to be set in year 1) are halted or reversed by year 3.</p> <p>Indicator 6: At least 200 of the estimated 400 fishers in 11 villages within the Lake Ossa Reserve are engaged in VSLAs with an average of at least 20,000cfa (£25) each in savings (based on the average for VSLAs elsewhere in Cameroon) by year 3 (from a baseline of zero in Year 1).</p>	<p>control of the lake, and an agroforestry approach to reforestation will help diversify agricultural practices and subsequently, local food security.</p> <p>The socioeconomic and biophysical indicators are adequate for ensuring that the project outcome is being met, and despite delays in carrying out some of the baseline surveys, we still believe that we will be able to see improvements in indicators because the majority of project interventions will begin in year 2.</p>	<p>completed to complement the modules on lake ecology, fisheries, co-management etc. developed in year 2. Training will be delivered to VSLA and Community Management Groups to increase their understanding and ability to engage and participate in the project activities and co-management.</p> <p>The project partners will work with the 6 Community Management Committees over the next two years for the development of a lake management plan, including sustainable fishing practices, zonation, placements of watchtowers and co-management enforcement protocols.</p> <p>Participatory mapping of lake shore uses will be carried out in the coming months with each community and with support from community leaders to ensure adoption of reforestation/agroforestry/ecotourism zones along the lake shore. This participatory mapping exercise will also be an important first step to identifying boundaries of the reserve.</p> <p>Six community-based tree nurseries have been identified and will be supported to ensure that they will have enough trees to support reforestation activities.</p> <p>A survey will be carried out to map abandoned fishing gear and lake clean-ups will be organized to ensure that net collection starts. At the same time recycling facilities will be established.</p> <p>Further Village Agents will be training to enable further VSLAs to be set up in</p>
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	<p>Indicator 7: At least 50% of abandoned fishing nets and bamboo fishing gear in the lake (baseline to be set in Year 1) is removed by Year 3 through a series of stakeholder events that generate income and awareness, and clean-up is ongoing.</p> <p>Indicator 8: At least one palm oil company with direct influence on Lake Ossa water quality have and are implementing protocols for habitat restoration as part of the management plan.</p>		<p>other interested communities.</p> <p>Efforts will continue to establish a formal relationship with SAFACAM to ensure their engagement in the project.</p>
<p>Output 1. Community Management Committees that are representative of lake users and encompass all 11 villages surrounding Lake Ossa are formally established and supported to develop and implement co-management plans with MINFOF for Lac Ossa that includes sanctuary zones for priority species (manatees, freshwater turtles) and sustainable fishing zones.</p>	<p>Indicator 1: Seven Community Management Committees encompassing all 11 Lake Ossa villages and representative of Lake Ossa users (as defined in baselines) are formed and meeting regularly with MINFOF Conservation Service by the end of year 1.</p> <p>Indicator 2: Co-management plans established by Community Management Committees through participatory planning covering fisheries species, freshwater turtles and manatees with at least 15% of the lake gazetted as refuges for these species by year 2.</p> <p>Indicator 3: Enforcement structures are in place and joint patrols by eco-guards and local communities initiated by year 2.</p> <p>Indicator 4: Declines in fisher's CPUE and VPUE (baseline condition) are halted or reversed by year 3 based on monitoring of CPUE and VPUE throughout the project period.</p> <p>Indicator 5: Decreasing trends (baseline condition) in populations of</p>	<p>Six Community Management Committees have been re-established and incorporate all 11 Lake Ossa villages. Committees have applied to local authorities for formal legal recognition and registration so they have the authority to represent the communities in a co-management arrangement with the Conservation Service for the Lake.</p>	

