

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 no more than 10 pages in length, excluding annexes

Submission Deadline: 30 April

Darwin Project Information

Project Reference	22-007
Project Title	Establishing Sustainable Management of the Lake Sofia Catchment, Madagascar
Host Country/ies	Madagascar
Contract Holder Institution	Wildfowl & Wetlands Trust
Partner institutions	Durrell Wildlife Conservation Trust (DWCT), Organisation de Soutien pour le Développement Rural à Madagascar (OSDRM), Asity Madagascar, Sofia Regional Department of Rural Development and Agriculture, Sofia Regional Department of Ecology, Environment, Marine and Forests, and Villages of the Lake Sofia catchment, Marotolana commune.
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Reporting period (e.g., Apr 2015 – Mar 2016) and number (e.g., Annual Report 1, 2, 3)	Apr 2015 – Mar 2016. Annual Report 1
Project Leader name	Rob Shore
Project website/blog/Twitter	http://www.wwt.org.uk/support/our-appeals/mission-madagascar/ http://www.wwt.org.uk/conservation/wwt-projects/saving-the-madagascar-pochard/
Report author(s) and date	Tomos Avent, Andrew Bamford and Rob Shore – 29/04/16

1. Project Rationale

Most of Madagascar's wetlands have either been lost (+60%) or severely degraded due to conversion, sedimentation, invasive species and over-harvesting. Wetland species have declined dramatically as their habitats disappeared. The human communities, of which 80% are rural and 90% have jobs reliant on natural resources, have suffered as a result from loss of ecosystem services. Finding a sustainable solution to avoid the complete loss of native wetlands while improving conditions for local communities requires an integrated approach.

Lake Sofia, the most intact remnant of the once vast Bealanana Wetlands Complex and home to some of the world's most threatened endemic waterbirds, represents one of the last opportunities to implement this approach. 10,000 people (at least 62% of which are highly impoverished) rely on this wetland for their water, food and marsh plants. Extensive community interviews conducted prior to the project show that the main problems are threats from external pressures such as mining, agri-business and fishers from other regions, as well as increasing

malnutrition and livestock disease. By securing community-based management of the Lake Sofia catchment, developing, training and supporting sustainable farming partnerships, empowering fishing groups, and applying lessons into national wise-use guidelines, this project aims to protect and improve local people and secure a healthy wetland ecosystem that enables them to move beyond a subsistence only economy.

Lake Sofia is situated approximately 115 km east of the town of Antsohihy, in the Sofia region of Northern Madagascar.

2. Project Partnerships

The project partners have wide ranging expertise in ecology, conservation and development, and work closely alongside government representatives (regional and national) and local communities. Mechanisms for regular formal communication have been set up through Quarterly Project Management Group meetings, which result in reports to feed into bi-annual Projects Steering and Advisory Group (SAG) meetings. Project Management structures and ToR for SAG are attached as Annexes 4 and 5 respectively.

A project launch festival at Lake Sofia was attended by representatives of all partners' field and management teams, and was shortly followed by a two-day combined project field team workshop. This workshop aimed to ensure effective coordination of activities and highlight opportunities to link development activities with conservation, and vice versa – communicating the message of healthy wetlands for healthy people. Despite individual partners focusing on certain activities, all external stakeholders are aware that our organisations are linked to the projects central outcome – see Annex 6 for example of all partner logos being present on all communication materials. Within the local communities, the field team are seen as members of a single project identify, rather than representatives of their respective organisations. So far communication has been very effective.

3. Project Progress

3.1 Progress in carrying out project activities

Output 1: Fully representative community management structures surrounding Lake Sofia re-established and strengthened, with new community management structures established for the wider

Activity 1.1 Develop and agree initial 3-year management transfer agreements for Sofia Mandroso, Fikambana Fitantanana Matsabory Sofia, and Sandatra Sofia – Consultations with the Sofia regional Director of Environment, Ecology, Marine, and Forestry (DREEMF), Regional Director of Rural Development and Agriculture (DRDA), Regional Director of Fisheries (DirPeche), the Chef Cantonnement of Bealanana, and members of the three communities resulted in consensus that the former management transfer agreement (a GELOSE created in 2002 and now expired) would benefit from a more detailed review than previously envisaged. Further community meetings at other villages in the catchment showed a general desire to structure the new GELOSE to allow residents of all villages to join in preference to the creation of new associations and management transfer agreements for different villages. This Activity was therefore delayed to give the project team time to review the numerous options available for Management Transfer Agreements around Lake Sofia (see Section 3.2 Output 1), and will run concurrently with Activity 1.2. We are confident this Activity will be completed within Y2.

Activity 1.2 Develop agreements to transfer the management of natural resources to local-constituted community associations across the upstream catchment of Lake Sofia – Scheduled in Y2 and will now run alongside Activity 1.1. Membership of the Lake Sofia GELOSE through the three existing community associations will now be open to all, while a separate Management Transfer Agreement will be created for forest resource use in upstream communities. There will be an overarching platform supporting an arrangement between these two Management Transfer Agreements which allows members of one to have limited and controlled access to certain resources regulated by the other.

Activity 1.3 Revise and update the management transfer agreements for Sofia Mandroso, Fikambana Fitantanana Matsabory Sofia, and Sandatra Sofia based on information gathered by the project – Scheduled for Y3. All management transfers are reviewed after the first 3 years. Delays to Activity 1.1 mean that a formal review, with resulting potential updates to the agreements, will only be possible after the end of this Darwin Project. An informal review will be completed within the project period to feed into this process.

Activity 1.4 Constitute membership of executive committees, advisory boards, and general assemblies of local associations – Meetings were held with the three existing VOIs to renew their memberships until new Management Transfer Agreements are in place. The number of members now stands at 72 for Sofia Mandroso (Marotolana), 68 for FFMS (Marofamara) and 45 for Sandrata (Andampy). These low numbers are due to the former regulations being outdated and presenting few incentives to join. This issue will be solved during the development of the new agreement.

Activity 1.5 Hold annual workplan development and review meetings with general assemblies – Community consultations completed but no formal work plan development due to delay in Activity 1.1.

Activity 1.6 Hold community fora 3 times per year in each community to ensure wider accountability – Fora were held twice during the first year. The workload for field staff in organising fora in 9 villages is substantial, and consequently this activity has been altered to two fora per year. In total, 350 participants, from all villages attended the meetings (Ambondrona 40, Andranovaky 31, Antilongo 35, Andampy 41, Marotolana 35, Lohanisofia 36, Mahatsinjo 26, Andilantsara 25, Marofamara 81) (see Annex 7). It is expected that participation will increase through the project.

Activity 1.7 Produce semi-annual and annual progress reports on each local association – Associations not yet formally formed (see Activity 1.1) so no reports were generated during Y1.

Activity 1.8 Provide technical support to the local community to understand and support delivery of the management transfer agreements – Preliminary information provided on nature of Management Transfer Agreements, full activity implementation will follow completion of Activity 1.1.

Activity 1.9 Deliver training on laws and rights for members of the local associations – Training relating to continuing livelihood and sustainable management activities has been given, an example being national legal fishing regulation training delivered by the Fisheries Department to 20 regular fishermen, but association bi-laws can only be shared on completion of Activity 1.1.

Activities 1.10 – 1.11 Establishing Watershed Management Groups and holding annual meetings – Scheduled for Y3.

Activity 1.12 Seek to support/reinforce catchment-level work through national/international site/landscape designation compatible with community management objectives (e.g. Protected Harmonious Landscape, Ramsar Site) – Although mainly scheduled for Y3, Lake Sofia has been included on the list of potential new Ramsar sites proposed during Madagascar's Ramsar Committee's (CONARAMS) at the National Wetland Day workshop in Antananarivo (February 2016). Initial discussions are underway to add Lake Sofia to the countries list of REDD+ sites, but the government is behind schedule on its work plan in this area.

Output 2: Approaches to enhance existing local livelihoods and establish additional livelihood options developed, demonstrated at key sites and being implemented across the wider landscape

Activity 2.1 Vaccinate domestic birds against disease in the villages surrounding Lake Sofia using authorised vaccinators – Vaccinations for avian cholera and Newcastle disease were given to 6000 ducks, geese and chickens in all villages in September 2015 and then a further 6300 in February 2016. Participation was strong in most villages, but a lower proportion of people were interested in the two main towns, as livestock farming is less popular in these areas due to relatively high levels of theft. Therefore benefits are skewed towards those in the most remote/rural areas.

Activity 2.2 Train members of local communities in vaccination techniques by working alongside authorised vaccinators to enable them to take over this work - A qualified vet provided training for field staff and community members in September. The second round of vaccinations was carried out by community vaccinators under supervision of field staff.

Activity 2.3 Produce vaccination guidance manual – Being produced alongside newly trained community members and will be completed in Y2.

Activity 2.4 Deliver animal husbandry practices training to all villages in the Lake Sofia catchment – Y2 activity.

Activity 2.5 Produce information factsheets on common diseases, focussed on prevention and management techniques – As with Activity 2.3, this will be completed in Y2.

Activity 2.6 Construct fishing and fish landing platforms at Lake Sofia to improve lake access and safety, enable easier processing and monitoring of fish catches, and reduce disturbance to marsh habitats – The locations for platforms have been decided through consultation with fishermen and other community members. Materials have been purchased but construction will not be carried out until the dry season, probably during October 2016.

Activity 2.7 Provide replacement fishing equipment in exchange for any fishing gear not permitted for use on Lake Sofia under existing or revised regulations – A core group of regular fishers has been identified and targeted for equipment exchange schemes and training (linked to Activity 1.9). The eventual Management Transfer Agreements (see Activity 1.1) will set local regulations, but much of the equipment currently used was not permitted by national legislation. 37 fishermen from Marofamara exchanged illegal fine-mesh fishing nets with 100m of legal net (between 25 mm and 30 mm) (see Annex 8). Further replacement equipment will be supplied when local regulations have been set.

