Darwin Initiative Main: Annual Report

To be completed with reference to the "Project Reporting Information Note":
(https://www.darwininitiative.org.uk/resources-for-projects/information-notes-learning-notes-briefing-papers-and-reviews/).

It is expected that this report will be a **maximum of 20 pages** in length, excluding annexes

Submission Deadline: 30th April 2023

Submit to: BCF-Reports@niras.com including your project ref in the subject line

Darwin Initiative Project Information

Project reference	28-008
Project title	Restoring the Alaotra Ramsar Watershed - The Breadbasket of Madagascar
Country/ies	Madagascar
Lead Partner	Durrell Wildlife Conservation Trust
Project partner(s)	Alaotra Rano Soa, DREDD, DRAE, Graine de Vie
Darwin Initiative grant value	£491,008.00
Start/end dates of project	01 October 2021 – 31 June 2024
Reporting period (e.g. Apr 2022 – Mar 2023) and number (e.g. Annual Report 1, 2, 3)	Apr 2022 – Mar 2023; Annual Report 2
Project Leader name	Fidy Ralainasolo
Project website/blog/social media	
Report author(s) and date	Fidy Ralainasolo, Fabrice Randriamanarivontsoa, April 30 2023

Annex 0.1: Table of Acronyms

1. Project summary

Deforestation is one of the scourges that threatens different types of habitats in Madagascar. The Lake Alaotra watershed is a large habitat of several life forms (aquatic animal and plant species, local endemic lemur) and it provides ecosystem services to the local population (for example, it is a source for irrigation of agricultural land, fishing, drinking water, and basketry using aquatic plant species of the lake). The Lake Alaotra watershed is currently a degraded, vulnerable, and threatened habitat. This project contributes to the restoration activity of the marsh and the reforestation of the watershed.

The project not only works on the conservation of endangered species and their habitat but also contributes to human development. All reforestation activities take place in the lean season for farmers, remuneration during reforestation activities (preparation, implementation, and monitoring) helps them a lot in the face of this most difficult season of the year: the project recruited 200 people per day during three months of reforestation (planting 164 hectares of native forest),and established 25 VSLA new groups this year, adding to the seven VSLA groups which undertook a complete cycle , with total savings of £1800, with a net profit of 18%.

Women played a significant role in all project activities and we have been tracking the gender split of participants (for example 42.5% of those employed for reforestation were women and 87% of VSLA members are women). The Lake Alaotra region and the target villages (Figure 1) of the Darwin reforestation project is part of the province of Toamasina, Alaotra Mangoro region, and Ambatondrazaka District, located between 048°30'00'' East longitude and 17°30'00'' South latitude at an altitude of 750 m. This report focuses on the reforested land in Ambohidavakely which is 22 kilometres north of Ambatondrazaka by road and on the edge of the national road 44 (RN 44).
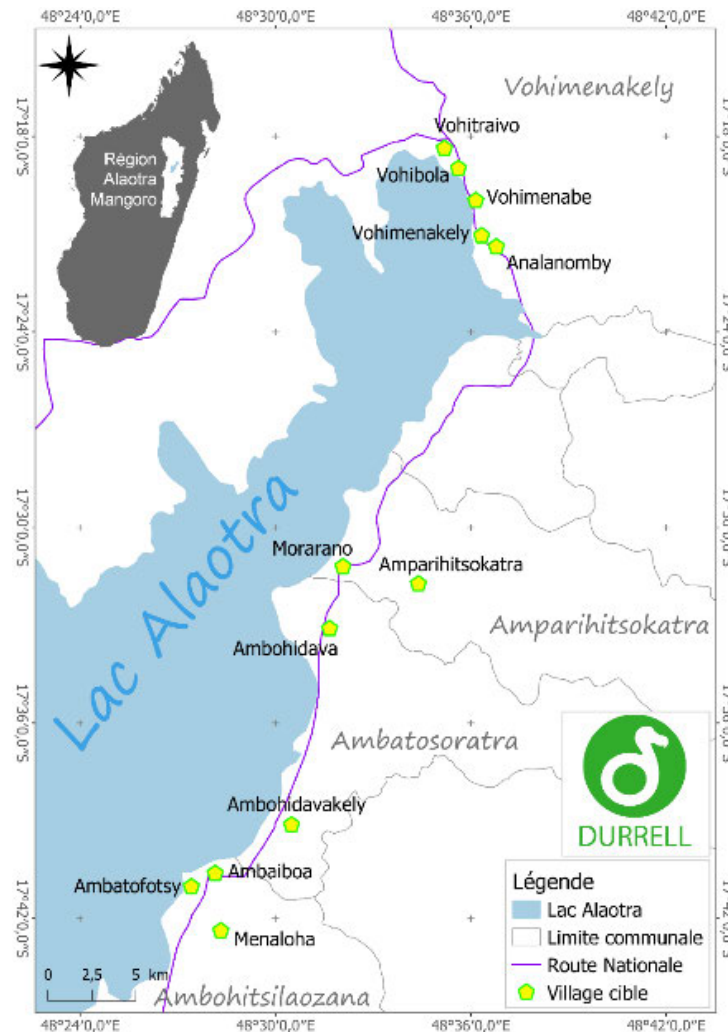

Figure 1: Darwin Project Intervention Villages, Alaotra

2.   Project stakeholders/ partners

To achieve the objectives and facilitation of the activities of the Darwin reforestation project, we collaborated mainly with four entities: The State, represented by the Regional Directorate of Environment and Sustainable Development Alaotra Mangoro (DREDD) and the Regional Director of Agriculture and Farming; The NGO Graine de Vie; The ARS (Alaotra Rano Soa) represented by the local population such as the Federations, the COBA (based Community) and the Fokonolona.

The Regional Directorate for the Environment and Sustainable Development (DREDD): party responsible for reforestation projects, and as a representative of the state in terms of the environment, we worked together from the planning, on the implementation of field work, as well as the monitoring evaluation of the reforestation project. For the monitoring and protection of the planted area, the implantation of the "VNA" (Vaomeran'ny Afo) in the Fokontany around the planted area will be the responsibility of the DREDD, as well as their participation in the development of the "Dina" which must be tasked with the laws in force on environmental protection and the enforcement of laws on violations of the rules within the PA and community reforestation.

The DRAE (the Regional Director for Agriculture and Farming)
The DRAE of Alaotra supported the project on the implementation of the Climate Smart Agriculture (CSA). The DRAE team provided recommendations for the improvement of the CSA action plans and the technical guidance sheets adapted for Alaotra region. We also work closely with Regional Director of Fisheries for the implementation of a standardised fishing monitoring system (3.6).

The Association Graine de Vie (GdV) is one that has a wide expertise on reforestation works with DARWIN reforestation as a technical partner and seed supplier. GdV has provided expertise regarding the choice of species used and the determination of ecological preferences of the selected species. GdV has trained local committees as well as Durrell staff on seed processing techniques for the direct planting reforestation method. A memorandum of understanding (MoU) was signed this year between the NGO Graine de Vie and Durrell on the collaboration of the Darwin reforestation project, with GDV as a technical partner. It has an important responsibility in the formation of local committees, the choice of species used and the determination of ecological preferences of the selected species.

The local communities in the Alaotra Rano Soa (ARS) platform are the key partners of this project. The 12 villages concerned are active members of the ARS, among others, the 6 local communities of protective bases of the marshes, an association of fishermen, a federation of water users as well as the 4 associations protecting watersheds. Their main objective is restoring together the Ramsar Alaotra site because they feel concerned by the degradation of this place and their daily life and subsistence depend directly on the existing natural resource in the Ramsar site. Their efforts were not sufficient to tackle the conservation challenges of the site, but through this project, their goals of joining forces for a single goal of restoring the Ramsar site have relevant results. Indeed, the collaboration with village chiefs or mayors as well as the authorities and technical services concerned by these projects helps them to identify the necessary aid to the population during this project. They are aware that working alone cannot advance conservation.

The British Embassy, Madagascar: Throughout this year, we have both kept in touch with the Development Counsellor from the FCDO, based in the British Embassy in Antananarivo through presentations both about this project and Durrell's other conservation livelihoods work (included other DEFRA-funded projects) and through a number of meetings. Durrell also facilitated the British Embassy in Antananarivo with the organisation of a tree planting event in March 2023 with a number of NGOs, hosted by the British Embassy.

3. Project progress

3.3 Progress in carrying out project Activities

0.1 Undertake annual population surveys of key species Alaotra gentle lemur

In March 2023, we were able to undertake a range-wide survey of the Alaotran gentle lemur using infra-red detection of lemurs through drones, for a reliable population estimate (which had previously been based on highly limited canoe surveys). After several years of trials to undertake the survey (constrained by the Covid-19 pandemic, drone technology and disturbance levels), we were able to undertake this infra-red based survey over 10 days. There are some protocols to be adjusted, but the first robust, range-wide survey of the Alaotran gentle lemur will be undertaken in Y3 (with co-funding from Darwin Innovation fund).

0.3 Undertake annual assessment of marsh quality and area reforested

The use of the fixed-wing VTOL drone, which has a long duration of flyby capability, allowed us to collect a comprehensive photo library of the marsh and the areas to be reforested. These photos were processed using an imaging software called Pix4Dmapper or Agisoft Metashape (Figure 2). We will use this map to inform future monitoring, deploy additional patrols if needed and monitor reforested marsh areas. We also have access to satellite data which will be used to monitor reforested areas at annual intervals. We are developing the methodology to identify the regeneration of seedlings both at the marsh level and also at the watershed level, which will include georeferenced photographs and drone and satellite data.
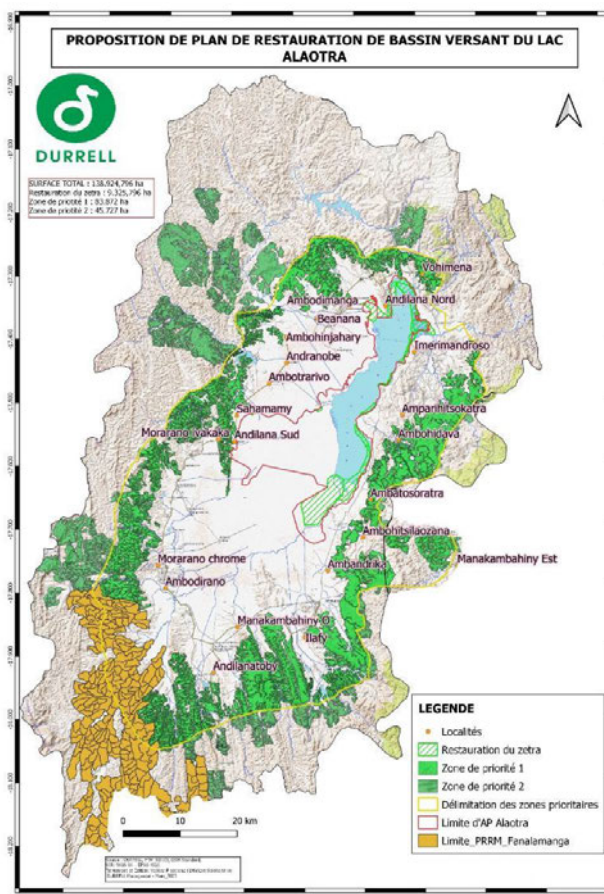
Figure 2: Orthomosaic map of bandro habitat

Figure 3: Map of priority reforestation zones in Alaotra

1.1 Produce a map of the Alaotra watershed and, together with key stakeholders, identify priority areas for marsh restoration and land reforestation.