	freshwater turtles (e.g. African softshell turtle, <i>Trionyx triunguis</i> , status unknown) and manatee ( <i>Trichechus senegalensis</i> , IUCN Red List VU; upgraded to CITES Appendix I in March 2013) are halted or reversed within the sanctuary zones by year 3, based on monitoring of these populations throughout the project period.	
Activity 1.1: Free, prior informed consent (FPIC) carried out in 11 villages.		The free, prior, and informed consent process has been carried out in all 11 villages.
Activity 1.2: Biological baseline surveys carried out for manatee and freshwater turtles, including compilation of biodiversity reports, fisheries reports, and community perception surveys		Community perception/biological baseline surveys were completed by AMMCO. The compilation of other biodiversity and fisheries reports was limited due to the lack of availability of studies and reports.
Activity 1.3: Training and implementation of baseline surveys for fisheries CPUE and VPUE in 11 villages.		Early studies showed that VPUE is not a reliable indicator for fisheries management in Lake Ossa because of the negotiable way fish is sold. CPUE is therefore the most reliable indicator. A lack of human resources capable of carrying out CPUE surveys has meant these have not yet taken place but are now planned for early year 2.
Activity 1.4: Re-establishment of seven Community Management Committees, including member election, ensuring gender, age, and occupational equality		Six Community Management Committees have been re-established with participation for 197 fishers using a fair, transparent, and equitable process. There was an emphasis on gender and age equality, with requirements for at least 30% of the board to be women.
Activity 1.5: Workshop, training-of-trainers and advocacy on community-based management approaches for Community Management Committees and VSLAs, MINFOF Conservation Service, and the private sector.		A five-day workshop was delivered to the Conservation Service, with a focus on training ecoguards to deliver similar modules to VSLAs, Community Management Committees, and the private sector [Annex 14]
Activity 1.6: Participatory development of management plans and mapping of lake management areas through Community Management Committees.		This is the next step for the Community Management Committees and will be developed with the Conservation Service and partner NGOs..
Activity 1.7: Implementation of management plans, including the construction of watchtowers, training of Community Management Committees and monitoring of enforcement activities by MINFOF.		Not yet commenced.
Activity 1.8: Collaborative write-up of a five year simple management plan and approval by Conservation Service and Community Management Committees for post-project		Not yet commenced.
Activity 1.9: Biological and fisheries impact assessments through collection, analysis and feedback of data for manatee and freshwater turtles, and for fisheries CPUE and VPUE		Not yet commenced.
Activity 1.10: Reporting and preparation and submission of peer-reviewed paper.		Not yet commenced.
Output 2. VSLAs established and integrated into Community Management Committees, increasing	Indicator 1: At least 3 VSLAs established with 10-25 members each through community management	Three Village Savings and Loans Associations (VSLAs) have been established in three villages (Beach, Pongo Pitti, Mevia) with a total of 66 members. Two of the three groups are already saving money, while the third is still in the development

<p>the financial security of poor men and women living around Lake Ossa and acting as a platform for community engagement in the management and conservation of the lake.</p>	<p>committees by end of year 1. Indicator 2: Village Agents replicate the VSLA approach in year 2, taking the total number of VSLAs to at least 10 with at least 200 households engaged by year 3. Indicator 3: Training modules on lake ecology and management developed and integrated into VSLA training programme by year 1. Indicator 4: Households engaged in VSLAs saving an average of at least 20,000cfa (£25) per year by year 3 from a baseline of an average of 0 cfa in savings.</p>	<p>phase. Village Agents have played a major role in their establishment and further Village Agents will be training in year 2 to support the establishment of further VSLAs at the request of other village groups.</p> <p>Training modules have been developed to support co-management and conservation of the lake and will be delivered to both VSLAs and Community Management Committees.</p>
<p>Activity 2.1: Workshop and training-of-trainers on VSLAs.</p>		<p>Two workshops were carried out. The first 3-day workshop focused on training 7 ecoguards to help them understand the benefits to working with the VSLA model [Annex 15]. The second 3-day workshop focused on training 4 selected ecoguards and 4 Village Agents.</p>
<p>Activity 2.2: Establishment of socio-economic baselines through community consultations with 11 communities, and collection, analysis and feedback of data from household surveys and participatory rural appraisal.</p>		<p>A household census was carried out in all 11 Lake Ossa villages [Annex 16]. Establishing socio-economic baselines has been delayed but will commence in early year 2</p>
<p>Activity 2.3: Establishment and fostering of first VSLAs in three pilot communities.</p>		<p>Three VSLAs have been established in three different villages with a total of 66 members.</p>
<p>Activity 2.4: Development of training modules on lake ecology and management developed and integrated into VSLA delivery</p>		<p>Modules were developed for Activity 1.5. and will be used for delivery to VSLA.</p>
<p>Activity 2.5: Replication of VSLAs through Village Agent model and monitoring, ensuring that at least 11 communities have at least one VSLA group functioning</p>		<p>Not yet commenced.</p>
<p>Activity 2.6: Socioeconomic impact assessment through collection, analysis and feedback of data from household surveys and participatory rural appraisal (linked also to output 3).</p>		<p>Not yet commenced.</p>
<p>Output 3. Three business models assessed, taking lessons from initial pilots, and training provided for potential new sustainable enterprises to diversify the livelihoods of local communities in a) community-based native tree nurseries, b) Net-Works and c) wildlife tourism (migratory birds, manatees and freshwater turtles – building on the existing local government priorities for ecotourism development).</p>	<p>Indicator 1: Training modules developed and delivered through the VSLAs for community tree nurseries and Net-Works by year 1 Indicator 2: Business model for Net-Works and community tree nurseries developed and refined based on practical experience by year 2. Indicator 3: 50% of fishing households engaged in either tree planting or Net-Works by year 2 from a baseline of 0%. Indicator 4: Feasibility study and</p>	<p>A feasibility study and business plan for the establishment of community-based tree nurseries has been completed, and a business model is currently being adapted from the Philippines Net-Works model to ensure its appropriateness in Cameroon. One training course has been delivered for the establishment of community-based tree nurseries, and 6 sites have been selected based on the establishment of early-phase nurseries (two in Beach, and one each in KM11, KM3, Pongo Pitti, and Songueland). Net-Works sites have also been selected based on interest and engagement from communities, as well as geographic factors, specific to the proximity of the communities to the lake and distance from other Net-Works collection groups. Once the Net-Works training modules are completed, three early-established VSLA groups, and potentially a fourth, will be trained on net collection in year two.</p>