Activity 2.8 Design and implement fisheries/fish catch monitoring programme – The project field team have been working with fishermen since June 2014 to measure the size of fish caught, monitor net mesh size and record preferred fishing locations. This provisional monitoring work also highlighted that the national closed season for fishing is not respected on Lake Sofia. All information will feed into the details of the Management Transfer Agreement bi-laws and regulations. Monitoring will increase when new regulations are agreed.

Activity 2.9 Identify locations for pilot rice farming projects and sign agreements with participants – All nine fokontany in the catchment were surveyed during August and September to select suitable participants for pilot rice work. Farmer Associations have been set up in all fokontany (see Annex 9), alongside associated Community-based Savings and loans Groups (CBSGs). These CBSGs aim to provide increased financial security and create a mechanism to finance cooperatively managed farming resources for increased environmental benefits and operational efficiency.

Activity 2.10 Conduct pilot projects in three villages to demonstrate the application of more environmentally sensitive rice cultivation practices – Environmentally sensitive rice cultivation is now being piloted by 42 participants, collectively farming a total land area of approximately 56 ha. Farming households have received training on 5 key techniques; good soil preparation, selection of seeds, transplantation, field maintenance, and water management. Following requests from farmers, fourteen mechanical weeders were distributed on a contract basis. The contract requires farmers receiving a weeder to exchange 60kg of paddy at

harvesting and to plant 50 trees per machine. A group in Marofamara group has produced 3200 plantlets to meet this demand. While these are fruit trees designed to help address nutritional deficiencies (particularly during the lean season), it is planned that the nurseries established to propagate these plantlets will also be used to cultivate native samplings for reforestation work in future years under activity 3.10

The scope of activities related to agriculture has increased to include overall food security, decreasing dependence upon rice (thus decreasing pressure from encroachment and chemical input), enhancing nutrition, and creating alternative sources of food during the lean season between rice harvests. All nine villages are now benefiting from some form of food security programme. The total number of households involved in farming groups is currently 320, which is 15% of all households in the project area.

Activity 2.11 Develop and implement monitoring programme (focussed on yield, water quality and external inputs) for pilot rice farming projects – Disaggregated indicators are under development to inform the four variables defined in Indicator 9. A baseline survey related to OSDRM activities will be conducted in April. The farmers involved in the pilots are registered so that the rate of adoption of practices can be monitored. The MERL process is being followed and includes the farmers' experiences in being a model and pilot.

Activity 2.12 Report on findings of pilot projects – Y2 Activity.

Activity 2.13 Train agricultural extension training team – Three extension staff have been appointed for this project. They regularly attend monthly staff meetings held in Bealanana where they receive training. Formal topics covered are; refresher training on improved rice techniques, the self-production of safe fertiliser and pesticides by using local plants and by valuing local knowledge, and techniques for producing high quality rice seeds (Annex 10). Several other topics are covered informally during discussions at the staff meetings. Learning materials such as technical leaflets and articles are regularly disseminated among the staff.

Activity 2.14 Deliver environmentally sensitive rice cultivation (including soil management techniques) training to all villages in the Lake Sofia catchment - All members of the farmers groups were trained on improved and environmentally sensitive cultivation techniques in January. Avoidance of chemical products was emphasized, particularly the fertilisers and pesticides commonly used. The principles and techniques of Conservation Agriculture (CA) were offered as an alternative option. The pilot rice farmers are encouraged to disseminate the new techniques they have learned and to support others who have not directly benefited from the training (Annex 10).

Activity 2.15 Develop and agree a roll-out programme of rice farming work with local associations and village leadership – Scheduled for Y2 and Y3.

Activity 2.16 Conduct feasibility study for alternative livelihood options (wet-processed Arabica coffee/sustainable vanilla) - The terms of reference for the feasibility study are under development and the work is expected to start in early May. Prospection of Arabica coffee seeds or plantlets has already been undertaken to renew local coffee plantations. As an additional alternative livelihood activity, four rice farmers involved in the pilot rice farming have been formally contracted with SOCOTA, a private sector company that exports bio products, to produce high quality pink rice, a variety of wholegrain rice that is exported to the USA. SOCOTA provided 12 kg of seeds for 0.6 ha of rice field. The focus of the first year will be on production of high quality seeds; rice production for export will start in the following years. The farmers have been trained and will be rigorously supported in techniques for seed production.

Activities 2.17-2.19 Development, implementation and training on value-added coffee and vanilla projects – Scheduled for Y2 and Y3

Activity 2.20 Produce quarterly updates and annual progress report on all activities – Activity reports generated by all project partners each quarter to feed into Project Management Group meetings and formal Quarterly Reports.

Output 3: Conditions (policy, practice and awareness) in place to reduce key threats to wildlife and the environment of Lake Sofia and its catchment, including burning/clearance of marsh, hunting/trapping of threatened wildlife, and draining of wetlands.

Activity 3.1 Develop environmental education programme and supporting materials (lesson plans, ID guides, basic sampling equipment, teaching guides) for use in schools – Development of the environmental education program for schools is still in progress, and will be finalised in time for implementation at schools in Q2&3 of Y2.

Activity 3.2 Run initial demonstration sessions in schools – Although scheduled for Y2, school gardens (Green Schools) have been created at the public primary schools in Marotolana and Marofamara to promote environmental education (Annex 11). This activity will be developed and expanded to other schools (public primary schools in Andampy, Lohanisofia, Antilongo, and the public secondary school in Marotolana). A competition has been held at six community schools to produce a project logo. In total there were 220 participants.

Activity 3.3 Conduct teacher training events – A capacity building event on the importance of wetlands and the biodiversity of Lake Sofia was held in March and attended by 32 school teachers from 5 fokontany.

Activity 3.5 Establish catchment-wide network of community information dissemination points – Identification of the best location for the information panels was discussed with the fokontany and VOI representatives at Marofamara and Andampy. The panels are planned to be installed during the next quarter.

Activity 3.6 Develop simple ecological monitoring framework, linking improvements in ecological health to human health/wellbeing – Initial surveys of marsh plants and birds complete, establishing the biodiversity baselines. Surveying of waterbirds and benthic invertebrates carried out by field staff. As yet the final monitoring framework has not been devised – this will be completed during Q1 of Y2, based on the data collected so far.

Two approaches to monitoring of breeding birds in the marsh were attempted, however the density of marsh vegetation meant sufficient access could not be gained for effective surveys of nests on foot and nests could not be seen from an unmanned aerial vehicle (drone). This means that the associated output indicator will require replacing (see Section 3.2).

A water quality monitoring programme has been developed and is being implemented by project staff. This programme has highlighted to service provided by the marsh habitats in filtering and cleaning water that flows into the lake. Relatively high nitrate levels detected in the inflow (around 5 mg/l), indicating organic pollution, are not present in the lake itself (where nitrate levels are close to zero).

Activity 3.7 Identify network of local community monitoring focal points and sign agreements with participants – Project staff have carried out all baseline monitoring to date and will work with communities to develop focal points and sign agreements in Q1 of Y2.

Activities 3.8-3.9 Training and reporting for community monitoring groups – This activity is behind schedule and will follow completion of Activity 3.7 in early Y2.

Activity 3.10 Identify and agree locations and plans for reforestation work on bare headlands surrounding lake with local associations – Experts in reforestation from Missouri Botanical Gardens (based in Antananarivo) are being consulted to evaluate the potential locations identified by the project team. Land ownership is difficult to determine so this activity may be delayed slightly until the suitable reforestation permissions are granted. The DREEMF is assisting in this matter.

Activities 3.11-3.12 Supply seedlings and conduct reforestation events – Y2 and Y3 activities

Activity 3.13 Assess extent and quality of aquatic/marginal habitat and identify priority locations for restoration work – Report complete (see Annex 12)

Activity 3.14 Undertake restoration of aquatic and marginal vegetation with local community, using cuttings and transplants from other areas of the lake/catchment – To be undertaken in Y2 and Y3.

Activity 3.15 Undertake habitat extent and condition monitoring using combination of remote sensing and groundtruthing techniques – Aerial photographs from drones taken and currently being processed by project team for baseline.

Activity 3.16. Produce quarterly updates and annual progress report on habitat restoration work – Quarterly reports to start alongside initiation of restoration work.

Output 4: National-level sustainable wetland management guidance (informed by the model developed at Lake Sofia) adopted by the Government of Madagascar and being used at wetlands across the country.

Activity 4.1 Constitute national working group to develop the guidance – The plans for this work were presented at a meeting with the national Ramsar Committee (CONARAMS) in November 2015 (Annex 13). Members of the working group have been identified and approached. The group will be formally constituted during the second National Wetland Guidance (NWG) meeting in April 2016. During the April meeting the project partners will receive a signed copy of the formal government approval to facilitate the NWG development process (although completed after reporting period this approval letter is shown in Annex 14).

Activity 4.2 Run study tours to four wetlands (Lake Alaotra, Lake Kinkony, Torotorofotsy and Lake Sofia) – At the first National Wetland Guidance meeting it was decided that this activity should be put on-hold until after the first convening of the national working group in April 2016. The study tours are likely to take place during the next dry-season (new provisional dates around Aug 2016), but the number of study tours for the entire working group may be decreased given the time commitments required for each individual trip (for example, travel from Antananarivo to Lake Sofia takes two whole days each way). Additional trips for sub-groups may then also be planned. We would also like the working group to have input to the locations of the most appropriate wetlands once the scope of the guidance has been determined.