In Y2, a map of priority areas for reforestation of the PA Lake Alaotra watershed was developed with stakeholders during a participatory mapping workshop. 39 local, regional, state, environmental NGOs and DREDD authorities were involved. From this, 83,872 ha of land to be reforested has been identified as a priority given the statue of the land its accessibility, and its level of degradation, in addition an area of 9,325 ha has been delimited as a priority area for the restoration of marshes.

1.2 Establish nurseries in 6 villages in FY2 and 5 more villages in FY3

As agreed in a change request in Y1, we adopted the direct sowing method in Y1 and would establish 6 nurseries in Y2, and 5 nurseries in Y3. During Y2; 6 nurseries have been set up in the villages of Morarano, Vohimena, Analanomby, Vohimenabe, Vohibola and Vohitraivo. These nurseries will produce up to a total of 176,000 seedlings.

1.3 Train local communities in the maintenance and care of nurseries

Fourteen nurserymen from six villages were trained on the preparation, installation, care, and maintenance of the nursery. The training was provided by technicians from Durrell and its partners, namely DREDD and the NGO Graine de Vie.

1.4 Undertake weekly nursery maintenance

After the installation phase of the nursery, maintenance activities were carried out in 36 interventions to perform relining, weeding, reclassification, and cutting of the emergent root.

1.5 Undertake annual tree planting

During Y2, we used seedlings produced from nurseries installed in the six villages. These seedlings covered a total of 164 ha of land including 9 ha in Morarano, 23ha in Vohitraivo, 44 ha in Vohibola 33 ha in Vohimenakel/Analanomby and 55 ha in Vohimenabe. Durrell along with partners "Graine de Vie" and DREDD delivered training through reforestation committees established amongst the local community. Through these committees, people were trained in seedling production through nurseries, the technique of holing, planting, and protection of the reforested area. Over three months, 200 people per day were hired from Fokontany Morarano, Analanomby, Vohimenabe and Vohitraivo, meaning a total of 390 people were involved in the direct planting activity (Annex 5.1-5.5). In total 164 ha of land identified for reforestation was planted in Y2 (Annex 4).

1.6 Monitor planted areas

Protection of the reforested area is undertaken by forestry committees - six VNA (Vaomeran'ny Afo) with 50 members who will patrol and monitor all reforested areas to prevent the threat of fire and presence of livestock. Signs have been installed and protection of seedlings has been put in place. Six collaboration agreements on reforestation and its protection have been set up and accompanied by the installation of local regulations (DINA) for each village around the reforested area. A total of five DINA have been established and signed between the community, the authorities, the DREDD and Durrell to ensure the sustainability of the reforested area against fire and pastoral activity. A total of 160 signs on fire and herbivore defence have been installed around the reforested areas to deter the setting of fire and passage of livestock. 46 patrols were carried out in the reforested area from Y1 (Ambohidavakely). No pastoral activities took place and the threat of fire was avoided.

50 ha of the reforested area in Y1 was hoed and replenished (replacement of dead individuals) to increase the survival rate of seedlings to cover the entire area. Whilst the direct planting method of Y1 showed initial success at the last point of reporting, the survival rate over the year was between 40 to 45%, lower than the survival rate from the nursery approach experienced by Durrell in previous years. However, we were able to mitigate this in the 50 ha planted in Y1 through refilling in Y2 and will continue to do so in Y3.

We cleared 164 ha of the area reforested in Y2 hoed to avoid invasion of rats and competition with other plants and similar monitoring will take place in Y3.

Output 2:

### 2.1 Plant 25 ha phragmites reed each year

We exceeded planting targets this year, planting 44 ha compared with the planned 25 ha. The restoration of the marsh, which is important habitat for *Hapalemur alaotrensis* as well as an important waterbird breeding area, was carried out by the VOIs with the effective participation of schoolchildren, local authorities such as the Chiefs of Fokontany, the Mayor and the Deputy Mayor of the commune. The period for the implementation of this restoration activity is between the months of September and December 2022. During Y2, 44 ha of *Cyperus madagascariensis* and *Phragmites communis* have been planted (Maps 1 and 2); including 29.56 ha in Analanomby, 2.71 ha in Vohimenakely, 7.551 ha in Vohitsara, 1.168 ha in Andreba station, 2.416 ha Angoja and 3 ha in Ambohidavakely.
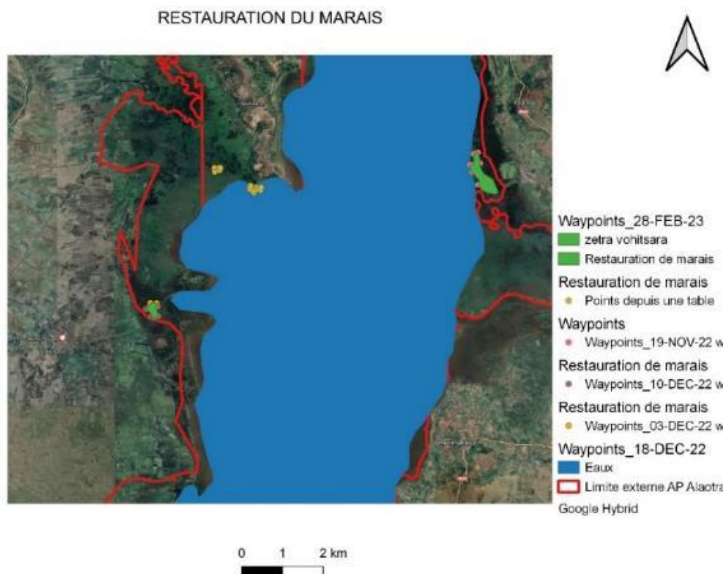
Map 1
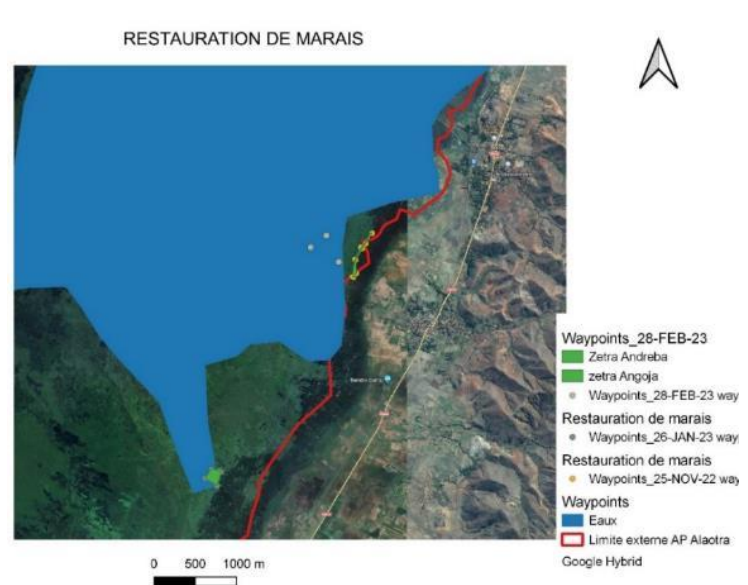
Map 2

The number of participants varied between 81 and 418 over a 10-day period. The survival rate of the planted marsh was high for the majority of the villages; however it is low for the villages of Vohitsara and Angoja because of the delay in the arrival of rain in this area. We planted more than 25 ha for Y2 to complete the unfinished area in Y1 and we will restore 25 ha in July-October 2023. The location will not rule out the map developed at a meeting of 39 people represented by the municipalities, the Chief of Fokontany, Tangalamena and VOI member around the AP Lake Alaotra. This allows us to collect information on the area to be restored in the PA and in the catchment area ('Bassin Versant') outside the Lake Alaotra PA to achieve the project objective (Figure 3).

2.2 Undertake water hyacinth clearance annually

During Y2, 5.481 km of canal were cleaned, which represents 109.6% of the agreed target. The distribution of the cleaned canals is as follows: 3.775 km of tourist circuits located in and around Sandro Park, 0.5 km of canal used by patrol boats in Vohimenabe, 0.25 km in Vohimenakely and 0.956 km in Anororo. This activity was in collaboration with the VOIs and the guide association whose number varies between 7 to 27 participants for 15 days. In Anororo, the Municipality itself has hired two people to monitor and maintain these canals. In Andreba station, these commitments were fulfilled by the fishermen.

The removal of water hyacinths from the two satellite lakes east of the village of Andilana south took place in July-August and December 2022. This part of the work was carried out by local people ranging from 27 to 111 members of VOI and fishermen's association. The deadline for completion of this work is 18 days. In total, 18 ha of the lake area occupied by *Salvinia molesta* have been cleaned. For this, 14.07 ha were cleaned in Lake Bezafo and 3.937 ha in Lake Amparihilava (see Map 3 below). The alien plants removed were used to manufacture organic compost. In this case, 3,000kg of compost were made in by members from two FFS groups from Andilana South.
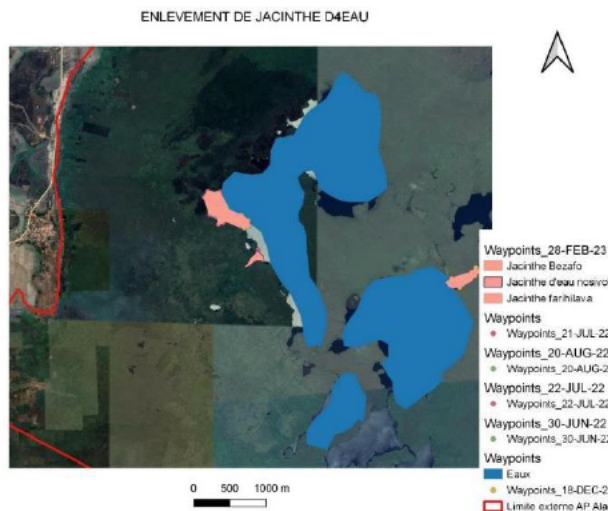
Map 3

Output 3:

3.1 Undertake a capacity and training needs assessment across all COBAs

This was completed in Y1 of the project.

3.2 Deliver training to COBA members based on results of assessment (FY2)

Y2 of the project was focused on the implementation of the training plan which was developed following the results of the competencies assessments conducted in Y1.