	associated business model (if appropriate) for wildlife-based tourism completed by year 3, including plan for appropriate training of local community members to work in this sector.	
Activity 3.1: Participatory assessment of enterprise opportunities and capabilities in 11 communities (done in conjunction with activity 1.2) and site selection for implementation of tree nurseries and Net-Works.		A feasibility study was carried out in all 11 villages to better understand the possibilities of establishing sustainable community tree nurseries. 6 sites have been selected for community-based tree nurseries and 4 sites for VSLAs and Net-Works.
Activity 3.2: Development of outline business model for Net-Works and tree nurseries.		A tree nursery business model has been developed and an outline business model was developed for Net-Works and will be completed in year 2.
Activity 3.3: Development and implementation of training modules for tree nurseries and Net-Works through VSLAs (in conjunction with activity 5.1)		18 community members from all 11 villages were trained in the basic principles of tree nursery establishment. Net-Works training modules are being developed by the Net-Works coordinator and will be available in the near future.
Activity 3.4: Pilot phase for tree nurseries implemented in up to three communities as determined from activity 3.1, including exchange visits, materials purchase, community engagement, trainings, marketing, and monitoring		Based on the tree nursery feasibility study and the reforestation/agroforestry technical training provided in Dizangué in March, 6 community-based groups have been identified and have shown initial effort at establishing tree nurseries.
Activity 3.5: Participatory establishment of community-management mechanism, payment mechanisms and benefit sharing for Net-Works.		In the coming months, the Net-Works coordinator is visiting Cameroon and will help provide guidance on ways forward.
Activity 3.6: Initiate net collection through lake clean-up and start buying discarded nets.		Communities have already been sensitized and will continue to be sensitized by ZSL and project partners. Posters have been developed, printed, and distributed across all of the villages during meetings with village chiefs and community members, and meetings with local administration have been held to inform them about Net-Works. One lake clean-up has been held with local administration and youth from local high schools in conjunction with Volunteer Day activities.
Activity 3.7: Evaluation and assessment of community tree nursery businesses through development of business model and continued support as necessary		Not yet commenced
Activity 3.8: Develop export plan for collected nets and obtain relevant export documents and permits.		ZSL has been working with SAFACAM to understand the exportation process. It was determined that a 2% charge on waste fishing nets will be paid to duty and customs officers and SAFACAM has volunteered to assist with the process where they can.
Activity 3.9: Re-assess the business model for Net-Works based on monitoring of net collection and adapt as necessary.		Not yet commenced
Activity 3.10: Expansion of Net-Works into all 11 communities and ongoing collection of nets.		Not yet commenced
Activity 3.11: Wildlife tourism feasibility study through external consultation and dissemination of results to multi-stakeholder platform (as established in output 4).		Not yet commenced
Output 4. A multi-stakeholder management committee established by	Indicator 1: Multi-stakeholder management committee including	A multi-stakeholder meeting was held at the end of year 1 on March 31, 2015, with representation from the neighbouring agroindustry SAFACAM, all six

<p>year 1 that includes agro-industry (palm oil companies), Community Management Committees, MINFOF and NGOs to agree the boundaries of the reserve and develop and implement a Reserve Management Plan; and 30ha of the Reserve's lake shore is restored in priority areas of lake shore habitat to reduce siltation/runoff through the development of community-based native tree nurseries and replanting of native species.</p>	<p>agroindustry, Community Management Committees and MINFOF is formed and meeting at least twice per year starting at the end of year 1.</p> <p>Indicator 2: A reserve map of Lake Ossa with boundaries clearly demarcated and zoning system included is agreed by the multi-stakeholder management committee by year 2 and legally ratified by MINFOF by year 3.</p> <p>Indicator 3: Participatory mapping completed and 30 ha of priority lake shore area within the reserve identified and agreed for restoration with any land clearing required completed by year 2.</p> <p>Indicator 4: At least 3 community tree nursery is established and providing at least 500 native trees a year by year 3 to support restoration of lake shore</p> <p>Indicator 5: 30 ha of identified priority lake shore is replanted by year 3 with trees monitored for survival and demonstrating signs of growth.</p> <p>Indicator 6: Neighbouring industry participates through contributions made in kind and through direct purchase of tree seedlings from community tree nursery for restoration activities.</p>	<p>Community Management Committees, VSLA representatives from all 3 VSLA groups, village chiefs, local administration including the Subdivisional Officer and the mayor, and MINFOF including the Conservation Service of Lake Ossa and Departmental and Regional representatives. An important next step will be the establishment of a formal terms of reference to ensure that the Committee is meeting regularly and is advancing on the establishment of a Reserve Management Plan.</p>
<p>Activity 4.1: Workshop on Lake ecology and management with senior representatives of neighbouring agro-industries, MINFOF and Community Management Committees.</p>		<p>This has not yet taken place because the Committees have only recently been re-established, but the materials delivered to the Conservation Service (see activity 1.5) will be adapted for this workshop early in year 2.</p>
<p>Activity 4.2: Establishment of multi-stakeholder platform, involving Community Management Committees, MINFOF Conservation Service and local agro-industry.</p>		<p>A multi-stakeholder meeting was held at the end of year 1 on March 31, 2015 and will be repeated at least every 6 months.</p>
<p>Activity 4.3: Mapping of Reserve boundaries and agreement on boundaries by multi-stakeholder platform, formulated through establishment of MOU between</p>		<p>Work has commenced to map the land in and around the reserve to identify degraded areas around the lake shore. Participatory mapping will be carried out in each community early in year 2 to help establish a zoning system that will feed</p>