Activity 4.3 Hold guidance development workshop – The first workshop, held in Nov 2015, was to secure government support for the process and outline National Wetland Guidance concept to multiple stakeholders to ensure widest possible representation and buy-in to the process. The next workshop, scheduled for 20th April 2016, will cover the potential scope of the guidance, formally constitute the working group, create a provisional structure, outline and work plan, and schedule the study tour site visits.

Activity 4.4 Write up Lake Sofia case study – Y2 & Y3 activity.

Activity 4.5 Produce draft guidance and consult with broad range of stakeholders – The start of this process has been slightly delayed, but progress will be made in Y2 Q1 and the activity is likely to be completed on schedule.

Activities 4.6-4.10 Finalise, publish, use and promote wetland wise-use guidance – Activities scheduled in Y2 and Y3.

Activity 4.11 Produce quarterly updates and annual progress reports – All required updates and reports completed.

3.2 Progress towards project outputs

Output 1 - Management transfer agreements in place for the three local associations surrounding Lake Sofia (Sofia Mandroso, Fikambana Fitantanana Matsabory Sofia, and Sandatra Sofia) by November 2015 and for a further three upstream communities (Antilongo, Lohanisofia, and Andranovaky) by 2018.

After consultation with the three associations and local government, it was decided that all management transfer agreements should be coordinated concurrently and not staggered as previously proposed. The previously existing, but now expired, GELOSE (Gestion Locale Sécurisée) should be reviewed and restored, with updated rules and regulations created by community members. Resource use in the forested area in the upper lake catchment will now be regulated under a new separate GCF (Gestion Contractualisée des Forêts). Elected members in the VOIs (community groups) of the GELOSE and GCF will represent their respective VOIs on a Consultational Platform which will create and manage regulatory frameworks for benefit sharing agreements between VOIs in the GELOSE and GCF. Consequently, this output has required modification, with the aim now to create management transfer agreements, with membership options for all members of all communities, concurrently during Y2 of the project. This change in plan has meant that many activities under this output have been delayed, particularly those that follow from the creation of plans and associations. The indicators are still broadly appropriate but under the new proposal, all management transfer agreements will be in place by the end of Y2 (Indicator 1), with work plans in place and being implemented during Y3. Indicators 3 and 4 will stay the same.

Progress towards outputs 2, 3 and 4 shown in table below

Output 2:	Approaches to enhance existing local livelihoods and establish additional livelihood options developed, demonstrated at key sites and being implemented across the wider catchment		This output is on track and all indicators remain relevant. Changes to Activity 1.1 have not significantly affected this output, except for a few minor changes (e.g. see Indicator 7).	
	Baseline	Change recorded by 2016	Source of evidence	Additional Comments
Indicator 5	Zero – No vaccination programme exists	6285 chicken, geese and ducks were vaccinated	List of owners receiving vaccinations for their livestock.	The vaccination programmes targeted all nine communities in 2015/16 but only 25% of domesticated bird owners participated. It is hoped that uptake will increase during the second year as word spreads about benefits of the programme. Timings will also be adjusted to avoid peak rice harvesting, which should further boost participation levels

Indicator 6	Reporting of disease as major problem with chickens/ducks/geese at 90%/55%/55% in 2014.	Livestock vaccinated but efficacy can only be assessed in Y3.		
Indicator 7	No fishers with both legal nets and abiding by national regulation (e.g. respecting closed seasons).	37 fishermen have exchanged illegal fine-mesh nets for new nets that comply with national regulation.	Fishing gear receipts and baseline data collected.	Local regulations not yet established but will likely align to National legal regulations.
Indicator 8	No farmers working on farming pilots.	42 rice farmers have signed agreements and applying new techniques. The new groups (see comments) bring the total number of households involved in farming groups to 320	Signed agreements in place (Annex 9).	Farming associations extended to include crop diversification programme (see Activity 2.10)
Indicator 9	Baseline rice yields are 2-3 tonnes/ha.		None	Water and chemical inputs difficult to quantify due to current farming technique being rain-fed rather than irrigation-fed. These elements of the indicator may be more difficult to evaluate, but creative solutions are being sought, so indicator likely to remain.
Indicator 10	No rice farmers applying sustainable rice techniques.	42 farmers applying new training and using project machinery	Signed agreements in place (Annex 9).	Indicator completed ahead of schedule.
Indicator 11	No Arabica coffee and very little vanilla (approximately 40 households, not sustainably or reliably) produced for external consumption/export	Business plan not yet developed but consultations underway. Contracts in place with 4 farmers for high-value pink rice production. Initial infrastructure (nurseries) to support this initiative developed as part	None	Indicator still relevant but may also integrate high value pink rice.

		of other farming work (to grow fruit trees)		
Output 3:	Conditions (policy, practice and awareness) in place to reduce key threats to wildlife and the environment of Lake Sofia and its catchment, including burning/clearance of marsh, hunting/trapping of threatened wildlife, and draining of wetlands.			
Indicator 12	Data was collected in August 2015, as part of an in-depth survey at 102 households across all 9 villages, and is still being analysed to establish the baseline.	Sensitisation through livelihood activities and development of Green Schools is taking place but formal environmental education programme only scheduled in Y2	None	
Indicator 13	No existing formal environmental education material in schools, only natural science elements of national curriculum	Course in development but only to be delivered in Y2	None	
Indicator 14	No restoration work at Lake Sofia. Maps and photographs to provide current extent of habitats.	Aquatic vegetation mapped and aerial drone photographs taken to assess current state of habitat	Aerial photos have been taken. Vegetation report complete (Annex 12).	
Indicator 15	Baseline has been difficult to establish (see Activity 3.6). Furthermore, the intended control site (Bemanevika, located approx. 50km NW of Lake Sofia) appears to have suffered a collapse in its marsh-breeding bird populations, as no nests were recorded during 2015/16.			Indicator will need to be replaced. New indicator will be in place for the next breeding season.
Indicator 16	Baseline monitoring data on fishing practices is being collected and aerial photographs for burning and drainage.	None – Y3.	Aerial photographs to show burning and drainage. Fishery monitoring to check fishing gear. Attitudes	Rules of local association still to be set, so methods for dealing with illegal

			survey in 2017 to estimate extent of hunting.	activities by outsiders are unknown.
Output 4:	National-level sustainable wetland management guidance (informed by the model developed at Lake Sofia) adopted by the Government of Madagascar and being used at wetlands across the country.		This element of the project is behind schedule. All indicators are all still relevant but target date of Indicator 1 will need to be revised (see 'Comment' section Indicator 1). The National Ramsar Committee (CONARAMS) has endorsed the production of National Wetland Management Guidance. This will be facilitated by project partners under the auspices of CONARAMS (The Ramsar Focal Point to Chair meetings of the working group). This formal connection to CONARAMS will significantly strengthen the guidance produced under this output, ensuring the buy-in of key stakeholders. It has however caused delays to all activities under this output.	
Indicator 17	Working group does not exist.	List of Working Group members established.	Meeting minutes.	To be formally constituted in first half of Y2. Indicator change – <i>National-level working group established in Y2</i>
Indicator 18	Zero – No national level guidance exists.	Wetland Guidance concept presented at COANARAMS meeting.	Meeting minutes.	Draft guidance for consultation will still be developed for consultation by the end of 2016. First meeting to be held in April 2016.
Indicator 19	Zero – No national level guidance exists.	N/A	N/A	Still on track
Indicator 20	Zero – No national level guidance exists.	N/A	N/A	Still on track

3.3 Progress towards the project Outcome

Outcome:	Over 10,000 wetland-dependent people have secure access to natural resources and are part of a community-based management regime which improves food security/wellbeing/livelihoods and ecological conditions.		The project is still on track to deliver the intended outcome.	
	Baseline	Change by 2016	Source of evidence	Comments (if necessary)
Indicator 1	Zero - Three historic community associations are still performing limited functions but legal basis has expired.	Still no associations established (see Activity 1.1) but liaison with national and regional government, each of the nine villages, and members of expired VOIs underway.	None for Y1	
Indicator 2	Overall average score of 2.4 out of 4, comprising; ability of individuals to affect change (2.97), safety/security (2.59), general satisfaction (1.80), short-term satisfaction (2.55), contribution to society (2.10)	Project launch festival highlighted ecosystem services and potential to become involved with livelihood activities. High membership take-up for new farming and savings groups building greater cooperation and cohesion. Government supporting concept of community management transfer agreements.	Pre-project household survey.	
Indicator 3	No baseline established. Will be calculated in comparison to reference villages at the end of project to mitigate influence of other factors (e.g. climatic conditions)	Sustainable rice farming groups established with high membership from Y1. Food security further enhanced by establishment of crops (e.g. fruit trees) that grow in different seasons	None for Y1	

		and enhance nutrition (see activity 2.10).		
Indicator 4	<p>Habitat extent and condition report and photographs completed in Y1 for baseline.</p> <p>Population densities for marsh birds calculated in Oct 2015</p> <p>Appropriate data have been collected on birds and benthic invertebrates to establish a baseline, however delays to data input and analysis mean baseline is not yet available.</p>	<p>Monitoring programme underway. Report produced on condition and extent of vegetation and on bird survey conducted in Oct 2015.</p>	Habitat extent and condition report (Annex annex 12)	
Indicator 5	No national-level guidance on wise-use of wetlands exists. Current overall Wetland Strategy still in development	Major stakeholders are aware of the importance of the work and project partners are endorsed to facilitate process.	Letter of endorsement from National Ramsar Focal Point (Annex 14).	