A total of 301 Board members from the 33 VOIs and from Alaotra Rano Soa were trained in the 9 key competencies from May 2022 to March 2023, namely:

	Planning, management, and administration
PPP 02	Establish regular and systematic planning and monitoring of management activities.
ORG 01	Ensure establishment and implementation of participation and good governance.
ORG 02	Association management of the community organisation.
FRM 01	Manage the financial resources of the organisation.
CAC 01	Maintain effective communication and good working relations with stakeholders and partners.
CAC 02	Organise and conduct presentations and meetings at local/regional level.
CAC 03	Identify and address interpersonal conflicts.
APC 01	Make effective decisions.
APC 02	Demonstrate commitment to transparency and participation.

An additional 87 VOI members received law enforcement training (LAR 02 Provide information to protected area users about laws, rights and regulations affecting a protected area in the competence group Applied Protected Area Management) which took place in January and February 2023. It was delivered by the representatives of the ministry MEDD and of the DREDD Alaotra Mangoro.

3.3 Undertake an evaluation on effectiveness of training to COBAs

For each training, pre and post training evaluations undertaken. The evaluation will take place in Y3.

3.4 Undertake assessment of infrastructural and equipment needs for ARS and COBAs in FY1

This assessment took place in Y1 and in Y2 the project addressed the needs of this for the operation of the two ARS offices. Currently the two completed offices are operational and used for the monthly meeting of the members of the ARS offices.

3.5 Construct and equip 4 local association offices for ARS and COBAs

Two offices have been completed and are equipped with two desktop computers, two printers, four tables, 14 chairs and two storage cabinets. We proceeded with the construction of these two offices in the area of Amparafaravola and Imerimandroso since these areas represent the place where we easily found land for construction. Previously, these two offices were simple meeting rooms, but when members realized that the office also needed good security, we asked for an additional budget to reinforce security with protective grids for the eight windows and four doors of these offices. We took advantage of repainting the interior and exterior walls as well as the windows and doors of these buildings. Although we made great efforts to find land from the people who should be able to give us in the second year of the project, it was difficult to find land to build the two remaining offices. It was only at the end of the second year that our state partner, the DRAE, promised to give us land and now we are preparing the collaboration. It is important to note that the ARS headquarters need to be central in each area to facilitate access and meeting of members.

3.6 Develop a standardised system for monitoring fishing in conjunction with fishing federations.

The collaboration with DRPEB continued during Y2. Meetings with DRPEB and the Federations were held every three months for the coordination and follow-up of activities. The census of fishermen working inside the PA Lake Alaotra was also completed. The total number of fishermen registered is 3224 and they are grouped into 97 associations. Six illegal nets "Arato lay" were seized by the members of the Federations and the CFL under the support of the DRPEB in the part of Morarano and Analanomby. To support their efforts to abandon illegal tools, the project exempts tools from fishing. The Prefect has set by the minimum catch size and the prohibition of fishing equipment in the region. The decree orders the District Chiefs, the Regional Director of Fisheries and Blue Economy Alaotra-Mangoro, the Group Commander of the National Gendarmerie Alaotra Mangoro, the Regional Director of Public Security of Alaotra Mangoro, and the Mayors to charge each as far as he is concerned with the application of this decree.

3.7 Carry out regular monthly meetings with ARS

During Y2, there were 12 monthly meetings of ARS board members. ARS headquarters in Tanambe, Amparafaravola, Ambatondrazaka and Imerimandroso hosted these meetings monthly. The President of the ARS and the Secretary General coordinated this meeting with the objective of overseeing the activities of ARS. About 15 people representing the Watersheds Federation, the Water Users Federations, fishermen and the Marsh Federations meet each month to do the monthly report. For the two completed ARS buildings, these rooms can be used to host the meeting.

3.8 Undertake annual monitoring of fishing in the lake

Seven monitoring and control missions were carried out by the DRPEB, the Fisheries Federations and the Gendarmerie to raise awareness, the fight against the taking of small fish and the use of illegal fishing gear. As a result, 300kg of fish were seized during the closure of the fishing season for the year 2022 including 150kg for the first month, 97kg in the second month, 53kg in the third month. During the closure of the fishery (between October and December 2022), 13 representatives of the Federations worked closely with the DRPEB for fisheries surveillance. They dispensed badges delivered by the DRPEB team. Annex 4H is a summary report from DRPEB on the closed fishing season.

3.9 Undertake annual assessments of management effectiveness of Alaotra PA

Each year, according to the statute of the ARS, the members of each zone hold a General Assembly (GA), to make an annual assessment of the conservation activities of the Ramsar site including the PA Lake Alaotra (watersheds, water users, marshes as well as fishermen) as well as awareness on climate change. ARS members are represented by 200 members grouped in

four zones. During the evaluation, each activity reported on the challenges and successes of Ramsar site conservation at the level of each member association. As a result, we have the 2023 annual workplan "Plan de Travail Annuel", which focuses on strengthening marsh plantations (165 ha), cleaning up to 76 km of drains in rice fields, reforesting 200 ha and seizing illegal equipment used by fishermen, as well as illegal exploitation of small fish. The commitment to find land for the construction of the two ARS offices is also one of the biggest challenges for members. We also supported ARS and associations through the development of 17 sign boards delimiting the protected area (design submitted for printing and will be erected in Q1 Y3).

A change request in Q3 2022 granted the undertaking of an R-METT Assessment (Ramsar Management Effectiveness Tracking Tool) for Alaotra. A review of the management effectiveness will be important for planning and reviewing management for the RAMSAR site for ARS, community associations, Durrell and other stakeholders. There has only ever been one RMETT carried out of the Alaotra RAMSAR PA (in 2018), whereas guidelines state that the assessment should be done every 3 years. Therefore, after the ARS GA, competent authorities such as local authorities, the Regional Directorate for Environment and Sustainable Development, the Regional Directorate for Fisheries and the Blue Economy, the Regional Directorate for Agriculture and Livestock, federations and NGOs working in the Alaotra Ramsar Site met for the R-METT evaluation of the Alaotra Ramsar site in Y2Q4. The aim is to be able to standardize the evaluation of the management of Ramsar sites through the management effectiveness monitoring tool and to have the necessary documents for protection. The following is a summary of the evaluation score (full score Annex 4I):
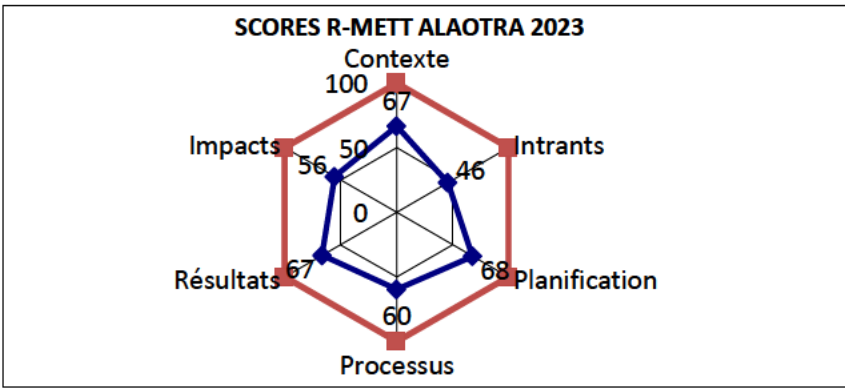

Figure 4: RMETT Evaluation 2023

Co-funding has been secured from Jersey Overseas Aid (JOA) to undertake a PAP (People Affected by Protected Areas) in 2023. It has become clear that the current PAP is outdated and does not reflect the true extent of communities affected by the creation of the PA, or the nature of effects felt.

3.10 Compile annual records of illegal activity from local associations and Government

To have good quality data from the patrol officers of the PA Lac Alaotra on the reporting of the existence of violations in their territory, we strengthened the capacity of the 105 patrollers in August 2022. Among the people trained, this included the four Presidents of Marsh Federation, the 19 Presidents of VOI and the 82 Community Forest Patrollers in the four areas around the lake.

During Y2, 47 grievance or full reports and/or complaints against marsh fires and land clearing in the area within the Protected Area from the CFL or VOI were received at both the Durrell office and the DREDD office. From these reports received, 28 raids were organised to ascertain crimes when deemed serious breaches. From these raids, there were 15 follow up investigations at the DREDD office level by the OPJ (Judicial police officer), who were then presented before the prosecutor's office of the Court of Ambatondrazaka. The result is that 11 offenders are in jail on a warrant of committal, and five are out on bail (Liberté Provisoire)

Table 1: Summary of Law Enforcement Incidents and Responses in 2022

Village	Type of offence	Note
Ambodivoara and Sampananefatra	Land clearing, fire followed by rice planting and transformation of marshes into rice fields	12 offenders were brought before the Public Prosecutor's Office, 10 of whom are on a warrant of committal or arrest warrant and 2 Provisional Liberties or LP. The verdict came out on January 19 that the 12 offenders were one year of suspended imprisonment and an almond of 4,000,000 Ar per person. And there are also two other cases going on and a few offenders in that case are repeat offenders.
Imerimandroso and Vohitsivalana	Rice planting and transformation of marshes into rice fields	6 people summoned for the investigation to the Officer of the Judicial Police of DREDD of which 4 are worked at the beacon limit after the verification of the geographical coordinates their rice fields in relation to the PA and they were released; and the 2 were put under arrest warrant after deferment by the DREDD officer. Case ongoing.
Vohimenabe and Vohibola	Clearing followed by rice planting and transformation of marshes into rice fields	9 offenders were brought before the Public Prosecutor's Office, including 4 arrest warrants and 5 LPs who did not have the perpetrator but workers. The case is ongoing.
Belempona	Swamp fire	2 the firelighters have a warrant for their arrest. The case is ongoing.
Vohitsara	Rice planting and transformation of marshes into rice fields	File of 4 persons to be sent to the Tribunal. Case ongoing.
Anororo	Land clearing, followed by rice planting and transformation of marshes into rice fields	2 offenders were brought before the prosecutor's office and all had a warrant for their arrest. Case ongoing.
Andilana South	Swamp fire	An offender was brought before the prosecutor's office and he had a warrant for their arrest. Case ongoing.

Output 4: Approximately 2500 people across 12 villages are supported to drive greater benefits from their agricultural and natural products whilst utilising natural resources more sustainably.

4.1 Identify, create and structure FFS groups in each association.

In Y2, 50 FFS groups were created consisting of 529 beneficiaries including 319 men and 210 women. The process of creating an FFS group began in May 2022 for off-season cultivation and in September 2022 for long-season cultivation. For each village, a mass meeting was held to raise awareness of the project and to identify the committees that will validate the lists of beneficiaries. These committees are constituted of the fokontany chief or sector chief, VOI president, Tangalamena, Local Forestry Committees, etc. To facilitate field activities and to facilitate communication between beneficiaries and project technicians, 5 new farmer leaders have been identified.

4.2 Train and support FFS groups in techniques.

In Y2, 523 FFS members including 210 women were trained on the basic principles of agricultural technique to cope with climate change, which are mainly:

- soil fertility management, intercropping and crop rotation techniques;

- organic fertilization (such as composting, vermicompost) and biological pest control;

- improved cultivation techniques such as row sowing, use of resistant seed varieties, crop maintenance, etc.