multi-stakeholder platform members and decree from MINFOF.	into the development of a reserve map.
Activity 4.4: Participatory identification of 30ha of degraded priority lake shore habitat for restoration through multi-stakeholder committee, and development of management plan for these areas (including plans for clearing illegal land-uses from these areas	Participatory mapping of agricultural zones and degraded areas will be carried out early in year 2 with each of the 11 communities and priority zones for reforestation, ecotourism, and traditional/sacred areas will be identified with the larger community to ensure buy-in early on and increase success of any reforestation efforts.
Activity 4.5: Participatory implementation of management plans for restoration of lakeshore habitat and planting of seedlings produced by community nurseries by male and female community members with support from industry (15 ha per year), supported by finance from industry.	Not yet commenced
Activity 4.6: Participatory follow-up of replanted tree progress and monitoring on the ground, including replanting where necessary	Not yet commenced
<p>Output 5. Community-based lake clean-ups of abandoned fishing gears is undertaken regularly with local communities generating income from the sale of old fishing nets collected during the lake clean-up for recycling into carpet tiles as part of ZSL and Interface's proven Net-Works project.</p>	<p>Indicator 1: Outreach programmes on the impact of discarded fishing gears on Lake Ossa is developed and implemented through VSLAs and Community Management Committees by year 1.</p> <p>Indicator 2: Participatory mapping and inventory of abandoned fishing gears in Lake Ossa completed by year 1.</p> <p>Indicator 3: Community Management Committees and VSLAs engaged in lake clean-up activities by year 1.</p> <p>Indicator 4: Net-Works business model operational by year 2, with fishers selling end-of-life nets into the supply chain (preventing further discards) and nets collected through the lake clean-up sold into the supply chain and benefits distributed equitably through VSLAs as per the established and tested Net-Works model.</p> <p>Indicator 5: Mechanisms for bailing and exporting the nets for recycling are piloted with one test shipment completed by year 2.</p> <p>Indicator 6: Other abandoned fishing gears are being recycled or sustainably</p>

	disposed of by year 2. Indicator 7: At least 50% of inventoried abandoned fishing gears are removed from Lake Ossa by year 3.	
Activity 5.1: Outreach and education training modules focused on Net-Works, lake ecology, and fishing practices is developed for delivery by VSLA Village Agents		Training modules have been developed and used to train MINFOF ecoguards. Support modules are currently being developed by Net-Works coordinator.
Activity 5.2: Training modules delivered as part of VSLA model within initially implemented VSLA groups and with Community Management Committees		Because both VSLAs and Community Management Committees were established only recently, delivery of training modules is planned for early year 2.
Activity 5.3: Participatory mapping and baseline inventory of abandoned fishing gears in Lake Ossa carried out and results delivered to VSLA groups and Community Management Committees		Due to delays in the importation of the project boat, plans for carrying out the participatory mapping and inventory of abandoned fishing gears is planned for early year 2.
Activity 5.4: Initiate and sustain lake clean ups for Net-works with VSLA groups and Community Management Committees to remove nets and other abandoned gear, including bamboo with benefits distributed back to participating groups		The first lake clean-up activities are planned for early year 2.
Activity 5.5: Establishment of recycling facilities, including designing and construction of baler machines for nets, establishment of warehousing for dealing with waste		ZSL Cameroon is waiting for technical plans for the construction of a baling machine. Important guidance on the establishment of recycling facilities will be provided by the Net-Works coordinator during her visit early in year 2.
Activity 5.6: Test-shipment of nets for implementation of export processes.		Not yet commenced.
Activity 5.7: Developing clean mechanisms for recycling or sustainable disposal of non-net waste (i.e. non-burning)		Not yet commenced.
Activity 5.8: Impact assessment of lake clean-ups through repeat inventory of abandoned fishing gears.		Not yet commenced.