3.4 Monitoring of assumptions

Outcome Assumption 1: That, following the recent elections (establishing the first democratically elected government since 2009), the newly established political environment remains relatively stable and conducive to conservation and development work delivered in partnership with external agencies

Comments: Although wrangling and power-struggles following the elections continue, the political environment (as it relates to this project and the major stakeholders) remains relatively stable, and local and national support is strong. Recent change of the country's Ramsar focal point have contributed to a slight delay in Output 4.

Outcome Assumption 2: That powerful individuals and outside influences, which have encroached into many other similar wetland areas (e.g. Lake Antafiandakana), do not seek to or succeed in destabilising the project's progress for their own interests.

Comments: No concerns in this area in Y1.

Outcome Assumption 3: That the management bodies established are endorsed and empowered by government to control/coordinate the sustainable management of Lake Sofia and its catchment.

Comments: Based on our work in Y1, we expect this assumption will be maintained throughout the duration of the project and beyond.

Output Assumption 1: Environmental and social conditions are representative (i.e. extreme events do not skew the baseline or mean that monitoring during project period is atypical).

Comments: The El Nino year has not significantly affected rain in the Sofia region so we are confident that our baselines represent a 'normal' status.

Output Assumption 2: That the evidence gathered and demonstrated through pilot project work will be sufficient to change attitudes and enable training to improve wider uptake (as cultural/spiritual beliefs can create scepticism towards technical solutions).

Comments: Assumption still stands at this early stage of the project.

Output Assumption 3: That there is not a fundamental ecological reason for the relative lack of productivity in Lake Sofia (of benthic invertebrates and fish) and that this is a consequence of poor environmental practices surrounding and upstream of the lake.

Comments: Too early to evaluate. No fundamental reason discovered yet.

Output Assumption 4: That the increasing political stability of Madagascar attracts additional donors and partners to work/collaborate in the region and build on the foundations established by the project.

Comments: All match funding has been secured for this project and good progress is being made on developing complementary projects/funding to support broader objectives and longer-term ambitions, including the agreement signed with SOCOTA (see Activity 2.16).

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

Impact - The Bealanana Wetlands Complex is managed sustainably for people and wildlife, acting as a national model for wetland and catchment management that helps Madagascar deliver international development commitments (MDGs/SDGs).

The biodiversity benefits of this project will be evidenced through a healthy lake catchment supporting native habitats and species. In Y1 of this project we have collected baseline information so that we can empirically progress towards this goal.

Livelihood projects are well-underway, with take-up much greater than expected within the first year of the project. Rice is a key constituent of diet, and training and equipment support has been received by 42 farmers/households (see Annex 9 for example of agreement). Enhanced nutrition and food security has also been added to our sustainable farming partnership schemes, alongside associated Community-based Savings Groups to allow community members to safely save money for time of year when food is scarce (e.g. the 'lean season'), or if the member of the family is ill and needs medical attention. Fishers have exchanged illegal nets as the first step in the process to secure sustainability of the lake's fishery, and 25% of bird owners in the entire catchment have been supported with livestock vaccinations.

4. Contribution to SDGs

This project has obvious direct links to: SDG1, to end poverty in all its forms everywhere; SDG 2, to end hunger, achieve food security and improved nutrition and promote sustainable agriculture; SDG 6, to ensure availability and sustainable management of water and sanitation for all; and to SDG 15, to protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

Within this project period our farming partnerships have provided local community members with training and capacity to increase yields in an environmentally sustainable way, and to diversify into other crops, many of which can be harvested at different times of year to rice and offer a more varied and nutritionally balanced diet. This contributed to food security and is a step towards longer-term poverty alleviation. Community-based savings groups have also been created to support farming associations, facilitating greater financial security to assist during times of food scarcity. These sustainable techniques also decrease chemical inputs into the wetland system, an important Y1 first step in halting the reversal of habitat degradation.

5. Project support to the Conventions, Treaties or Agreements)

The project has coordinated National Wetland Guidance workshops alongside the Ramsar Focal Point for Madagascar. Ramsar is recognised as a lead partner in implementing CBD wetland-related activities.

As mentioned in the project proposal, the work strongly contributes to the **Inland Waters Biodiversity** thematic programme however much of this contribution is longer-term and will only be realised in years 2 and 3 of the project.

Specific progress has also been made in relation to the following **Aichi targets**:

Strategic goal A/Target 2 (A2) – All sustainable farming partnership training is delivered to integrate impacts of development activities on the natural environment and reinforce the links between healthy environments and healthy people. At a national level, initial workshops to develop national wetland guidance have involved stakeholders from biodiversity conservation and international development NGOs, and representatives from government departments directly related to poverty reduction (e.g. fisheries, agriculture etc) have been identified and contacted to join the Working Group. This will help ensure biodiversity values around wetlands are considered when developing plans and strategies for poverty reduction.

B6 – Consultations with local fishing communities highlighted the extent of illegal fishing in Lake Sofia. A gear exchange process followed, ensuring mesh sizes were within the national regulations (see Activity 2.7). This is a first step in a process to sustainably manage fish stocks in Lake Sofia.

B7 & B8 – Newly formed sustainable farming partnerships are transferring techniques to more environmentally friendly methods (see Activity 2.14), thus decreasing nutrient inputs and benefiting biodiversity conservation through enhancing the health of habitats within the catchment.

D14 – work at both sites focuses on protecting and restoring ecosystem services for the benefit of local people.

6. Project support to poverty alleviation

Support has been given to the local community through sustainable rice farming partnerships (Activity 2.9), fisheries support (Activity 2.7), enhanced nutrition and food security (Activity 2.10) and community-based savings groups (Activity 2.9). Approximately 600 people from all nine communities around Lake Sofia have directly benefitted from some level of poverty alleviation work in Y1.

Work to transfer resource management to local community-based associations is underway, which secure resource access and provide a mechanism for controlling access to, and sustainably managing, resources within the lake catchment. Green schools have been developed in local communities to highlight links between health environments and healthy people.

7. Project support to Gender equity issues

Three women (and 2 men) have been recruited as project staff from the local area, meaning we have established a balanced/positively discriminated gender ratio within the site-based project team. As well as helping to ensure women's views are effectively represented and female-only stakeholder groups can be effectively engaged, this means the project is also directly contributing income streams to households within the catchment through female household members.

Socio-economic survey results include gender disaggregated data on the role/involvement of both women and men in various livelihood activities and other household tasks and the project is proactively targeting activities that are directly relevant to and will benefit women.

When the new management transfer agreements are in place, as indicated in output indicator 3, the project will work to ensure that women are appropriately represented within their leadership/decision-making structures and will also provide support and training to enable them to effectively perform these roles.

8. Monitoring and evaluation

This project involves 4 NGOs along with several government ministries and community groups. Keeping the various partners informed of progress and able to participate in decision-making has been a challenge in our monitoring and evaluation. To this end, project management of the project is arranged on several integrated levels. Field staff, who have most contact with communities, hold monthly meetings to inform each other of progress and workplans. The project Management Group, which consists of the direct line managers of the field staff along with a WWT co-ordinator and regional government staff, meet quarterly. Finally, the steering group, consisting of higher management from the four NGOs and regional government staff, meet bi-annually. Reports are produced at each level to inform that above, and representatives from each management level attend the meeting of the level above. Decisions made by the PMG and SAG are transmitted back to field staff through each NGO's line management structures.

In general, this system has worked well in the first but several flaws have needed to be corrected. In particular, field staff have not made their monthly meetings a priority. As this is the first level of monitoring it has impeded information flow up the chain and has also meant that field staff have not been aware of progress on activities other than those they are working on themselves. A schedule of field staff meetings has now been drawn up, to coincide with payday when all field staff travel to the nearest large town anyway. A named individual will organise each meeting and produce a report, with this role rotating between partners.

It has been found more effective to hold the Project Management Group meeting in two stages, one with and one without government staff present. Any field staff that are available are now invited to the Project Management Group, which keeps field staff more involved in decision making and provides the best information on which to base decisions.

Measurement of indicators is built into the workplans of field staff. In general this year we have found that data collection has been straightforward but that there has not always been sufficient time allocated for data entry and analysis. Field staff are now endeavouring to catch up on this aspect, but we are also investigating the possibility of recruiting volunteers through an internet café in Antananarivo to input certain data, in particular biodiversity monitoring, an approach which DWCT have successfully used in the past.

The Project M&E plan format is shown as Annex 15.

9. Lessons learnt

Certain unforeseen seasonal considerations have hampered the timing of a few scheduled activities. On overlap between the planned vaccination period and peak rice harvesting meant that a number of livestock owners were not able to participate in the programme during Y1. The timings will be shifted to allow for this during Y2 and Y3.

There was a desire from community members for greater opportunities to diversify crop production for increased food security. Fortunately OSDRM have a lot of experience with other agricultural farming processes and were able to respond to these requests, showing community members that the project was willing and able to support community ideas rather than simply enforce rigid plans.

National level government support has been strong, but coordinating meetings and workshops has been slower than anticipated; a problem made worse by a change in Madagascar's Ramsar Focal Point after the initial workshop. This had slightly delayed progress of Output 4, but recent meetings between WWT, Durrell and the new focal point will hopefully ensure that communication of project objectives is clear. Although CONARAMS will play a major part in the process, it is clear that they have many obligations so our role as facilitators will require a high level of process coordination.

10. Actions taken in response to previous reviews (if applicable)

N/A

11. Other comments on progress not covered elsewhere

N/A – all comments provided elsewhere.