Each trained beneficiary received technical sheets to refresh their knowledge during the practical and classroom training. The 12 Lead Farmers received special training in the practice of agroecology and the way of working as Lead Farmers. 12 permanent school fields (one per village) were installed to show beneficiaries the practice of agroecology. An exchange visit was organized in March 2023 for the 12 lead farmers and 67 other beneficiaries to visit agroecological practices at the GSDM demonstration site in Ambotresana and at the Alaotra agricultural college.

4.3 Implementation of agricultural techniques

Agricultural surveys were carried out for the identification of crops favourable to each village before the creation of the FFS groups. The results of these surveys allow us to deduce the following crops: beans, onion and cucumber (for off-season cultivation); rainfed rice, rice irrigated using RMME (Rice fields with poor water control) and RBME (Rice with good water control), peanut-maize association and maize bean association (for long-term cultivation).

In Y2 173.3 ha was cultivated in Alaotra: onion 0.106 ha, beans 0.650 ha and cucumber 0.240 ha (off-season); rice in MMR or direct seeding 1.390 ha, irrigated rice 3.280 ha, rainfed rice 0.310 ha, maize alone 0.210 ha, groundnut association maize 7.490 ha and bean-maize association 0.8 ha (main season). The quantities of inputs and agricultural equipment to be supplied to each group are deduced by techno-economic studies of each crop and which also make it possible to deduce the profitability of each crop. For the application of the cultural technique trainings, the beneficiaries received seeds certified adapted to each area and also resilient to climate change. These seeds are of the variety IRAT 200 for maize, Valencia for peanut, IR-5-2 for beans, MARKETER for cucumber, X1648 for rice in RMME, NERICA 4 for rainfed rice, X265 and MK34 for irrigated rice and Violet de galmi for onions. The total farm inputs and equipment supplied are summarized below: Agricultural inputs: IRAT 200: 883 kg; Valencia: 5936 kg; IR-5-´2: 1430kg; MARKETER: 2.4 kg; X1648: 1242.5 kg; X265: 361 kg; NERICA 4: 233 kg; MK34: 459 kg; Galmi violet: 3.2 kg Agricultural machinery (number): Seal: 162; Sprayers: 209; Watering cans: 20; Angady: 289; Sarcleuse: 64. Each village received 2 kg of earthworm for vermicompost and two breeding ponds per village For producer organisations, they received 45 sprayers, 8 seeders and 30 plastic cylinders

4.4 Annual agricultural surveys

Evaluations of the Y1 agricultural campaign were made for the 12 villages, assisted by representatives of DRAE Alaotra. The evaluation was done with the use of individual cards to preserve the influence of other members' ideas. The form to be completed by each member contains self-assessments in relation to the training they have received and in relation to the needs for training, evaluation of technicians, quality evaluation of inputs and materials distributed and performance evaluation.

4.5 Establish VSLA groups in target villages and train members in VSLA process.

During Y2, 25 new VSLA groups were created, equipped and trained on the 8 VSLA modules in 8 villages: Ambatofotsy, Ambahiboho, Ambohidavakely, Ambatosoratra, Morarano, Marovato, Analanomby, Vohimenakely and Vohimenabe. With 340 members in total (298 women), which represents 87% of the members.

To ensure the scaling up of the approach and the local assistance of the new groups, 17 village agents from 9 villages (Ambatofotsy, Ambahiboho, Ambohidavakely, Ambatosoratra, Morarano, Marovato, Analanomby, Vohimenakely and Vohimenabe) were identified and trained on the 8 modules of the savings and credit system. As a result of this training, these officers in turn created and trained 16 of the 25 VSLA groups. VAs will also ensure the sustainability of the approach, i.e. ensure continuity and sustainability after project closure. In order to broaden their perception of the system and share each other's knowledge, 133 members of the new groups of 2022 made an exchange visit with the former FITIAVANA and TARATRA groups in Vohimenakely. It shows that each member now has a more palpable vision of the benefits of the system and the relevant techniques to have more profits. These new groups are now motivated and determined to move their group forward.

4.6 Monthly meetings with VSLA groups to track progress through the full cycle

We continued to meet VSLAs monthly to monitor progress and provide support where needed. Of the ten VSLA groups established in 2021, eight groups are currently functional. The two groups from Vohibola village were dissolved because of the breach of trust between members. VSLAs operate in a "cycle" that lasts approximately 9 to 12 months and after which accumulated savings and loan profits are distributed among members in proportion to the amount they have saved. Of the eight functional groups, seven groups have done the end-of-cycle sharing and are currently starting the second cycle. The last group, AVOTRA of Ambatofotsy will share the funds in April. The seven groups were able to accumulate 9,886,200 Ariary in savings, with a net profit of 1,798,300 Ariary (18%) during the first cycle. This profit is due to the use of the fund for credit that is repaid with an interest rate that varies from 5% to 10% per month. During this year, 286 loan applications were granted at the level of VSLA groups, representing a total amount of 8,141,400 Ariary (82% of the total amount of savings). The latter have used 80% of their profit in agricultural work and the rest helps to meet the daily needs of the family (purchase of kitchen utensils, purchase of primary healthcare products etc.). The annual savings capacity of members ranges from 28,000Ar to 242,000Ar. Concerned about the financial management of these VSLA groups, we trained 5 groups (Taratra, Tsiky mioty, Faniry, Fahombiazana and Mamiratra) or 80 members in financial education. The objective is to make people know how to best manage your money according to your life goals and your economic context.

4.7 Establish and run training for basket weaving

During Y2, 17 basket making groups were created in eight villages including Ambatofotsy, Ambahiboho, Ambohidavakely, Marovato, Analanomby, Vohimenakely, Vohimenabe and Vohitraivo. These groups bring together 252 women basket weavers. Recently trained by a professional basketry trainer, these groups have acquired skills on the basics of weaving, coloring and basketry in general. In addition, these women basket weavers were provided with equipment such as Rafia, coloring powder, pot, bowl and bucket. Because rafia and coloring powders are too expensive on the local market, these donations will help these groups to better develop this sector.

Table 2: Key data on basket weaving groups across Alaotra

Site	Nom du groupe	Nombre des membres	ROFIA (kg)	POUDRE COLORANTE (kg)	MARMITE (unité)	CUVETTE (unité)	SEAU (unité)
AMBATOFOTSY	FITIAVANA	15	58,5	9	3	4	4
AMBATOFOTSY	MAMIRATRA2	15	58,5	9	3	4	4
AMBAHIBOHO	EZAKA	10	60	9	3	4	4
AMBAHIBOHO	VONONA	10	60	9	3	4	4
AMBOHIDAVAKELY	MIAVOTRA	15	57	9	3	4	4
AMBOHIDAVAKELY	FIAREMANA	10	57	9	3	4	4
MAROVATO	ZORO MAINTSO	23	57	9	3	4	4
ANALANOMBY	EZAKA	18	58	10	4	5	5
ANALANOMBY	MAMPIRAY	24	58	10	4	5	5
VOHIMENAKELY	TANJONA	17	57	10	4	4	4
VOHIMENABE	FANOMEZANTSOA I	15	57	9	3	4	4
VOHIMENABE	FNOMEZANTSOA II	15	57	9	3	4	4
VOHIMENABE	AVOTRA	18	57	9	3	4	4
VOHIMENABE	MIRAY	15	57	9	3	4	4
VOHIMENABE	FITAHIANA	12	57	9	3	4	4
VOHITRAIVO	FANEVA	10	57	8	4	4	4
VOHITRAIVO	MAMIRATRA	10	57	8	4	4	4

4.8 Take members of the FFS and women's basket weaving associations groups to rural fairs around Alaotra

In August 2022, two representatives including a woman from one of our beneficiaries (FFS and women basket weavers) participated in the national fair "Fier Mada" in Antananarivo. They brought samples of their respective products such as rice, peanuts, and basketry products.
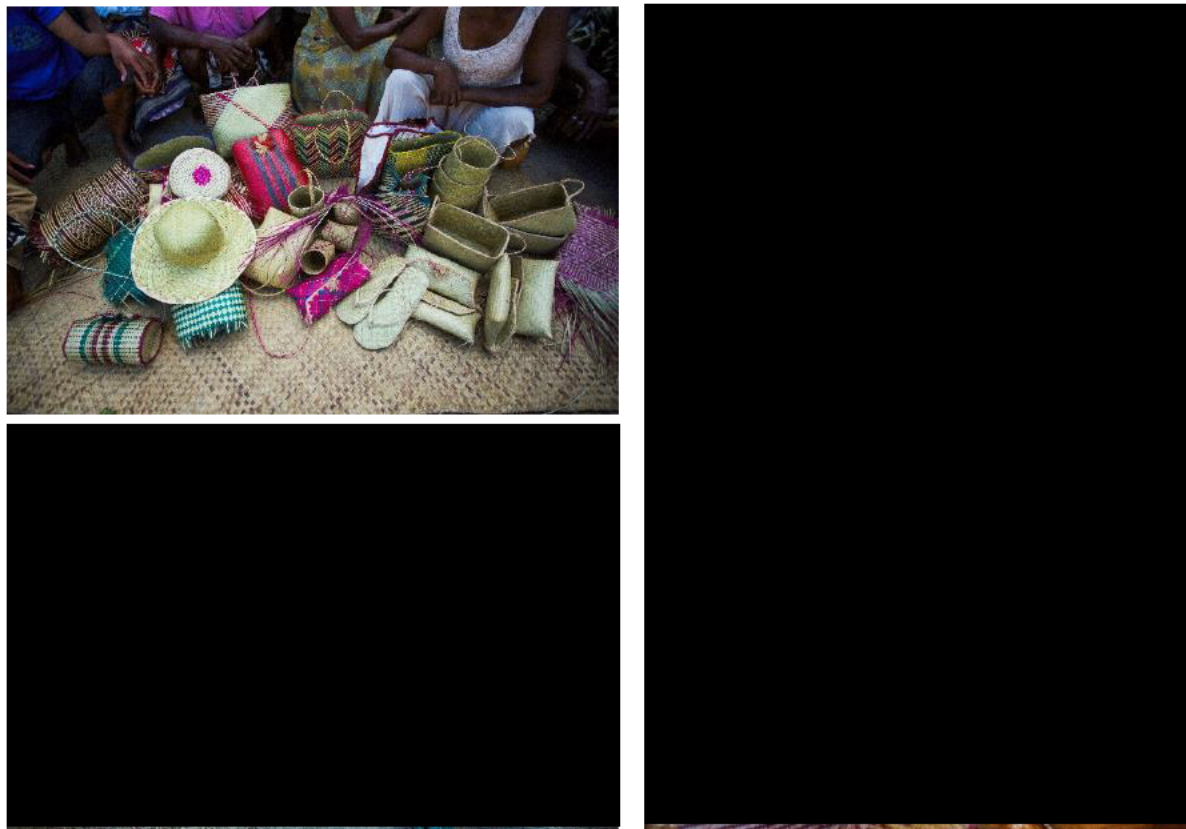

Figure 5: Basket weaving groups supported this year

4.9 Develop market value chains for locally produced products

Three producer organisation groups were created to optimise their production: 1 groundnut producer group with 30 members from which their products will be sold to local groundnut oil producers and 2 chilli producer groups which already have an aggregation contract with MCI (Madagascar Consulting and Ingredients), with 17 members each making a total of 34 chilli producers. For the two chilli producer groups, the total cultivated area this year was 2 ha, with a target of 1.8 tons of pepper for 2023. In the agreement with MCI, the kilo of chili pepper is set at 20000Ar (£4).