## Annex 2 Project's full current logframe

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p><b>Goal:</b> Lake Ossa Reserve communities benefit from enhanced livelihoods and ecological protection associated with Ramsar designation, and the Reserve becomes an important site for freshwater biodiversity within the Douala-Edea protected landscape.</p>			
<p><b>Outcome:</b> Local communities and MINFOF Conservation Service are implementing a clear co-management plan for Lake Ossa Manatee Reserve to enhance livelihoods and reverse declines in food fisheries, endangered species, and habitats.</p>	<ol style="list-style-type: none"> <li>1. Decreasing trends in populations of fish and freshwater turtles (e.g. African softshell turtle, <i>Trionyx triunguis</i>, status unknown) and manatee (<i>Trichechus senegalensis</i>, IUCN Red List VU; upgraded to CITES Appendix I in March 2013) are halted or reversed within the sanctuary zones by year 3.</li> <li>2. Achieve an average of at least 20% improvement in locally-defined wellbeing scores and material style of life indices for 400 fishing households surrounding Lake Ossa by year 3 (baselines set in year 1 through household baseline surveys). Well-being will be assessed using subjective quality of life approaches applied to fisheries (Britton and Coulthard 2013, Coulthard et al 2011) and locally defined quantitative indicators (e.g. the proportion of households with tin roofs).</li> <li>3. Boundaries of the Reserve are clearly demarcated, understood and endorsed by local communities and agroindustry, with &gt;30ha of lake shore vegetation successfully rehabilitated (illegal farms/plantations cleared and native tree species planted and protected) by year 3.</li> <li>4. 15% of lake area established as refuges (no-take sanctuary zones) for fish, manatees and freshwater turtles (nesting sites) and 70% of lake area</li> </ol>	<ol style="list-style-type: none"> <li>1. Turtle and manatee survey reports; annual report to UNEP-CMS Action Plan for West African Manatees; annual report to relevant IUCN Specialist Groups.</li> <li>2. Socioeconomic profile survey report of 11 communities; report of baseline and annual changes in wellbeing.</li> <li>3. Legally ratified reserve map approved by MINFOF; Lake Ossa Manatee Reserve Management Plan; vegetation survey report; map of vegetation rehabilitation priority zones; reports from training workshops; report and photos of nurseries and number of native trees planted and monitored for successful establishment.</li> <li>4. Report of a) biological surveys and b) local ecological knowledge surveys; training workshop reports.</li> </ol>	<ol style="list-style-type: none"> <li>1. Private sector industry positively engages with the project and takes action within the timeframe of the project.</li> <li>2. The zoned map of the reserve can be approved by all relevant authorities within the timeframe of the project. Communities have already engaged in this zoning system and are supportive.</li> <li>3. Land tenure can be resolved with palm oil company to enable habitat restoration to be implemented in the Reserve's land mass around the lake within the timeframe of the project.</li> <li>4. There's a risk surrounding the replacement or rotation of members of MINFOF Conservation Service, including the Conservator. The project will put in place appropriate mechanisms to ensure continuity of project actions even in the eventuality that the Conservator and his team are rotated to another site, and by working with well-established local NGOs we will ensure there are the support systems necessary to ensure continuity of project actions.</li> <li>5. Communities remain supportive of project efforts, particularly lake clean-up actions and community-based enforcement.</li> <li>6. Fishing nets collected for recycling can be exported relatively easily from</li> </ol>

	<p>effectively implementing sustainable fishing practices, actively enforced with watch-towers and enforcement protocol in place by year 3 (from a baseline of 0%).</p> <p>5. Decreasing trends in fisheries indicators (Catch or Value Per Unit Effort – CPUE/VPUE) of fishers from local communities (baseline to be set in year 1) are halted or reversed by year 3.</p> <p>6. At least 200 of the estimated 400 fishers in 11 villages within the Lake Ossa Reserve are engaged in VSLAs with an average of at least 20,000cfa (£25) each in savings (based on the average for VSLAs elsewhere in Cameroon) by year 3 (from a baseline of zero in Year 1).</p> <p>7. At least 50% of abandoned fishing nets and bamboo fishing gear in the lake (baseline to be set in Year 1) is removed by Year 3 through a series of stakeholder events that generate income and awareness, and clean-up is ongoing.</p> <p>8. At least one palm oil company with direct influence on Lake Ossa water quality have and are implementing protocols for habitat restoration as part of the management plan.</p>	<p>5. Fisheries survey reports.</p> <p>6. Members of VSLAs; reports from training workshops; savings books; annual report on savings and loans.</p> <p>7. Survey report of abandoned fishing gear in lake; tons of nets collected; accounts of funds received by VSLAs for nets sold; report of number of bamboo fishing gear removed.</p> <p>8. MoUs with industry partners; environmental impact assessment report; workshop reports; manual with protocols; development and implementation of management plans.</p>	<p>Cameroon to Slovenia for appropriate recycling into carpet tiles (the only place in the world where the appropriate technology for high-grade recycling this valuable engineering grade plastic exists. Note that cost-benefit analyses of shipping for recycling vs generating new material from oil products still gives a positive result for recycling). Initial investigation indicates that there should be no custom problems with this.</p>
<p><b>Outputs:</b></p> <p>1. Community Management Committees established and supported to develop and implement co-management plans for Lac Ossa.</p>	<p>1a. Seven Community Management Committees encompassing all 11 Lake Ossa villages and representative of Lake Ossa users (as defined in baselines) are formed and meeting regularly with MINFOF Conservation Service by the end of year 1.</p>	<p>Community Management Committee and Multi-Stakeholder Management Committee records and documents (e.g. co-management plans, map of Reserve)</p> <p>Biological and socioeconomic survey</p>	<p>Communities have the will to manage their natural resources effectively and get involved in lake clean-ups.</p> <p>Government authorities (particularly MINFOF) remain consistently agreeable</p>