12. Sustainability and legacy

Project Launch Events were held at Lake Sofia (for local communities and regional government) and in Antananarivo (for national government representatives, including Mrs Sahondra Rabesihanaka – a senior figure in the Ministry of Environment, Water and Forests – and staff of other interested NGO and private-sector). These events, alongside the subsequent National Wetland Guidance Workshops in Antananarivo and community conservation activities at Lake Sofia, have ensured that the project currently has the widest possible profile and all relevant stakeholders have a good understanding of our work and objectives.

The number of people engaged in community activities at Lake Sofia is good evidence of the increasing interest and capacity emanating from the project. There is always a contingent of the field team at the field site at any one time, with community fora receiving good attendance from each village. Originally one village – Andilantsara – was sceptical of the intentions of our project, concerned that our real objective was to appropriate control of the lake and its resources (e.g. for mining). Once members of this village started to see farmers from other villages gaining real benefits, strong internal pressure was applied to the village chief, who then chose to engage with the project.

Our planned exit strategy is still valid and on track, although our timetable for Management Transfer Agreements has been slightly altered (see Section 3.2 Output 1). The technical assistance provided to local farmers provides a sustainable platform for the retention of low input rice farming techniques into the future. The increase in extent of area employing low-input rice farming techniques is an important step to improving the long-term ecology of the lake.

13. Darwin Identity

The Darwin logo has been included on all invitations to project events, the project summary shared with local and national representatives (see Annex 6) and any project reports coming out of Y1 (see Annex 12). Darwin is also credited during project presentations within and outside Madagascar, as well as in project partner publicity material.

The Madagascan Ramsar Focal Point and other relevant government stakeholders (mainly within departments of rural development, fisheries, environment, and agriculture) are well aware that our work is sponsored by the UK government; this is mentioned at workshops and meetings.

Darwin is credited on WWT and Durrell webpages dedicated to the project (see <http://www.wwt.org.uk/conservation/wwt-projects/saving-the-madagascar-pochard/> and <https://www.durrell.org/animals/birds/madagascar-pochard2/>).

14. Project Expenditure

Unfortunately due to a delay in receipt of in-country expenditure details for the final quarter of the year from one of the project's local partners we are unable to finalise this expenditure table at this time. We will provide full expenditure details with our actual Q4 claim in May. We continue to expect some underspend for the year as previously explained in our mid-year report and outlined in the reforecast.

Table 1 Project expenditure during the reporting period (1 April 2015 – 31 March 2016)

Project spend (indicative) since last annual report	2015/16 Grant (£)	2015/16 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items (see below)				
Others (see below)				
TOTAL				

Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2015-2016

Project summary	Measurable Indicators	Progress and Achievements April 2015 - March 2016	Actions required/planned for next period
<p>Impact</p> <p>The Bealanana Wetlands Complex is managed sustainably for people and wildlife, acting as a national model for wetland and catchment management that helps Madagascar deliver international development commitments (MDGs/SDGs).</p>		<p>A Project Launch event was attended by members of all villages, relevant local government representatives, and the Chef de Region. All scheduled livelihood activities are well underway, with membership of associated groups higher than anticipated. New creative approaches to increase food security have also been developed. Decisions around the best way to structure Management Transfer Agreements have taken longer than expected but this extended consultation phase will likely increase the potential for sustainability of these groups into the future. Government support for national level guidance is strong, providing solid foundations for the draft guidance to be fully developed in Y2.</p>	
<p>Outcome</p> <p>Over 10,000 wetland-dependent people have secure access to natural resources and are part of a community-based management regime which improves food security/wellbeing/livelihoods and ecological conditions.</p>	<p>1. Six community associations are active across the entire catchment and are working together to address catchment-scale issues by year 3.</p> <p>2. By year 3, average community satisfaction and social cohesion perception scores improve by 20% against 2014 baseline (gender and poverty disaggregated data is available, however to give an indication of change, overall scores would move from a current average of 2.16 to 2.60 out of 4).</p> <p>3. Average duration of the 'lean season' (a widely recognised measure</p>	<p>1. At the end of the first year of the project there are currently no active community associations, although there are high levels of enthusiasm for commencing association activities as soon as possible. The delay is due to a change in approach, requested by the communities and local government. The intent now is for the existing 3 associations to incorporate membership from across the entire catchment. An additional association may be set up to cover activities in the upper catchment, particularly relating to forests, but it is unlikely that six associations will be needed.</p> <p>2. The participatory nature of the</p>	<p>Establish the community associations, including detailed conditions for membership for members living in the upstream communities. Decide whether additional community associations will be required.</p> <p>Monitoring the impact of initial agricultural development activities, modifying the programme based on this initial assessment and ensuring that support in these activities is available to more people. Demand for these activities exceeds supply, so methods to increase project reach will be considered.</p> <p>Ensure that protection for wetland habitats and wildlife is included in</p>

	<p>in development work, broadly defined as the difficult period between harvests when resources become scarce and food is more expensive) is reduced by 20% in target villages by year 3 in comparison to identified reference villages for the same period.</p> <p>4. Populations of ecological indicator species at Lake Sofia stabilized at current levels and no net loss of wetland habitat or deterioration in condition in year 3 in comparison to year 1.</p> <p>5. Guidance on the sustainable management of wetlands in Madagascar is supported by government and being used at (or agreed plans in place to use at) wetlands across the country.</p>	<p>project, and the levels of support and enthusiasm for it, would suggest that strong progress is being made in this area however empirical information will only be gathered in year 3 of the project.</p> <p>3. Participation in agricultural activities has been greater than hoped for, and it seems that enthusiasm for these activities cannot be underestimated. It is difficult, however, to judge the impact of this work so early in the project.</p> <p>4. Establishing population baselines for indicator species has proven more difficult than expected. Baseline wetland habitat mapping has been completed.</p> <p>5. Wetland management guidance is now being prepared under the auspices of the National Ramsar Committee. Although this has caused delays to the process of writing the guidance, it makes government and other stakeholder support more likely.</p>	<p>management transfer agreements signed by the local communities, without hampering access to the natural resources found in these habitats.</p> <p>Complete the delayed establishment of the working group that will produce the national wetland management guidance; produce draft guidance.</p>
<p>Output 1. Fully representative community management structures surrounding Lake Sofia re-established and strengthened, with new community management structures established for the wider catchment of the lake</p>	<p>1. Management transfer agreements in place for the three local associations surrounding Lake Sofia (Sofia Mandroso, Fikambana Fitantanana Matsabory Sofia, and Sandatra Sofia) by November 2015 and for a further three upstream communities (Antilongo, Lohanisofia, and Andranovaky) by 2018.</p> <p>2. Annual workplans and 3-year action plans (covering institutional development activities as well as conservation and community development work) are in place (agreed by general assembly) and being implemented in 3 communities by</p>	<p>After consultation with the three associations and local government, it was decided that management transfer agreements could not be put in place in 2015 as there was insufficient information available to inform the plans. Consequently, this output has required extensive modification, with the aim now to create management transfer agreements for all the communities simultaneously during 2016 and 2017. This change in plan has meant that many activities under this output have been delayed, particularly those that follow from the creation of plans and associations. The indicators are still appropriate but under the new proposal, all nine communities are expected to reach the indicators by 2018.</p>	

	<p>2016 and 6 communities by 2018.</p> <p>3. The membership of local association management structures (executive committee, advisory board, and general assembly) are fully representative of the local community, including at least 50% women and with representative social stratification, by 2017.</p> <p>4. Watershed management group established and holds inaugural meeting by 2018.</p>	
Activity 1.1 . Develop and agree initial 3-year management transfer agreements for Sofia Mandroso, Fikambana Fitantanana Matsabory Sofia, and Sandatra Sofia.		Delayed as a result of consultations with communities and local government Former VOI agreements require greater revision to ensure long-term sustainability, and to allow broader membership from people all across the catchment. Activities 1.1 and 1.2 to now run concurrently.
Activity 1.2, Develop agreements to transfer the management of natural resources to local-constituted community associations across the upstream catchment of Lake Sofia.		Scheduled to occur during Year 2 and will run alongside Activity 1.1
Activity 1.3. Revise and update the management transfer agreements for Sofia Mandroso, Fikambana Fitantanana Matsabory Sofia, and Sandatra Sofia based on information gathered by the project.		Scheduled to occur in Year 3 but changes to Activity 1.1. will mean this can only be an informal review, with resultant changes only implemented after the end of the current project.
Activity 1.4. Constitute membership of executive committees, advisory boards, and general assemblies of local associations		Interim management structures are in place for the three associations.
Activity 1.5. Hold annual workplan development and review meetings with general assemblies		Delayed due to changes to Activity 1.1
Activity 1.6. Hold community fora 3 times per year in each community to ensure wider accountability		Held twice in first year and frequency will be changed to two for subsequent years.
Activity 1.7. Produce semi-annual and annual progress reports on each local association		Not done due changes to Activity 1.1.
Activity 1.8. Provide technical support to the local community to understand and support delivery of the management transfer agreements		General overview given on Management Transfer agreements but no formal support will be given until Activity 1.1 is complete.
Activity 1.9. Deliver training on laws and rights for members of the local associations		Some training sessions were held with existing association members, relating to fishing regulations, but this activity is also delayed.
Activity 1.10. Establish watershed management group for Lake Sofia Catchment, bringing together local associations across the catchment, local government and other stakeholders.		Scheduled for year 3.