For PGs in the groundnut sector, the objectives for the project are to optimize their production and improve the quality of products so that the selling price will be beneficial for each household. The identification of these PGs comes from FFS, who are well-motivated households looking for opportunities. The surface area set up by these PGs is 8 ha. The unit price of the product is not yet fixed but varies according to the quality of which we hope to sell 2800Ariary per kilo (usually 1500Ariary).

Output 5: Understanding of carbon sequestration capacity of Lake Alaotra's watershed, including lake and marsh, is improved to inform development of external investment opportunities for sustainable habitat restoration

5.1 Produce a high-resolution map of Alaotra watershed

This is included in this report as Map 4.

5.2 Confirm academic partner to support blue carbon study

The project has been agreed between Durrell and the Institute of Zoology (IoZ) under the supervision of Dr Clare Duncan (Research proposal Annex 4D). A Masters student was interviewed and identified in Y2 with the appropriate skills and interests, and will visit Madagascar in Y3 to undertake the study.

5.3 Identify Malagasy Masters student to undertake study

Durrell's Head of Species and Research is leading discussions with the University of Antananarivo to identify the Malagasy student who will undertake the study, whose placement will take place concurrently with a student from the UK.

Activities 5.4-5.7 will take place in Y3.

3.4   Progress towards project Outputs

The impact of the reforestation and marsh replanting on the improvement of the environment and ecosystem service is not measurable only after 2 years. However, we have exceeded **Output 1** target of 120 ha per project year (264 ha to date). Map 4 (above) shows these areas (and includes reforestation from Darwin and co-funding) along with replanted marsh areas. This is also included as Annex 4Bi.

We are also on track to meet **Output 2** objectives: 5.7 km of channels were cleared of invasive aquatic species this year (in addition to last year's 5.2 km) This year included 3.7 km of tourist routes to improve access, and the other areas allowed access for patrols. In addition, 18 hectares of *Salvinia Molesta* were removed, and so far in the project we have restored 51.9 ha of reed phragmites and are on track to meet our 75 ha target by Y4.

Activities under **Output 3** are on track to meet the target by the end of the project: 305 COBAs have been trained this year in two different training modules. In order to assess the area of marsh area being managed by COBA, we are in the process of collecting and assessing management transfers (and supporting the process of management transfers through our work). Of the 33 VOIs, 16 have already obtained the management transfer documents. These 16 VOIs manage approximately 53.27% of the entire marsh. the 17 VOIs that do not yet have the management transfer documents could manage 46.62% in case their management is carried out. In Y3, we will support the renewal of these 16 existing VOIs and also to carry out the transfer of management or ritualization of the 17 VOIs that remain. Durrell will continue to work on this beyond the lifetime of the Darwin project. In addition, we have developed a standardised monitoring system for illegal fishing and continued to train patrollers, leading to 44 reports of illegal activity and 11 people on warrants of committal for illegal marsh clearing.

Output 4 is reaching a wide scope of the population across 12 villages - 33 VSLA groups have been created and 15 more will be created before the end of the project. The project has trained 252 basket weavers (all female) within 17 groups who will continue to be supported with basic materials, additional skills and access to markets. Our support to conservation agriculture in relation to the delay in the implementation of the Y1 project, we propose to adjust the number of households to 2,000 to ensure the achievement of the objectives. Currently we are at 1,512 households; the constraint on the ground is the number of households with the criteria for targeting our activities this year met our target for Y2 (we reached 529 households this year). To date, we have supported the farming of 301.27 ha under conservation agriculture techniques (well on track to reach the outcome target of 360 ha). Our agricultural surveys (taken at the end of Y1) monitored the effect of the project at household level by recording production and yield data and comparing it with regional yield. This agricultural survey found that the majority of households were able to extend their cultivated area and other income generating activities.

Whilst we are seeing good progress in activity roll out, we have currently reached 1,512 households with activities, and we are unlikely to reach 2,500 in this area due to a number of households not meeting criteria for targeting of activities. We would therefore like to request a revision of this target to **2,000.**

Activities under **Output 5** will take place in Y3. Academic partners have been identified, the research proposal is approved and the plans are in place.
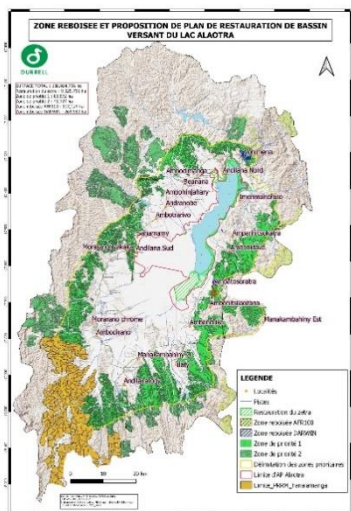
Map 4: Reforested zones to date across the Alaotra watershed (trees and marsh) per donor

3.5 Progress towards the project Outcome

Enhanced local stewardship is reducing negative impacts on Lake natural environment and improving well-being of c.15,000 people across 12 villages.

0.1 250 ha reforested by end of project: We are able to report that we have met indicator 0.1 through reforesting 269 ha to date in the Alaotra watershed. We will continue to support community nurseries for further planting in Y3 (Map 4 shows the scale of the challenge ahead).

0.2: Priority Gentle Lemur habitat: We are working towards this by both replanting the marsh (44 ha replanted by end Y2) and clearing 10 km of channels. By supporting COBAs to grow their capacity to manage the watershed through direct management transfers (we hope to renew 17 by end of project), this is working towards the regeneration of gentle lemur habitat. We will be able to understand progress through indicators 0.2 (gentle lemur habitat) and 0.4 (marsh burning) through time lapse satellite data at the end of the project.

0.3 No decrease in gentle lemur population during project (2019 baseline: 2,000-2,500 individuals): A new more effective survey method was trialled in March 2023. Although we have experienced issues with the methodology of the new drone survey technique, this indicator is still appropriate as we are now in a position to conduct a full range-wide survey in Y3 and we will be able to use this data to show any changes in lemur populations compared with the 2019 baseline.

0.4 Marsh burning does not exceed 500Ha/year in each year of the project (2014-2019 average 500Ha/year): This previous data was based on the number of light points recorded each year by the VIRS SVC12 Satellite (in 2021 there were 201 light points, and 238 in 2022). It is from this which we calculated the levels of marsh burning. However, the data is very top level and therefore we will we use drones in order to understand in more detail about the amount burned. We will compile this information at the end of the project.

Progress against outcome indicators **0.5 -0.8** will be determined by the household survey in Y3, measured against the baseline of Y1. The headline figures of the baseline are as follows - the full baseline household survey report is attached as Annex 4E.

0.5: Subjective well-being indicators from baseline household survey:

Global Person Generated Index: The GPGI asks people to list the five most important elements for their well-being and to rate their level of satisfaction with each status. From this information, an overall well-being score is calculated on a scale of 0 to 100. Households in Alaotra scored slightly above average (over 65%).

Life satisfaction: For the question: "How satisfied are you with your current life?" , the response of 75% of households in Alaotra was between "not at all satisfied" and "somewhat" satisfied (Figure 7).

Joy and happiness: On the question: *"How happy did you feel yesterday?"*, almost half of households at 46% expressed satisfaction with their level of happiness with 37.5% having enjoyed their happiness "moderately" and 8.6% satisfied with their happiness "very".

Regarding the question *"How worried/anxious did you feel yesterday?"*, 28% of households in Alaotra responding to feeling very or moderately anxious the day before.

0.6: Food Insecurity: Household Food Insecurity (HFIAS) An overall score is calculated on a scale of 0 to 27, the higher the score, the higher the household's food insecurity. This score is used to classify households into one of four levels of food security: food security, mild food insecurity, moderate food insecurity, and severe food insecurity. With a score of 7.1, households were not at risk of food insecurity However, only 17% of households were food secure, 14% were already mildly food insecure and more than half of households at 69% were food insecure.

The MPI score in the area of Alaotra is quite low: less than 0.25%. Further information on Adequate Food Supply Month (AFM,) and Food Consumption Scores are in the baseline household survey report.

0.7; Decision Making Power: For Alaotra, 75% of households interviewed felt they had the ability to influence decision-making at the community level. (Figure 11). Of those, 54.7% answered "yes very easily" to the question "*do you think people like you can influence decision-making in your community*?" And the rest said "yes but not easy".

0.8 Improved economic independence and resilience:

In the Alaotra Region, 41.7% of households belonged to a group or association. The majority of households interviewed in the Alaotra Region felt the benefits of being a member of an association in the form of economic benefit (by 64.5% of households) and solidarity (62.6%). These are strong baseline conditions on which to establish the 35 VSLAs, which since the start of the project, have amassed 9,886,200 Ariary in savings, with a net profit of 1,798,300 Ariary (18%) during the first cycle.

The year 2022 has had a positive impact on the life of the rural community in the eastern part of the Lake Alaotra Protected Area as 480 rural people have seen their lives change. They no longer need to resort to microfinance in the city to be able to provide for the family. Agricultural work is becoming easier and easier thanks to the financial means available at all times, which is the VSLA.

The support of the DARWIN project at the level of the 12 villages on farmers has reduced the burden for households at the end of the endowment of agricultural inputs. As a result, most households have been able to extend their cultivated area, which will lead to an increase in the production of each household, which will have an impact at the regional level. Section 1 details the level of agricultural outputs by beneficiaries since the start of the project (based on agricultural surveys).

3.6   Monitoring of assumptions

Assumption 1: No significant reduction in current level of political stability.

Comments: The current political situation in Madagascar is quite stable despite the existence of active opponents. They are mostly active in the media and on social networks. Many journalists and whistleblowers were still imprisoned. There are presidential elections scheduled for 2023, which risk changing the situation.

Assumption 2: Engagement with regional authorities continues to be productive.

Comments: The former Head of Region has been dismissed and replaced. His position on Durrell's interventions in relation to the zetra (marsh) clearing ban. But the Region's team remains collaborative whether during meetings and workshops or during field visits. This assumption remains relevant when thinking about Y2, as the region representative and the prefect are supportive of Durrell's interventions in the watershed through reforestation, the region and district

team remain collaborative and have contributed their support for reforestation and the protection of reforested areas.

Assumption 3: Continued community willingness to engage with and participate in project initiatives.