	<p>1b. Co-management plans established by Community Management Committees through participatory planning covering fisheries species, freshwater turtles and manatees with at least 15% of the lake gazetted as refuges for these species by year 2.</p> <p>1c. Enforcement structures are in place and joint patrols by eco-guards and local communities initiated by year 2.</p> <p>1d. Declines in fisher's CPUE and VPUE (baseline condition) are halted or reversed by year 3 based on monitoring of CPUE and VPUE throughout the project period.</p> <p>1e. Decreasing trends (baseline condition) in populations of freshwater turtles (e.g. African softshell turtle, <i>Trionyx triunguis</i>, status unknown) and manatee (<i>Trichechus senegalensis</i>, IUCN Red List VU; upgraded to CITES Appendix I in March 2013) are halted or reversed within the sanctuary zones by year 3, based on monitoring of these populations throughout the project period.</p>	<p>reports with photos documentation where relevant (e.g. for replanting/restoration of lake shore).</p> <p>VSLA record books and records contributed to the online global database (SAVIX).</p> <p>Training manuals produced for co-management and replanting, with documented monitoring system</p> <p>Business models produced for livelihood interventions</p> <p>Transaction records and quantity of nets exported for recycling</p> <p>Monthly reports from extension workers and project partners</p> <p>Annual project progress reports</p>	<p>to proposed co-management arrangements and reserve delineation.</p> <p>Private sector actors remain consistently agreeable to proposed management arrangements including Reserve delineation.</p> <p>Business models for Net-Works and tree nurseries are viable.</p> <p>Sufficient numbers of households are interested and able to engage in VSLAs.</p>
<p><b>2. VSLAs established and integrated into community management committees</b></p>	<p>2a. At least 3 VSLAs established with 10-25 members each through community management committees by end of year 1.</p> <p>2b. Village Agents replicate the VSLA approach in year 2, taking the total number of VSLAs to at least 10 with at least 200 households engaged by year 3.</p> <p>2c. Training modules on lake ecology and management developed and integrated into VSLA training programme by year 1.</p> <p>2d. Households engaged in VSLAs</p>	<p>Peer-reviewed papers</p>	

	saving an average of at least 20,000cfa (£25) per year by year 3 from a baseline of an average of 0 cfa in savings.		
<b>3. Three business models assessed and training provided for potential new sustainable enterprises to diversify the livelihoods of local communities</b>	<p>3a. Training modules developed and delivered through the VSLAs for community tree nurseries and Net-Works by year 1</p> <p>3b. Business model for Net-Works and community tree nurseries developed and refined based on practical experience by year 2.</p> <p>3c. 50% of fishing households engaged in either tree planting or Net-Works by year 2 from a baseline of 0%.</p> <p>3d. Feasibility study and associated business model (if appropriate) for wildlife-based tourism completed by year 3, including plan for appropriate training of local community members to work in this sector.</p>		
<b>4. A multi-stakeholder committee formed to define and agree boundaries of the reserve, with 30ha of the Reserve's shore restored in priority areas</b>	<p>4a. Multi-stakeholder management committee including agroindustry, Community Management Committees and MINFOF is formed and meeting at least twice per year starting at the end of year 1.</p> <p>4b. A reserve map of Lake Ossa with boundaries clearly demarcated and zoning system included is agreed by the multi-stakeholder management committee by year 2 and legally ratified by MINFOF by year 3.</p> <p>4c. Participatory mapping completed and 30 ha of priority lake shore area within the reserve identified and agreed for restoration with any land clearing required completed by year 2.</p> <p>4d. At least 3 community tree nursery is established and providing at least 500</p>		

	<p>native trees a year by year 3 to support restoration of lake shore</p> <p>4e. 30 ha of identified priority lake shore is replanted by year 3 with trees monitored for survival and demonstrating signs of growth.</p> <p>4f. Neighbouring industry participates through contributions made in kind and through direct purchase of tree seedlings from community tree nursery for restoration activities.</p>		
<p><b>5. A community-based lake clean-up of abandoned fishing gears is undertaken with local communities</b></p>	<p>5a. Outreach programmes on the impact of discarded fishing gears on Lake Ossa is developed and implemented through VSLAs and Community Management Committees by year 1.</p> <p>5b. Participatory mapping and inventory of abandoned fishing gears in Lake Ossa completed by year 1.</p> <p>5c. Community Management Committees and VSLAs engaged in lake clean-up activities by year 1.</p> <p>5d. Net-Works business model operational by year 2, with fishers selling end-of-life nets into the supply chain (preventing further discards) and nets collected through the lake clean-up sold into the supply chain and benefits distributed equitably through VSLAs as per the established and tested Net-Works model.</p> <p>5e. Mechanisms for bailing and exporting the nets for recycling are piloted with one test shipment completed by year 2.</p> <p>5f. Other abandoned fishing gears are being recycled or sustainably disposed of by year 2.</p> <p>5g. At least 50% of inventoried</p>		

abandoned fishing gears are removed from Lake Ossa by year 3.