Activity 1.11. Hold annual watershed management group meeting	Scheduled for year 3.
Activity 1.12. Seek to support/reinforce catchment-level work through national/international site/landscape designation compatible with community management objectives (e.g. Protected Harmonious Landscape, Ramsar Site).	Scheduled for year 3.
<p>Output 2.</p> <p>Approaches to enhance existing local livelihoods and establish additional livelihood options developed, demonstrated at key sites and being implemented across the wider catchment</p>	<p>This output is generally on schedule.</p> <p>5. 25% of domesticated bird owners participated. This is lower than targeted, but is expected to increase after results of first year.</p> <p>7. Local fishing regulations were due to be set as part of the management transfer agreements in activity 1.1. As the agreements have been delayed, there are no local fishing regulations yet. Consequently, fulfilling this indicator is now expected to occur by 2017.</p> <p>8. Complete. 42 farmers (from all nine communities) are participating in the rice farming pilot projects.</p> <p>9. The rice growing season ends in June, so the results of the pilot rice farming project will be known then. However, as very little rice grown in the project area is irrigated, measuring water use is proving difficult and this metric may need to be adjusted or dropped from the indicator.</p> <p>11. The plans for alternative sustainable livelihoods are not completed yet. We are still expecting to develop the infrastructure by 2017.</p>
Activity 2.1. Vaccinate domestic birds against disease in the villages surrounding Lake Sofia using authorised vaccinators	Vaccinations were given to 6000 ducks, geese and chickens in all villages in September 2015 and then a further 6300 in February 2016.

Activity 2.2. Train members of local communities in vaccination techniques by working alongside authorised vaccinators to enable them to take over this work	Initial training complete with communities vaccinating birds in Feb 2016. Training will continue through project.
Activity 2.3. Produce vaccination guidance manual	In development Will be completed in Y2.
Activity 2.4. Deliver animal husbandry practices training to all villages in the Lake Sofia catchment	Scheduled for Y2.
Activity 2.5 .Produce information factsheets on common diseases, focussed on prevention and management techniques	In development. Will be completed in Y2.
Activity 2.6 .Construct fishing and fish landing platforms at Lake Sofia to improve lake access and safety, enable easier processing and monitoring of fish catches, and reduce disturbance to marsh habitats	Locations decided and materials purchased. Activity on schedule and platforms to be built during dry season in Y2.
Activity 2.7 .Provide replacement fishing equipment in exchange for any fishing gear not permitted for use on Lake Sofia under existing or any revised regulations.	37 fishermen have replaced illegal nets with new equipment and further replacement nets will be supplied when local regulations have been set.
Activity 2.8 .Design and implement fisheries/fish catch monitoring programme	Field staff have been working with fishermen to measure catch sizes and species all through Year 1. Additionally, field staff have been recording locations used by fishermen. Data is still being collated for analysis.
Activity 2.9 .Identify locations for pilot rice farming projects and sign agreements with participants (through local associations where already in place)	42 participants have been recruited for pilot rice farming projects. In total an area of 56 ha has been given over to the pilots.
Activity 2.10 .Conduct pilot projects in three villages to demonstrate the application of more environmentally sensitive rice cultivation practices	The pilot rice farming is being conducted in all nine villages, due to enthusiasm among farmers for learning new techniques. The participants were given training in environmentally sensitive rice farming methods, focussing on soil preparation, seed selection, transplantation, field maintenance and water management.
Activity 2.11 .Develop and implement monitoring programme (focussed on yield, water quality and external inputs) for pilot rice farming projects	Indicators are still under development. Data will be collected from during the first quarter of year 2, covering the rice harvesting season.
Activity 2.12. Report on findings of pilot projects	The rice growing season ends in June. Findings will be reported on then.
Activity 2.13 .Train agricultural extension training team	Three extension staff are being trained at present.
Activity 2.14 .Deliver environmentally sensitive rice cultivation (including soil management techniques) training to all villages in the Lake Sofia catchment	Farming groups have been established in all villagers and training has been delivered to all groups. The participants in the pilot rice farming project are being encouraged to disseminate the new techniques they have learned. More formal training will be delivered during Year 2, after the conclusion of the pilot rice farming trials.
Activity 2.15 .Develop and agree a roll-out programme of rice farming work with local associations and village leadership	Scheduled for Year 2.
Activity 2.16 .Conduct feasibility study for alternative livelihood options (wet-processed Arabica coffee/sustainable vanilla)	Terms of reference for this study are being drawn up, and work will take place during Year 2.
Activity 2.17 .Establish local nursery to supply high-quality coffee/vanilla cuttings to local farmers	Scheduled for Year 2, although we are exploring potential for facilities developed

		for fruit trees to be re- or dual-purposed.
Activity 2.18 .Identify locations for development of pilot value-added coffee and vanilla projects and sign agreements with participants		Scheduled for Year 2.
Activity 2.19 .Provide training and materials to support sustainable coffee/vanilla farming projects		Scheduled for Year 3.
Activity 2.20 .Produce quarterly updates and annual progress report on all activities		Reports and updates have been delivered each quarter.
<p>Output 3.</p> <p>Conditions (policy, practice and awareness) in place to reduce key threats to wildlife and the environment of Lake Sofia and its catchment, including burning/clearance of marsh, hunting/trapping of threatened wildlife, and draining of wetlands.</p>	<p>12. 65% of households in the Lake Sofia catchment have an increased understanding of the social, environmental and economic importance of sustainable wetland/watershed management by 2017 in comparison to 2015 baseline</p> <p>13. Environmental education programs developed by the project are integrated into the curriculum of at least two primary schools and one secondary school in the catchment by 2016 and being adopted commune-wide by 2018</p> <p>15. Density of marsh-breeding bird nests and fledging success rates increased by 20% and 10% respectively in 2017 compared with 2015 baseline (as proxy for reduced disturbance). Indicator will also compare with adjacent control site to adjust for impacts of external factors (e.g. climate variation)</p>	<p>Several activities under this output are behind schedule, but none of the delays are severe or expected to affect eventual completion of the output.</p> <p>12 & 13. Development of the environmental education programme has been delayed, but it is anticipated that the programme will be complete and included in the curriculum of schools in the community for the 2016/17 academic year.</p> <p>15. Monitoring of marsh-breeding birds has proven extremely difficult. The density of the marsh makes access by foot impossible, while attempts using a small unmanned aerial vehicle (drone) were also unsuccessful due to the density of the vegetation making the nests difficult to see. Furthermore, the intended control site (Bemanevika, located approx. 50km NW of Lake Sofia) appears to have suffered a collapse in its marsh-breeding bird populations, as no nests were recorded during 2015/16. This indicator is therefore now unsuitable and we are exploring options for a revised indicator.</p>
Activity 3.1 .Develop environmental education programme and supporting materials (lesson plans, ID guides, basic sampling equipment, teaching guides) for use in schools		This activity is behind schedule. Development of the environmental education programme is expected to be completed in time for the start of the academic year in October 2016.
Activity 3.2 .Run initial demonstration sessions in schools		Scheduled for Year 2, but limited activities including the creation of 'green gardens' in primary schools have already been carried out.
Activity 3.3. Conduct teacher training events		Scheduled for Year 2.

Activity 3.4. Develop magnification/roll-out plan with local and regional education departments	Scheduled for Year 2.
Activity 3.5. Establish catchment-wide network of community information dissemination points	Locations for and format of information points have been agreed with community leaders. These will be established over the first quarter of Year 2.
Activity 3.6. Develop simple ecological monitoring framework, linking improvements in ecological health to human health/wellbeing	Baseline surveys for birds and aquatic plants were conducted in November and reports on these are now available. For the first year of the project, basic ecological monitoring focussing on birds and benthic invertebrates has been carried out. Development of the final monitoring framework will be finished early in Year 2.
Activity 3.7 .Identify network of local community monitoring focal points and sign agreements with participants	This activity is behind schedule, but is expected to be completed early in Year 2.
Activity 3.8. Run training events and provide simple monitoring materials to focal points to enable them to act as local coordinators of monitoring effort	Not yet started.
Activity 3.9 .Produce semi-annual community monitoring reports	Not yet started.
Activity 3.10. Identify and agree locations and plans for reforestation work on bare headlands surrounding lake with local associations	Possible locations have been identified, but landowners are still being identified. Experts in reforestation are being consulted to confirm plans.
Activity 3.11. Procure supply of suitable seedlings for reforestation work and establish local holding station/nursery	Scheduled for Year 2, although nursery facilities developed under output 2 could be used.
Activity 3.12. Conduct reforestation events with villages surrounding Lake Sofia	Scheduled for Year 2.
Activity 3.13. Assess extent and quality of aquatic/marginal habitat and identify priority locations for restoration work	Detailed mapping of aquatic vegetation was completed in Year 1. General areas in need of restoration have been identified but specific sites for restoration have not yet been chosen.
Activity 3.14. Undertake restoration of aquatic and marginal vegetation with local community, using cuttings and transplants from other areas of the lake/catchment	Scheduled for Year 2.
Activity 3.15. Undertake habitat extent and condition monitoring using combination of remote sensing and groundtruthing techniques	Photographs of the vegetation surrounding the lake were taken using an unmanned aerial vehicle (a drone) in February. These are still being processed, and will form the baseline for this monitoring.
Activity 3.16. Produce quarterly updates and annual progress report on habitat restoration work	Not yet started.
Output 4. National-level sustainable wetland management guidance (informed by the model developed at Lake Sofia) adopted by the Government of	1. National-level working group established in 2015 2. Draft guidance developed for consultation by 2016
	The National Ramsar Committee (CONARAMS) has endorsed WWT to facilitate the production of national wetland management guidance, and a working group has been identified. Output slightly delayed but still expected to be fully completed. Next meeting in April 2016 with study tours scheduled in July/Aug 2016.