Comments: For reforestation, the commitment and participation of the community in reforestation activities made it possible to exceed results A2 (164 Ha). 200 people per day were involved in reforestation for 3 months even though this activity was carried out during the lean season. 1950 personnes bénéficiaires du Fokontany Vohitraivo, Vohimenabe, Vohimenakely, Analanomby, Morarano et Ambohidavakely ont participé au planting activities. The local authorities have always been present during all the reforestation days despite their heavy task at the level of their community.

Assumption 4: The project is able to engage with the Governments RFR project and it is continued over the forthcoming years so that land tenure via reforestation can happen for rural communities and people.

Comments: The project complements the government's RFR field project. There is no land problem noted during the second year of implementation of reforestation activities. The local authorities supported the resolution of the problems on the ground of reforestation.

Assumption 5: Seed survival in nurseries is not compromised by external events beyond our control e.g. disease, extreme weather.

Comments: For this second year, the implementation team proceeded with a more conventional approach that uses tree nurseries. During Y2, 6 nurseries for 6 villages have been installed in Morarano; Vohimena; Analanomby; Vohimenabe; Vohibola. Vohitraivo who produced 176,000 seedlings in total. Despite the delay of the rain, the activity was a success.

Assumption 6: Environmental conditions do not change drastically to negatively impact growing seasons and crop productivity e.g. increased cyclone activity, lack of rains/prolonged drought.

Comments: During the last cropping season, there was a delay in the onset of the rains but the rainfall, once it arrived, was sufficient. However we did have to delay reforestation activities.

Assumption 7: Community members default on the commitments to the VSLA during the process.

Comments: The feasibility study concluded that VSLAs can be implemented in Alaotra. Additionally, a JOA-funded project that had already been in place since 2018 until 2022 was a success from the VSLAs

Assumption 8: Theft of project savings occurs during implementation.

Comments: The feasibility study concluded that VSLA can be implemented even if it does not exclude minor theft risks. In any case, there were no problems with theft in year 2.

Assumption 9: Academic partner for carbon content estimation remains committed to the project, or alternative partnership identified.

Comments: The search for the implementation partner for the estimation of the carbon content has begun this second year and research will be done in Y3.

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

The intended long-term impact of this project is that community-led management and restoration of the Alaotra Ramsar watershed are providing sustainable long-term benefits and services to people and wildlife and helping mitigate impacts of climate change. Specifically, this project will contribute to the reforestation of the Alaotra watershed which will, in time, lead to reduced erosion on the surrounding hills and a reduction in siltation in the lake, improving water quality for both people and biodiversity. The intention is that erosion is estimated to decrease within 5 years and the pressures and threats to the habitat of wildlife species such as Bandro, birds and aquatic animal and plant species of Lake Alaotra will be reduced.

In addition to the ecological and long-term financial impact of reforestation, the project will provide short-term financial benefits for local communities living in the watershed through financial tools

such as the establishment of VSLAs, which are being rolled out to provide income and financial security. This project has also contributed to the food security of surrounding communities through the Farmer Field Schools, which provide training in agri-ecological techniques and farming methods, also contributing to the soil restoration and ecological recovery of degraded habitat.

4. Project support to the Conventions, Treaties or Agreements

Through our reforestation and restoration work, this project has contributed to Madagascar's National Reforestation Program, which aims to reforest at least 40,000 hectares per year, by planting 164ha of trees and 44ha of marsh in Y2. The project has also built the capacity of Protected Area professionals, and involved local communities in conservation work (for example, this year, 390 people were involved in direct planting, 14 people from local communities were trained as nurserymen, 523 Farmer Field School members were trained in Climate Smart Agriculture techniques) which is contributing to Madagascar's National Development Plan target 5 – to enhance natural capital and build resilience to disaster risks.

The project has contributed to the Madagascar National Biodiversity Strategy and Action Plan's strategic objectives; 2 (recognise and integrate biodiversity values and benefits from sustainable use); 5,14 (protect and restore habitats and ecosystems); 11 (manage PAs more effectively); and 12 (improve the conservation status of threatened species). Improved enforcement in Output 3 (87 members of local associations received law enforcement training this year), and protection of reforested areas in Output 1 (160 signs were installed and 46 patrols took place this year), has contributed to more efficient management and governance of the forestry sector (Malagasy Forestry Policy). More efficient conservation adaptive management contributes to Madagascar's National Policy against Climate Change, Axis 5 (promoting research, technological advances, and adaptive management) and towards the UNFCCC. Through activities under Output 5, this project has also taken steps to improve understanding of the carbon storage capacity of Lac Alaotra marsh ecosystem and the surrounding forest, which will inform the next stages of Durrell's Rewilding Carbon initiative and generate knowledge which is valuable to global understanding of wetland carbon storage.

Lac Alaotra and surrounding watershed is a Ramsar site and Durrell serves on the National Ramsar Committee. This project promotes and enables the restoration and wise use of wetlands, and its effectiveness will be assessed using an RMETT assessment. The mapping of marshland and reforestation both for priority areas (completed in Y2 with key stakeholders) and to monitor marsh burning (0.3) will be key in feeding into the RMETT and to inform ARS's protected area management. The sustainable management of natural resources in tandem with economic development for rural communities has been improved this year through training 301 local association members in good governance (Output 3).

5. Project support to poverty reduction

Approximately 2,500 people in 12 villages will directly benefit from support from this project due to improved agricultural practices, creation of basketry products and small business acumen and financial management, improving livelihoods and wellbeing. A decrease in overfishing through improved application of fishing regulations and provision of appropriate fishing tackle will protect livelihoods of c.10,000 fishermen. Further income opportunities will be available because of community-led annual habitat restoration activities, e.g., hyacinth clearance, reed planting, reforestation. The combined project activities will begin to improve the well-being of c.15,000 people across 12 villages.

In addition to the ecological impact of habitat restoration, and therefore the indirect poverty reduction that will result from improved biodiversity outcomes, this project has also resulted in direct poverty reduction in the last year. Over three months, 200 people per day were hired for reforestation from Fokontany Morarano, Analanomby, Vohimenabe and Vohitraivo, meaning a total of 390 people were involved in the direct planting activity, of whom 42.8% were women. Fourteen people from local villages were trained as nurserymen, and 50 members of forestry committees have been protecting reforested areas through patrols.

This year saw financial tools rolled out to provide income and financial security. During Y2, 25 new VSLA groups were created, kitted and trained on the 8 VSLA modules in 8 villages: Ambatofotsy, Ambahiboho, Ambohidavakely, Ambatosoratra, Morarano, Marovato, Analanomby,

Vohimenakely and Vohimenabe. There are 340 members in total (298 women), which represents 87% of the members. This model, which is designed to be replicated, can be rolled out across the landscape as a sustainable means of access to finance for community members. Of the eight functional groups, 7 groups have done the end-of-cycle sharing and are currently starting the second cycle. The last group will share the funds in April. The 7 groups were able to accumulate 9,886,200 Ariary in savings, with a net profit of 1,798,300 Ariary (18%) during the first cycle. VSLAs have positively changed the standard of living of the poor rural community living near the Lake Alaotra Protected Area. Their purchasing power has increased considerably, the financial behaviour of members has changed (increase in savings), and each member of the VSLA groups have been able to provide for their family, especially during the lean season and period of inflation in Madagascar.

This project contributed to the food security of 523 FFS members, including 210 women, through training in agri-ecological techniques and farming methods which have contributed to the soil restoration and ecological recovery of degraded habitat. 50 FFS groups were created. The project has already contributed to increased potential for income for most beneficiaries from villages involved in the FFS intervention, as has been shown through an evaluation at the end of the Y1 campaign. This showed the extension of income-generating activities (livestock, other speculation, extension of cultivated area) which will subsequently generate more production compared to each year.

6. Gender equality and social inclusion

Please quantify the proportion of women on the Project Board[1].	35%
Please quantify the proportion of project partners that are led by women, or which have a senior leadership team consisting of at least 50% women[2].	25%

Participation in agriculture and the sale of crops is roughly equal between men and women. Alaotra Rano Soa's leadership is mixed with both men and women participating in decision making. Membership of the local associations (COBA) favours men (60%) and only 4 of 33 COBAs having female Association Presidents. Alaotra is the only Durrell site, and only one known to us in Madagascar, that has female patrollers reflecting the strong sense of duty and agency among women in contributing to environmental protection.

Under this project, we planned to increase levels of female participation in Farmer Field Schools to 30% by project end, and in Y2 we made progress towards this, with 40% female membership of all new FFS created this year. Women also made up 42.8% of people hired to carry out reforestation work in Y2. VSLAs are targeted at women because of their role in managing household income, and those that were created in Y2 are made up of 87% women.

Our approach is always designed to be accessible to all genders, which may include ensuring that training takes place at an appropriate time (of the day and season) to ensure that women particularly are able to attend and are not taken up with domestic or agricultural tasks which would prevent them from accessing project resources. Women made up 40% of the FFS training this year. Women also made up all of the 252 basket-weavers, a traditional livelihood activity for women, who have been supported with training and materials.

Co-funded work in the Alaotra landscape also includes providing access to all women in our focal communities with access to reproductive health, through quarterly visits by our partner, Marie Stopes Madagascar. Access to reproductive health provides women with increased choice about family size and their ability to plan this.

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[1] A Project Board has overall authority for the project, is accountable for its success or failure, and supports the senior project manager to successfully deliver the project.

[2] Partners that have formal governance role in the project, and a formal relationship with the project that may involve staff costs and/or budget management responsibilities.

7. Monitoring and evaluation

At the beginning of the project's implementation, before intervening in the villages, Durrell carried out a baseline survey. From this survey, a report called the 'baseline report' was produced for the Darwin Alaotra project (see Annex 4E). This report provided information and references to better understand the target intervention villages and to evaluate the progress made during the implementation of certain activities.

In addition, a monitoring and evaluation plan was developed based on the project's logical framework. Then, monitoring tools were developed with the related forms. Training was given to 5 field staff (the reforestation manager, the general secretary of Alaotra Rano Soa, the Socio-Organiser and the two agricultural technicians) for three days from 7 to 9 April 2022 in Ambatondrazaka, on the Project's monitoring and evaluation system and on how to fill in the forms and to use them on a tablet. The objective of the training was to enable the staff to use these forms and to collect monthly data from the activities and to collect from the technicians the monitoring forms already entered on the tablet, to process the data and to know the progress of the activities in relation to the related indicators. Specifically, a new monitoring form on reforestation was developed, as this is a new activity implemented in Alaotra within the framework of this project. These sheets are also used to fill in the quarterly progress table of the Darwin Project. In addition, field visits are carried out by the coordination team to see these achievements first-hand and to compare them with the data reported.