Activity	No of Months	Year 1				Year 2				Year 3			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Output 1													
1.1 Free, prior informed consent (FPIC) carried out in 11 villages.	3 months	x											
1.2 Biological baseline surveys carried out for manatee and freshwater turtles, including compilation of biodiversity reports, fisheries reports, and community perception surveys	6 months	x	x										
1,3 Training and implementation of baseline surveys for fisheries CPUE and VPUE in 11 villages.	6 months	x	x										
1.4 Re-establishment of seven Community Management Committees, including member election, ensuring gender, age, and occupational equality	6 months	x	x	x									
1.5 Workshop, training-of-trainers and advocacy on community-based management approaches for Community Management Committees and VSLAs, MINFOF Conservation Service, and the private sector.	9 months			x	x								
1.6 Participatory development of management plans and mapping of lake management areas through Community Management Committees.	9 months				x	x	x						
1.7 Implementation of management plans, including the construction of watchtowers, training of Community Management Committees and monitoring of enforcement activities by MINFOF.	18 months							x	x	x	x	x	x
1.8 Collaborative write-up of a five year simple management plan and approval by Conservation Service and Community Management Committees for post-project	9 months									x	x	x	
1.9 Biological and fisheries impact assessments through collection, analysis and feedback of data for manatee and freshwater turtles, and for fisheries CPUE and VPUE	6 months										x	x	
1.10 Reporting and preparation and submission of peer-reviewed paper.	6 months											x	x
Output 2													
2.1. Workshop and training-of-trainers on VSLAs.	3 months		x										

2.2	Establishment of socioeconomic baselines through community consultations with 11 communities, and collection, analysis and feedback of data from household surveys and participatory rural appraisal.	3 months		x	x										
2.3	Establishment and fostering of first VSLAs in three pilot communities.	12 months			x	x	x	x							
2.4	Development of training modules on lake ecology and management developed and integrated into VSLA delivery	12 months		x	x	x	x								
2.5	Replication of VSLAs through Village Agent model and monitoring, ensuring that at least 11 communities have at least one VSLA group functioning	18 months							x	x	x	x	x	x	
2.6	Socioeconomic impact assessment through collection, analysis and feedback of data from household surveys and participatory rural appraisal (linked also to output 3).	6 months										x	x		
2.7	Reporting and preparation and submission of peer-reviewed paper	6 months											x	x	
Output 3															
3.1	Participatory assessment of enterprise opportunities and capabilities in 11 communities (done in conjunction with activity 2.2) and site selection for implementation of tree nurseries and Net-Works.	9 months	x	x	x										
3.2	Development of outline business model for Net-Works and tree nurseries.	6 months	x	x											
3.3	Development and implementation of training modules for tree nurseries and Net-Works through VSLAs (in conjunction with activity 5.1)	9 months		x	x	x									
3.4	Pilot phase for tree nurseries implemented in up to three communities, including exchange visits, material purchase, community engagement, trainings, marketing, and monitoring	12 months			x	x	x	x							
3.5	Participatory establishment of community-management mechanism, payment mechanisms and benefit sharing for Net-Works.	6 months				x	x								
3.6	Initiate net collection through lake cleanup and start buying discarded nets (ongoing)	24 months					x	x	x	x	x	x	x	x	x
3.7	Evaluation and assessment of community tree nursery businesses through development of business model and	21						x	x	x	x	x	x	x	x

	continued support as necessary	months													
3.8	Develop export plan for collected nets and obtain relevant export documents and permits.	6 months					x	x							
3.9	Re-assess the business model for Net-Works based on monitoring of net collection and adapt as necessary.	6 months							x	x					
3.10	Expansion of Net-Works into all 11 communities and ongoing collection of nets.	12 months									x	x	x	x	
3.11	Wildlife tourism feasibility study through external consultation and dissemination of results to multi-stakeholder platform(as established in output 4)	9 months									x	x	x		
Output 4															
4.1	Workshop on Lake ecology and management with senior representatives of neighbouring agro-industries, MINFOF and Community Management Committees	3 months			x										
4.2	Establishment of multi-stakeholder platform, involving agroindustry, Community Management Committees, MINFOF Conservation Service, (meeting regularly once established).	6 months			x	x									
4.3	Mapping of Reserve boundaries and agreement on boundaries by multi-stakeholder platform, formulated through establishment of MOU between multi-stakeholder platform members and decree from MINFOF.	6 months				x	x								
4.4	Identification of 30ha of degraded priority lake shore habitat for restoration through multi-stakeholder committee, and development of management plan for these areas (including plans for clearing illegal land-uses from these areas	6 months					x	x							
4.5	Participatory implementation of management plans for restoration of lakeshore habitat and planting of trees produced by community nurseries by male and female community members with support from industry (15 ha per year), supported by finance from industry.	18 months							x	x	x	x	x	x	
4.6	Participatory follow-up of replanted tree progress and monitoring on the ground, including replanting where necessary	25 months								x	x	x	x	x	
Output 5															
5.1	Outreach and education training modules focused on Net-Works, lake ecology, and fishing practices is developed for delivery by VSLA Village Agents	12 months	x	x	x	x									