<p>Madagascar and being used at wetlands across the country.</p>	<p>3. Final guidance (including a case study on Lake Sofia) produced and endorsed by government by the end of 2017</p> <p>4. Guidance is being applied to at least 3 additional wetland sites in Madagascar by 2018.</p>	
<p>Activity 4.1. Constitute national working group to develop the guidance</p>		<p>Efforts to constitute the national working group are ongoing, with preliminary workshop held in Nov 2015 to identify stakeholders and secure buy-in. Group to be formally constituted at next workshop in April 2016.</p>
<p>Activity 4.2. Run study tours to four wetlands (Lake Alaotra, Lake Kinkony, Torotorofotsy and Lake Sofia)</p>		<p>Delayed until Y2 Q2. .</p>
<p>Activity 4.3. Hold guidance development workshop</p>		<p>Preliminary workshop held in Nov 2015. First major guidance development workshop scheduled for April 2016.</p>
<p>Activity 4.4. Write up Lake Sofia case study</p>		<p>Scheduled for Year 2.</p>
<p>Activity 4.5. Produce draft guidance and consult with broad range of stakeholders</p>		<p>Consultation process begun in Nov 2015. Draft guidance on schedule.</p>
<p>Activity 4.6. Workshops to finalise guidance, chaired by national CBD and Ramsar focal points.</p>		<p>Scheduled for Year 2.</p>
<p>Activity 4.7. Design and publish guidance document in three languages (Malagasy, French and English)</p>		<p>Scheduled for Year 2.</p>
<p>Activity 4.8. Organise national conference for wetland managers and policy makers and use as platform to launch guidance</p>		<p>Scheduled for Year 3.</p>
<p>Activity 4.9. Project partners involved in managing wetlands elsewhere in Madagascar (particularly DWCT and Asity) test the guidance against those sites and apply recommendations.</p>		<p>Scheduled for Year 3.</p>
<p>Activity 4.10. Promote guidelines at national and international conferences and conventions</p>		<p>Scheduled for Year 3.</p>
<p>Activity 4.11. Produce quarterly updates and annual progress reports</p>		<p>Not yet done.</p>

Annex 2 Project's full current logframe as presented in the application form

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>Impact: Effective contribution in support of the implementation of the objectives of the Convention on Biological Diversity (CBD), the Convention on Trade in Endangered Species (CITES), and the Convention on the Conservation of Migratory Species (CMS), as well as related targets set by countries rich in biodiversity but constrained in resources.</p>			
<p>Outcome: Over 10,000 wetland-dependent people have secure access to natural resources and are part of a community-based management regime which improves food security/wellbeing/livelihoods and ecological conditions.</p>	<p>1. Six community associations are active across the entire catchment and are working together to address catchment-scale issues by year 3.</p> <p>2. By year 3, average community satisfaction and social cohesion perception scores improve by 20% against 2014 baseline (gender and poverty disaggregated data is available, however to give an indication of change, overall scores would move from a current average of 2.16 to 2.60 out of 4).</p> <p>3. Average duration of the 'lean season' (a widely recognised measure in development work, broadly defined as the difficult period between harvests when resources become scarce and</p>	<p>1. Public record (statutes and official signed documentation), project documents, association meeting minutes and participants lists, community forum meetings/feedback, participatory learning reports for target stakeholder/beneficiary groups (resource user groups, marginalised groups, women), social survey/attitudes assessment report, minutes of meetings with commune chief and district/provincial level representatives.</p> <p>2. Household survey data and reports.</p> <p>3. Household survey data and participatory learning reports, minutes of community meetings. Comparable data from reference villages (to capture real change rather than the influence of external</p>	<p>That, following the recent elections (establishing the first democratically elected government since 2009), the newly established political environment remains relatively stable and conducive to conservation and development work delivered in partnership with external agencies. <i>[National-level work, particularly activities under output 4 will be used to maintain close working relationships with the government and keep a close eye on the situation and the steering group will be tasked with developing strategies to address any changes]</i></p> <p>That powerful individuals and outside influences, which have encroached into many other similar wetland areas (e.g. Lake Antafiandakana), do not seek to or succeed in destabilising the project's progress for their own interests. <i>[Work to establish the legal basis for the</i></p>

	<p>food is more expensive) is reduced by 20% in target villages by year 3 in comparison to identified reference villages for the same period.</p> <p>4. Populations of ecological indicator species at Lake Sofia stabilized at current levels and no net loss of wetland habitat or deterioration in condition in year 3 in comparison to year 1.</p> <p>5. Guidance on the sustainable management of wetlands in Madagascar is supported by government and being used at (or agreed plans in place to use at) wetlands across the country.</p>	<p>factors such as climate)</p> <p>4. Biodiversity survey and monitoring data (including benthic invertebrate counts, fish catch records and waterbird population counts), satellite imagery and aerial photography</p> <p>5. National level CBD and Ramsar reporting, guidance referenced in additional</p>	<p><i>association's work will significantly address this issue during the lifetime of the project and national level work with government ministries will help ensure political support is in place to react to any threats]</i></p> <p>That the management bodies established are endorsed and empowered by government to control/coordinate the sustainable management of Lake Sofia and its catchment. <i>[Although using existing frameworks and recognised techniques this is a relatively new approach/model in Madagascar. The involvement of local government (DREEF and DRDR) as project partners will help to ensure this, supported by national level policy work]</i></p>
<p>Outputs:</p> <p>1. Fully representative community management structures surrounding Lake Sofia re-established and strengthened, with new community management structures established for the wider catchment of the lake</p>	<p>1. Management transfer agreements in place for the three local associations surrounding Lake Sofia (Sofia Mandroso, Fikambana Fitantanana Matsabory Sofia, and Sandatra Sofia) by November 2015 and for a further three upstream communities (Antilongo, Lohanisofia, and Andranovaky) by 2018.</p>	<p>1. Public record (official declaration), documents supporting submission, press releases and articles</p> <p>2. Articles of local associations</p>	

	<p>2. Annual workplans and 3-year action plans (covering institutional development activities as well as conservation and community development work) are in place (agreed by general assembly) and being implemented in 3 communities by 2016 and 6 communities by 2018.</p> <p>3. The membership of local association management structures (executive committee, advisory board, and general assembly) are fully representative of the local community, including at least 50% women and with representative social stratification, by 2017.</p> <p>4. Watershed management group established and holds inaugural meeting by 2018.</p>	<p>(annual workplans and 3 year activity plans), reports of annual workplan development/review and semi-annual workplan progress update meetings. Supplemented by feedback/minutes from community meetings and participatory learning reports.</p> <p>3. Public record (official documents), TORs, management committee membership/participant lists and minutes of meetings, minutes/feedback from community meetings, project documents, household survey data (disaggregated by village, Multi-dimensional Poverty Index score, and gender).</p> <p>4. Public record, press releases and articles, watershed management group meeting minutes and project reports/photographs.</p>	
<p>2. Approaches to enhance existing local livelihoods and establish additional livelihood options developed, demonstrated at key sites and being implemented across the wider catchment</p>	<p>5. At least 60% and 90% of domesticated bird owners in the three communities surrounding the lake are participating in vaccination programmes of the project by 2016 and 2017 respectively</p> <p>6. Reporting of disease as a major problem with</p>	<p>5. Signed agreements with individuals receiving vaccines, receipts and inventories showing volumes of vaccines used</p> <p>6. Household survey data and reports</p>	<p>That the evidence gathered and demonstrated through pilot project work will be sufficient to change attitudes and enable training to improve wider uptake (as cultural/spiritual beliefs can create scepticism towards technical solutions). <i>[This is an assumption based on</i></p>

	<p>chickens/ducks/geese, reduced to 30%/20%/20% in vaccinated area and 70%/40%/40% in wider landscape by 2017 (against 2014 baseline of 90%/55%/55%).</p> <p>7. At least 90% of fisherfolk are using recommended fishing equipment and respecting local fishing regulations by 2016</p> <p>8. 15 farmers (from three communities) signed up to and have started working on the rice farming pilot projects by 2016.</p> <p>9. Rice yields increased by an average of at least 150%, water use reduced by 20% and chemical inputs reduced by 90% on pilot rice fields by 2017 (in comparison with 2015 baseline of pilot sites and control sites).</p> <p>10. At least 30 additional rice farmers (beyond pilot sites) applying the new techniques to their rice fields by 2017</p> <p>11. Lake Sofia wet Arabica coffee and sustainable vanilla production business plans developed by 2016 with local infrastructure (nurseries, storage and collection networks) in place by 2017 and pilot phase</p>	<p>7. Records/receipts of gear exchange, reports of local associations on infringements of regulations, fisheries monitoring reports</p> <p>8. Signed agreements with local associations/village leadership and individual farmers, project reports</p> <p>9. Rice yield, and water monitoring data (quality and quantity) from pilot and control sites, community feedback (meeting minutes, attitudes/awareness surveys), press releases/articles, journal papers</p> <p>10. Agreements with local associations, participants lists and reports from training and follow-up events, community feedback (meeting minutes, attitudes/awareness surveys)</p> <p>11. Feasibility study final report, minutes of community meetings, Lake Sofia community development plans, Strategies/Plans of OSDRM, Project proposals, Project registers of donors.</p>	<p><i>successful work elsewhere in Sofia region, however in Madagascar cultural issues can be very localised (e.g. local 'fadys' which prevent certain activities in certain locations based on spiritual/ancestral beliefs). Staff of the project have the skills to adapt work to this very local context and additional staff recruited from the local community will help with this]</i></p>
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	production underway in 2018.		
<p>3. Conditions (policy, practice and awareness) in place to reduce key threats to wildlife and the environment of Lake Sofia and its catchment, including burning/clearance of marsh, hunting/trapping of threatened wildlife, and draining of wetlands.</p>	<p>12. 65% of households in the Lake Sofia catchment have an increased understanding of the social, environmental and economic importance of sustainable wetland/watershed management by 2017 in comparison to 2015 baseline</p> <p>13. Environmental education programs developed by the project are integrated into the curriculum of at least two primary schools and one secondary school in the catchment by 2016 and being adopted commune-wide by 2018</p> <p>14. At least 1.5ha of marginal/aquatic vegetation restored and 5ha of currently bare headland around Lake Sofia reforested (under cover of saplings of diverse native provenance and demonstrating annual survival rates of at least 70%) by 2018</p> <p>15. Density of marsh-breeding bird nests and fledging success rates increased by 20% and 10% respectively in 2017 compared with 2015 baseline (as proxy for reduced disturbance). Indicator will also compare with adjacent control</p>	<p>12. Attitudes/awareness survey at beginning and end of project</p> <p>13. School curricula/syllabus and lesson plans, evaluation report interviews with students and teachers, project reports, minutes of meetings with education departments, commune and district level education department plans</p> <p>14. Satellite imagery (Landsat images - 30m resolution), photographic evidence, minutes of community meetings, project reports, press/media articles, inventories and receipts of plug plants and saplings.</p> <p>15. Project reports and monitoring data, biodiversity reports (number of nests/fledging success rates of marsh nesting birds). Control site surveys (Bemanevika lakes)</p>	<p>That there is not a fundamental ecological reason for the relative lack of productivity in Lake Sofia (of benthic invertebrates and fish) and that this is a consequence of poor environmental practices surrounding and upstream of the lake. <i>[This issue has been explored and fairly detailed investigations conducted to date suggest that this is unlikely to be the case, however it must always be considered and any indications/evidence during the project that this may be the case need to be reported to and considered by project management]</i></p>