Improving collaboration with partners for information sharing among partners/stakeholders is an ongoing process and is at the heart of the project so that it can improve practice more widely among other stakeholders in Alaotra and Madagascar. We are in regular contact with the Direction Régionale du Développement Durable (DREDD), the DRPAB (Regional Directorate of Fisheries and Blue Economy, Regional Directorate of Agriculture and Livestock (DRAE) and the various NGOs (GSDM, Graine de vie, Marie Stopes Madagascar, etc.) to exchange information on the progress of the project and problems encountered, and the monitoring/reporting mechanisms in place for this purpose appear to be working well, as evidenced by the supporting documents attached to this report, meeting minutes from a number of partner meetings (Annex 4F) and our cooperation agreement with DRAE (Annex 4G).

8. Lessons learnt

We encountered difficulties in identifying Producer Groups as we had difficulty linking market opportunities with existing farmer groups. We had a target of 4 Producer Groups or the 12 villages but we only found 3. We have therefore had to change our method of support, creating Producer Groups on our own initiative. Usually, we need potential markets before creating PGs to aggregate with the private sector, which is the safest approach. However, due to a lack of potential markets, we have supported the producers to regroup, then strengthen them to improve their capacity and their production. Therefore they will be able to collectively bargain with collectors, especially on the price, and also find other potential market opportunities.

We found some tree species, *Intsia bijuga* particularly vulnerable to pests (rats in particular) and which showed lower survival rates. We will not be planting these species in the years going forward to protect the survival rate of the planted species. However, in the future, we may grow these species through long nursery and hardening processes, which can they be planted out once they are more resilient.

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

Comments Received:

a. Output 5 could be highly important for ensuring the long-term sustainability of restoration activities and funding related infrastructure (e.g., nurseries). I wondered if more could be done to focus on developing processes to support investors, instead of what seems to be more of a focus on assessing carbon sequestration potential?

Output 5 is focused on blue carbon - the carbon sequestration potential of the lake and marsh will be the focus of this piece of work. Whilst the whole watershed will be included in the study, there is increased understanding needed of the blue carbon storage of the wetlands in order to design ways to harness its potential for investment.

This piece of work is not taking place in isolation – Durrell is actively investigating how it can harness its potential for carbon investment within Madagascar's legislative framework, through support from our partnership with law firm DLA Piper. Durrell already has a successful initiative, [ReWild Carbon](#), where it has secured over £ (as of December 2022) of investment into carbon sequestration (through tree replanting in Brazil's Atlantic Forest) from private and public investors, a total of 35,220 carbon credits (as of December 2022). Output 5, along with ongoing parallel work, is part of a long term ambition to inform the next stages of Durrell's ReWildling carbon initiative, which we would like to expand to Madagascar. There is significant interest in expanding this programme for existing and potential investors. Durrell is also receiving support for reforestation in the Alaotra watershed from the AFR100 initiative. Thanks to satellite monitoring from the World Resources Institute, we will also be able to understand carbon sequestered through these reforestation activities to contribute to future carbon market engagement.

b. The Logframe Output 3 includes six indicators whilst the Annex 1 table in the Annual Report includes ten indicators for this output. It would be good to update the Logframe if needed.

Output 3 includes 6 output indicators included in the original logframe. There are 10 activities under Output 3 (3.1-3.10) and Annex 1 lists progress against each of these activities. No logframe revision necessary.

c. The sustainability after the project end of the removal of water hyacinth (i.e., reinvasion) was not discussed in the Annual Review. As mentioned above, it would be good to include a specific assumption about this in the Logframe.

Alongside this project, Durrell is running a project supported by Jersey Overseas Aid (JOA) which includes an ongoing five year commitment to hyacinth removal (a target of 100 hectares by 2027). In addition, removal of invasive species is part of Durrell's rewildling plan for Alaotra and therefore this is a long term commitment to IAS management. Whilst ongoing Durrell support will ensure that the hyacinth removal continues, the support from JOA is also developing vermicomposting of the hyacinth as a livelihoods strategy, both for farmers to use at a subsistence level, and also generating local opportunities to generate income from this compost.

d. The direct sowing technique appears to have been very successful. The approach could be a lot more cost-effective than the originally planned more intensive approach of growing seedlings in the nursery. The approach could also be more sustainable in the long-term, requiring less funding to maintain the nursery after the project ends

Whilst the success rate of the direct seeding technique is very high just at the end of the rainy season at the last point of reporting (73%), but during the long dry season, this rate decreases to 40% because the germinated seedlings are not yet in force and cannot withstand the long rainy period (10 months this year from April to December). This technique is more favorable in areas with strong and long rainy season such as the eastern part of Madagascar, but we proceeded to direct seedlings in Y1 due to the late start of the Darwin projects. The best practice for the Alaotra region, recommended by expert partners GDV, given the soil quality and the annual precipitation rate, the production of seedlings under nursery is the best practice to have more resistant seedlings and respecting the standards for ex-situ regeneration of native tree species. In addition, the nursery method is an important means of community engagement and provides both through income generation (for those directly employed in nurseries, planting and

monitoring), skills development of community members (for nursery technicians) and an raising the profile of reforestation at village level. The skills community members gain through this method can also be used to grow mixed-use species for community-level nurseries.

e. **3.6 Area of marsh being directly and effectively managed by ARS and COBAs by project end: 40% (2020 baseline: 25%-30%) For the next Annual Report it would be good to give more detail on how this will be quantified using the target metric. How are we measuring "directly and effectively managed?"**

The calculation method will be based on estimating the marsh area managed by the VOIs. We are still in the process of collecting this information from the management transfer documents. Of the 33 VOIs, 16 have already obtained the management transfer documents. These 16 VOIs manage approximately 53.27% of the entire marsh. the 17 VOIs that do not yet have the management transfer documents could manage 46.62% in case their management is carried out. The work to be done for Y3 is to ensure the renewal of these 16 old VOIs and also to carry out the transfer of management or ritualization of the 17 VOIs that remain. These activities will be carried out if the fund is available.

10.   Risk Management

Some new risks have arisen during Y2 of the project:

Election :An election will take place in Madagascar in November and December 2023. We do not directly see the presidential election significantly affecting in the day to day activities of the project. the However, the availability and participation of the authorities (eg Governor, district chief, mayor, president of fokontany) may decrease in the run up to the election and therefore we will plan to ensure they are planned appropriately. However, there are a number of risks associated with the election which our team are monitoring (and mitigation strategies are being discussed with technical advice and support from Durrell's Global Safety and Risk Manager). There have been crackdowns on public protest , and ability to move between Antananarivo and the rest of the country may decrease in the lead up to the election.

Curfew: A night curfew has been implemented within two districts of the Alaotra region from 1st March 2023. Papers reported that a reduction in the availability of cattle to steal, has lead cattle bandits to turn their hands to other crimes including kidnapping. To try and combat this, the government has sent in the military to clean up and re-establish security. The curfew has been implemented to reinforce the military's efforts. At time of writing the curfew is ongoing.

The nature of our work means there has been minimal impact on the Durrell team but we have ensured that activities are carefully planned to avoid anybody being on the road between 9pm and 3am. We informed the authorities of the presence of Durrell visitors and again, planned itineraries to ensure that they were at their hotel by nightfall.

New Staff: During this financial year, Durrell has also improved its capacity to manage and mitigate risk through the appointment of our Global Safety and Risk Manager, Amber Dyson. Amber will be supporting all our field programmes in rolling out improved Health and Safety across all programmes. She will be developing our capacity to identify and manage risks across all of our work through undertaking field audits and action plans at all sites, training teams in risk management and first aid and supporting Emergency Response Plans for all sites. Amber is also working closely with safeguarding focal points across Durrell to update and roll out our safeguarding policy . Amber visited the Alaotra site in February 2023 and undertook the first stage of developing an action plan for the Alaotra site, and delivered safeguarding and grievance mechanism training to teams.

11.   Other comments on progress not covered elsewhere

Darwin Identity and access to UKAID Logo: We strive at every opportunity to publicise Darwin Innovation Fund support and that of the UK Government, and this involves using the UKAID and

Darwin logo on communications materials (and items purchased or built under this project). We have tried to follow the [guidelines](#) for use of the UKAID logo and have tried to obtain the logo and permissions via this means but have received no communications back from the relevant contacts. This has inhibited our capacity to meet visibility requirements.

Report templates released too close to the deadline: Whilst we understand the need to amend templates each year to reflect additional information needed for the BCF, the reports for the DI are a significant amount of work for the field teams (alongside their field roles) and a large amount of time and notice is needed to prepare these reports (upwards of 6 weeks). The template for the 2023 Annual Report was not available at the time we started planning the report (in early March) and therefore reports are often made in last year's template and then additional work is needed to update it when the template is released early to mid April. Earlier release of report templates would facilitate work planning by the project implementation team.

New Team Members: We have also had a change within the project team, with Project Leader Fidy Ralainasolo now taking up the role of Protected Area Coordinator within Durrell. Fidy will remain Project Lead and will be supported by new Alaotra Field Manager Fabrice Randriamanarivontsoa. Fabrice has worked in the Alaotra watershed for several years

12.   Sustainability and legacy

This project represents part of a larger programme of complementary conservation and rural development activities in Alaotra, to which Durrell is committed. Durrell's work in Alaotra began in 1990, leading to the designation of Lac Alaotra as a Protected Area in 2015 with Durrell as designated co-manager alongside ARS. Whilst Durrell anticipates working in Alaotra for a prolonged period, all our interventions are designed to find sustainable, locally applicable natural resource management solutions, the responsibility for which will ultimately fall to local management structures, particularly training to COBAs under this project to fulfil the mandate of effective marsh management.

This project also works within National plans regarding ecological restoration. Durrell are a key partner in the national reforestation plan ('RFR'), a mandate of the President and the reforestation plan for the watershed sits within this. This plan, developed with Darwin support and mandated by the watershed committee and local government authorities will be the guide by which all reforestation in the watershed will be undertaken by both Durrell and other NGOs. A number of high profile events have raised the profile of the project activities both with the public and authorities: generation of the reforestation plan involved 39 stakeholders (VOIs, local authorities and NGOs) and the reforestation activities themselves (which were launched with support of the DRAE), provided employment for 200 people a day for three months. Our community patrollers have received reports early in 2023 of the presence of a migratory species not seen in Alaotra; this is a positive sign of the visibility of patrollers and their recognition by community patrols.

During this financial year, Durrell has secured a new grant across three sites in Madagascar (including Alaotra) from Jersey Overseas Aid, 'VALIHA', for a period of 5 years (value £2m) which has a component focusing on good governance (continuing support to fokotanies, additional training in advocacy for community members), continuing the long term strategy for a model of robust community management, the Lead Farmer model (installing trained members of the community in climate smart agriculture, and providers of seeds, organic inputs etc where needed. The Lead Farmer model is designed to embed climate smart agricultural skills within communities and have 'ambassadors' within our focal areas for climate smart approaches in the long term. This project will also continue to support removal of aquatic invasive species for use in biocompost, community reforestation and nurseries for mixed use species, generating opportunities for revenue generation from conservation. This project will also build long term structures for accessing markets and produce processing which will benefit this project's beneficiaries. Within this grant, there are plans to establish co-operatives within Alaotra.