5.2	Training modules delivered as part of VSLA model within initially implemented VSLA groups and with Community Management Committees (replicated in new VSLAs once up and running)	30 months			x	x	x	x	x	x	x	x	x	x
5.3	Participatory mapping and baseline inventory of abandoned fishing gears in Lake Ossa carried out and results delivered to VSLA groups and Community Management Committees	9 months		x	x	x								
5.4	Initiate and sustain lake clean ups for Net-works with VSLA groups and Community Management Committees to remove nets and other abandoned gear, including bamboo with benefits distributed back to participating groups	24 months					x	x	x	x	x	x	x	X
5.5	Establishment of recycling facilities, including designing and construction of baler machines for nets, establishment of warehousing for dealing with waste	9 months					x	x	x					
5.6	Test-shipment of nets for implementation of export processes.	3 months								x				
5.7	Developing mechanisms for recycling or sustainable disposal of non-net waste	6 months						x	x					
5.9	Impact assessment of lake cleanups through repeat inventory of abandoned fishing gears.	12 months			x			x			x			x

## 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
6A	Training on lake ecology, co-management, protected species ecology and management and Net-Works	4 women, 5 men	Cameroonian (1 ZSL staff and 8 Conservation Service members)	9				300
6A	Training on household census taking	4 women, 5 men	Cameroonian (1 ZSL staff and 8 Conservation Service members)	9				8
6A	Training on socioeconomic survey data collection	4 women, 4 men	Cameroonian (7 Conservation Service members and one AMMCO partner)					8
6A	Training on CPUE data collection	3 women, 6 men	Cameroonian (7 Conservation Service members, 1 ZSL EDGE Fellow), Spanish (ZSL Project Manager)					9
6A	Training on tree nursery establishment	7 women, 20 men	Cameroonian (8 Conservation Service members, 18 community members, 1 partner from CWCS)	27				35
6A	VSLA training courses	6 women, 10 men	Cameroonian (Conservation Service plus communities), American (ZSL project manager)	16				23
6A	Training on survey development and administration	1 woman, 1 man	Cameroonian (1 EDGE Fellow plus his co-worker)	2				1
6A	Training on basic water safety	3 women, 5 men	Cameroonian (8 Conservation Service)	8				8

			members)					
6A	Training on QGIS use	3 men	Cameroonian (1 EDGE Fellow plus two Conservation Service members)	3				3
6A	Training on use of boat outboard engine motor							10
	The number of people engaging in savings through VSLAs	20 women, 46 men	Cameroonian (community members from 3 communities)	66				Minimum of 110
7	Development of training materials for project stakeholders (Net-Works, tree nurseries, lake ecology, etc.)			7				15
14A	Dissemination workshops							2
20	Latrine (£700), boat and 40hp outboard motor (£10,000), Garmin GPS units (£940), Dell laptop (£518), 4x4 Toyota Hilux (£8000), watchtowers (£10,000), net bailing machine (£700)			£1218 (Latrine , Dell laptop)				£30,858
23	Funds raised by partner NGO AMMCO through PPI FFEM							

**Table 2 Publications**

<b>Title</b>	<b>Type</b> (e.g. journals, manual, CDs)	<b>Detail</b> (authors, year)	<b>Gender of Lead Author</b>	<b>Nationality of Lead Author</b>	<b>Publishers</b> (name, city)	<b>Available from</b> (e.g. website link or publisher)

**Supplementary Material Found in Associated Dropbox Folder:**

- Annex 4. FPIC report and attendance list**
- Annex 5. Reglement interieur and short reports for six Community Management Committees**
- Annex 6. VSLA first monthly report**
- Annex 7. Feasibility study/market survey for community-based tree nurseries**
- Annex 8. Tree nursery training report**
- Annex 9. Tree nursery training modules**
- Annex 10. Participatory map of Lake Ossa in local names**
- Annex 11. Net-Works posters**
- Annex 12. Photo from lake clean-up**
- Annex 13. QGIS training short report**
- Annex 14. Training modules on lake ecology, co-management, Net-Works, VLSAs, tree nurseries, and protected species**
- Annex 15. VSLA training modules**
- Annex 16. Household census short report**

**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
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<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
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Have you involved your partners in preparation of the report and named the main contributors	x
Have you completed the Project Expenditure table fully?	x
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