	<p>site to adjust for impacts of external factors (e.g. climate variation)</p> <p>16. Instances of deliberate burning/drainage of marsh, use of illegal fishing gear, illegal hunting by residents of local communities reduced to zero by year 3, and any instances of such activities by outsiders are effectively prosecuted/redressed in accordance with the rules of the local association.</p>	<p>16. Satellite imagery (Landsat images - 30m resolution), photographic evidence, incidences of burning and clearance reported in minutes of community/association meetings, District and provincial DREEF/DRADR records.</p>	
<p>4. National-level sustainable wetland management guidance (informed by the model developed at Lake Sofia) adopted by the Government of Madagascar and being used at wetlands across the country.</p>	<p>17. National-level working group established in 2015</p> <p>18. Draft guidance developed for consultation by 2016</p> <p>19. Final guidance (including a case study on Lake Sofia) produced and endorsed by government by the end of 2017</p> <p>20. Guidance is being applied to at least 3 additional wetland sites in Madagascar by 2018.</p>	<p>17. Working group ToR and commitment of members (MoU/charter), minutes of meetings, project reports.</p> <p>18. Draft guidance document, minutes of meetings</p> <p>19. Final guidance document, minutes of meetings, project reports</p> <p>20. Project reports from other sites (organisations both within and beyond the Lake Sofia project partnership), minutes of meetings and reports of government.</p>	<p>That the increasing political stability of Madagascar attracts additional donors and partners to work/collaborate in the region and build on the foundations established by the project. <i>[If this assumption does not hold, the project will focus even more effort on developing close relations with specific donors to ensure support continues during political instability. This has been a proven strategy during the past political turmoil. Work to ensure management structures are community-led and maintainable/sustainable without significant external intervention will also help mitigate the impact]</i></p>

- Activities** (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)
- 1.1 Develop and agree initial 3-year management transfer agreements for Sofia Mandroso, Fikambana Fitantanana Matsabory Sofia, and Sandatra Sofia.
 - 1.2 Develop agreements to transfer the management of natural resources to local-constituted community associations across the upstream catchment of Lake Sofia.
 - 1.3 Revise and update the management transfer agreements for Sofia Mandroso, Fikambana Fitantanana Matsabory Sofia, and Sandatra Sofia based on information gathered by the project.
 - 1.4 Constitute membership of executive committees, advisory boards, and general assemblies of local associations
 - 1.5 Hold annual workplan development and review meetings with general assemblies
 - 1.6 Hold community fora 3 times per year in each community to ensure wider accountability
 - 1.7 Produce semi-annual and annual progress reports on each local association
 - 1.8 Provide technical support to the local community to understand and support delivery of the management transfer agreements
 - 1.9 Deliver training on laws and rights for members of the local associations
 - 1.10 Establish watershed management group for Lake Sofia Catchment, bringing together local associations across the catchment, local government and other stakeholders.
 - 1.11 Hold annual watershed management group meeting
 - 1.12 Seek to support/reinforce catchment-level work through national/international site/landscape designation compatible with community management objectives (e.g. Protected Harmonious Landscape, Ramsar Site).
 - 2.1 Vaccinate domestic birds against disease in the villages surrounding Lake Sofia
 - 2.2 Train members of local communities in vaccination techniques
 - 2.3 Produce vaccination guidance manual
 - 2.4 Deliver animal husbandry practices training to all villages in the Lake Sofia catchment
 - 2.5 Produce information factsheets on common diseases, focussed on prevention and management techniques
 - 2.6 Construct fishing and fish landing platforms at Lake Sofia to improve lake access and safety, enable easier processing and monitoring of fish catches, and reduce disturbance to marsh habitats
 - 2.7 Provide replacement fishing equipment in exchange for any fishing gear not permitted for use on Lake Sofia under existing or any revised regulations.
 - 2.8 Design and implement fisheries/fish catch monitoring programme
 - 2.9 Identify locations for pilot rice farming projects and sign agreements with participants (through local associations where already in place)
 - 2.10 Conduct pilot projects in three villages to demonstrate the application of more environmentally sensitive rice cultivation practices
 - 2.11 Develop and implement monitoring programme (focussed on yield, water quality and external inputs) for pilot rice farming projects
 - 2.12 Report on findings of pilot projects
 - 2.13 Train agricultural extension training team
 - 2.14 Deliver environmentally sensitive rice cultivation (including soil management techniques) training to all villages in the Lake Sofia catchment
 - 2.15 Develop and agree a roll-out programme of rice farming work with local association and village leadership
 - 2.16 Conduct feasibility study for alternative livelihood options (wet-processed Arabica coffee/sustainable vanilla)
 - 2.17 Establish local nursery to supply high-quality cuttings to local farmers
 - 2.18 Identify locations for development of pilot value-added coffee and vanilla projects and sign agreements with participants
 - 2.19 Provide training and materials on sustainable coffee/vanilla farming practices
 - 2.20 Produce quarterly updates and annual progress report on all activities

3.1	Develop environmental education programme and supporting materials (lesson plans, ID guides, basic sampling equipment, teaching guides) for use in schools	
3.2	Run initial demonstration sessions in schools	
3.3	Conduct teacher training events	
3.4	Develop magnification/roll-out plan with local and regional education departments	
3.5	Establish catchment-wide network of community information dissemination points	
3.6	Develop simple ecological monitoring framework, linking improvements in ecological health to human health/wellbeing	
3.7	Identify network of local community monitoring focal points and sign agreements with participants	
3.8	Run training events and provide simple monitoring materials to focal points to enable them to act as local coordinators of monitoring effort	
3.9	Produce semi-annual community monitoring reports	
3.10	Identify and agree locations and plans for reforestation work on bare headlands surrounding lake with local associations	
3.11	Procure supply of suitable seedlings for reforestation work and establish local holding station/nursery	
3.12	Conduct reforestation events with villages surrounding Lake Sofia	
3.13	Assess extent and quality of aquatic/marginal habitat and identify priority locations for restoration work	
3.14	Undertake restoration of aquatic and marginal vegetation with local community, using cuttings and transplants from healthier areas of the lake/catchment	7
3.15	Undertake habitat extent and condition monitoring using combination of remote sensing and groundtruthing techniques	3
3.16	Produce quarterly updates and annual progress report on habitat restoration work	2
4.1	Constitute national working group to develop the guidance	
4.2	Run study tours to four wetlands (Lake Alaotra, Lake Kinkony, Torotorofotsy and Lake Sofia)	
4.3	Hold guidance development workshop	
4.4	Write up Lake Sofia case study	
4.5	Produce draft guidance and consult with broad range of stakeholders	
4.6	Workshops to finalise guidance, chaired by national CBD and Ramsar focal points.	
4.7	Design and publish guidance document in three languages (Malagasy, French and English)	
4.8	Organise national conference for wetland managers and policy makers and use as platform to launch guidance	
4.9	Project partners involved in managing wetlands elsewhere in Madagascar (particularly DWCT and Asity) test the guidance against those sites and apply recommendations.	
4.10	Promote guidelines at national and international conferences and conventions	
4.11	Produce quarterly updates and annual progress reports	

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 to be delivered for sustainable farming partnerships.	Male and Female	Malagasy	320			320	1000
6A	Management and administration training for VOIs (community association).	Male and Female	Malagasy	0			0	30
6A	Training delivered to local fishers.	Male and Female		20			20	50
6A	Schools Environmental Education programme	Boys and girls	Malagasy	0			0	2000
7	Schools Environmental Education course. National Wetland Guidance Manual. Project Information Posters.			0			0	3
9	Lake management transfer agreements			0				2
10	Waterbird / marsh plant ID guides for community monitoring			0				2
11A	Papers published			0			0	1
11B	Papers submitted			0			0	2

14A	Conference held on National Wetland Guidance			0			0	1
20	Agricultural equipment and fishing platforms and equipment			£5,000 (estimated figure)			£5,000	£9,200

Table 2 Publications

Title	Type (e.g. journals, manual, CDs)	Detail (authors, year)	Gender of Lead Author	Nationality of Lead Author	Publishers (name, city)	Available from (e.g. weblink or publisher if not available online)