Durrell continues to implement the Darwin Capacity Building grant: *Realising the Durban Vision: Strengthening Madagascar's Protected Area management capacity,* to build the Protected Area management capacity of professionals across Madagascar (60 to receive direct training over project period) along with long term mentoring, contributing to the overall development of the sector.

13. Darwin Initiative identity

In this year of the project, we have publicised the Darwin Initiative through our active social media pages and news articles on our website. This includes a post, tagging BCF, about our wetland restoration work in Madagascar (here), linking to an article (here), with a credit to BCF – Darwin Initiative. We have also written a news piece entitled 'Reforesting Madagascar' (here), to coincide with International Day of Forests, which thanks the BCF Darwin Initiative as part of our wider reforestation programme. Furthermore, we wrote a piece for the March 2023 Darwin Initiative newsletter entitled 'Converting Conservation Into Compost' about our marsh restoration work in Alaotra, and about the interdependence of water, biodiversity, health and livelihoods (here). These are all evidenced in Annex 4A.

This year we created signboards to publicise the Farmer Field Schools which have the Darwin Initiative and UKAid logos clearly presented as supporters of the project, which can be seen in Annex 4A. We also included Darwin initiative logos on all infrastructure and equipment which was built as part of this project, including renovated ARS offices, field equipment and motorbikes.

During all community events, and in speeches from ourselves, local authorities, and other partners, we always thank the British government and the Darwin Initiative for the support for grassroots communities and conservation. We also include the Darwin Initiative logo, along with the UKAid logo and the Durrell logo on all forms, attendance sheets, patrol sheets and other materials created for the project.

Within the host country (Madagascar), Durrell's teams, partners, and people from the communities are very aware of the support from Darwin Initiative and the UK government and understand that this is who is funding the project activities.

14. Safeguarding

Has your Safeguarding Policy been updated in the past 12 months?	/No
Have any concerns been investigated in the past 12 months	/No
Does your project have a Safeguarding focal point?	Yes/ [*If yes, please provide their name and email*] HANTANIRINASOA Lantotiana ██████████████████

Has the focal point attended any formal training in the last 12 months?	Yes [*If yes, please provide date and details of training*]
	April, 4th 2023 : Safeguarding awareness workshop
	  1) Case studies and ongoing learning
	  2) Localised policies and procedures
	  3) Resources
	  4) Identification and reporting
	  5) Survivor care
	  6) Staff wellbeing
	
	August 10th 2022 : Intro to Safeguarding
	  1) Safeguarding definition
	  2) Staff safeguarding support mechanisms
	  3) Project reporting and investigation procedures that are victim/survivor focused
	  4) Project beneficiary complaints procedure

What proportion (and number) of project staff have received formal training on Safeguarding?	Current: 90.75% [96 people] Target: 100% [106 people]

Has there been any lessons learnt or challenges on Safeguarding in the past 12 months? Please ensure no sensitive data is included within responses.
 	
We conducted a staff survey, the results of which identified two key challenges relating to safeguarding.
  1. Firstly we need to improve staff familiarisation with the safeguarding policy and associated processes. The policy has recently been translated into Malagasy and our focal point, Lantotiana Hantanirinasoa will continue to visit the project site to provide briefings and answer questions.
  2. The second challenge relates to reporting. Survey results demonstrated that some staff wouldn't feel confident reporting due to concerns around confidentiality and impact on both the reporter and accused. We will continue to encourage staff and share lessons learned to build confidence in the process.

Does the project have any developments or activities planned around Safeguarding in the coming 12 months? If so please specify. -   A safeguarding action plan has been developed based on the survey results. Lantotiana Hantanirinasoa along with other members of the Madagascar Senior Management Team and the Global Safety and Risk Manager will work through the actions over the next few months. -   Implementation of grievance mechanisms will be reviewed. -   Continuation of regular training conducted by Lantotiana Hantanirinasoa, including orientation on safeguarding policy and procedure. -   Developing specific training materials for new starters and reviewing our induction process to ensure that safeguarding is covered in detail.

Durrell has updated the safeguarding policy, whistleblowing policy and Code of Conduct and this has been distributed to all staff. There have been no safeguarding concerns recorded during this project to date. Future concerns will be dealt with in accordance with our policies, and all concerns recorded on a register. Durrell will lead on this where the concern is for, or because of the actions of one of, our staff or project staff. The updated policies have also been provided to in-country partners. Where there is a concern relating to a staff member of one of our partners working on the project, Durrell will provide the safeguarding policy and request the partner organisation to respond according to our policy – and provide a written account to add to the register.Since the Human Resources Manager based in Antananarivo she is now responsible for overseeing the dissemination of all organisational policies to the team operating throughout Madagascar.

15.   Project expenditure

Please expand and complete Table 1. If all receipts have not yet been received, please provide indicative figures and clearly mark them as Draft. The Actual claim form will be taken as the final accounting for funds.

Table 1: Project expenditure <u>during the reporting period</u> (1 April 2022 – 31 March 2023)

Project spend (indicative since last Annual Report	2022/23 Grant (£)	2022/23 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)				
Monitoring & Evaluation (M&E)				
Others (see below)				
TOTAL	£209,720	£208,183		

The above budget is after Change Request 3 in November 2022 where it was agreed to move 5,000 from Y2 to Y3 from the 'Other Costs' line.

Table 2: Project mobilising of matched funding during the reporting period (1 April 2022 – 31 March 2023)

	Matched funding secured to date	Total matched funding expected by end of project
Matched funding leveraged by the partners to deliver the project.		
Total additional finance mobilised by new activities building on evidence, best practices and project (£)		

16. **OPTIONAL: Outstanding achievements or progress of your project so far (300-400 words maximum). This section may be used for publicity purposes**

I agree for the Biodiversity Challenge Funds Secretariat to publish the content of this section (please leave this line in to indicate your agreement to use any material you provide here).

File Type (Image / Video / Graphic)	File Name or File Location	Caption, country and credit	Online accounts to be tagged (leave blank if none)	Consent of subjects received (delete as necessary)
				Yes / No
				Yes / No
				Yes / No
				Yes / No
				Yes / No

Annex 1: Report of progress and achievements against logframe for Financial Year 2022-2023

Project Summary	Measurable Indicators	Progress and Achievements April 2022 - March 2023	Actions required/planned for next period
Impact: Community-led management and restoration of the Alaotra Ramsar watershed are providing sustainable long-term benefits and services to people and wildlife, and helping mitigate impacts of climate change.			
Outcome: Enhanced local stewardship is reducing negative impacts on Lake Alaotra's natural environment and improving well-being of c.15,000 people across 12 villages.	0.1 250Ha reforested by end of project. 0.2 Priority gentle lemur habitat increased to 6,000 Ha (from 4,100Ha 2019 baseline). 0.3 No decrease in gentle lemur population during project (2019 baseline: 2,000-2,500 individuals). 0.4 Marsh burning does not exceed 500Ha/year in each year of the project (2014-2019 average 500Ha/year). 0.5 Subjective well-being indicators improved by end of project. (Global Person Generated Index; % households who are satisfied with life; % who feel their actions are worthwhile; % who felt anxious yesterday; % who felt happy yesterday). 0.6 Measures of food insecurity in intervention villages improved by end of project (Assessed via Household Food Insecurity Access; Months of Adequate Household Food Provisioning and the Food Consumption Score Nutritional Quality Analysis scales). 0.7 The proportion of households who believe they have the power to	0.1 Total 269 ha reforested to date (105 ha reforested in Y1; 164 ha reforested in Y2) 0.2 Total 63.35 ha of marsh replanted (19.35 ha in Y1; 44 ha in Y2) and total 15 km of channels cleared (5.2 km Y1; 5.48 km Y2) Additional 18ha cleared of invasive aquatic species in satellite lakes. 0.3: New more effective survey method trialled in March 2023; full range-wide survey planned for Y3. 0.4: New methodology (from drone flights) will enable more accurate calculation of marsh burning. Satellite light points (from fires): 201 light points vs 238. 0.5 Results from baseline data (collected from HH survey in Y1) analysed and presented in Y2. Compare to HH survey results due to be collected in Y3. 0.6 Same as 0.5 0.7 Same as 0.5 0.8 Same as 0.5	Range-wide survey of the Alaotran gentle lemur will be undertaken in Y3 HH survey to take place in Y3. Data cleaned, analysed and presented to be compared with baseline collected in Y2. In Y3 use drones to survey marsh area detected (either by MODIS or patrols) as affected by fires.

	influence decision making in their communities has increased by end of project cf. start 0.8 Improved economic independence and resilience; % of households using VSLAs to manage their savings and value of savings has increased by end of project cf. start.		
Outputs: **1.** 12 community nurseries, together producing c.100,000 saplings annually to enable 120Ha reforestation annually within priority zones by project end.	1.1 Restoration plan for 722,500Ha Alaotra Ramsar watershed including priority sites and plant species composition developed by end of FY1 1.2 Number of nurseries capable of producing c.10,000 saplings per year established through project: 6 by end FY2; 11 by end FY3 1.3 Number of nursery technicians trained across all nurseries: 24 1.4 Area reforested each year 50Ha in FY1; 100 Ha in FY2; 120Ha in FY3	1.1 A restoration plan containing a map of priority areas for reforestation of the watershed and marshes has been produced through participatory mapping with the parties (Annex 4B). A methodology on reforestation, choice of priority areas, choice of species used and protection strategies are included. 1.2 As per the change request approved in Y1, six nurseries have been set up across six villages. These nurseries will allow the total production of 176,000 seedlings. A further five nurseries will be established in Y3 meaning this indicator is still on track. See photos under Annex5 1.3 390 people received training in direct sowing techniques in Y1. A total of 14 nurserymen from six villages were trained on the preparation, installation, care, and maintenance of the nursery in Y2. A further 10 will be trained in Y3. See photos under Annex 5. 1.4 Area reforested is: 105 ha in Y1; 164 ha in Y2. At least 120 ha is planned to be reforested in Y3. See Map 4, Annex 4C. Agreement for forest protection Annex 4k	
1.1 Produce map of Alaotra watershed and with key stakeholders identify priority areas for marsh restoration and terrestrial reforestation		A restoration plan containing a map of priority areas for reforestation of the watershed and marshes was produced through participatory mapping with the parties in Y2. A methodology on reforestation, choice of priority areas, choice of species used and protection strategies are included. Five dossiers on reforestation collaboration and its protection have been signed by local and state authorities, DREDD and Durrell.	Completed in Y2.
1.2 Establish nurseries in 6 villages in FY2 and 5 further villages in FY3		In Y2, six nurseries have been set up in the villages of Morarano, Vohimena, Analanomby, Vohimenabe, Vohibola and	5 nurseries to be established in Y3.

		Vohitraivo. These nurseries will allow the total production of 176,000 seedlings.	
1.3 Train local communities in nursery maintenance and care		14 nurserymen from six villages were trained on the preparation, installation, care and maintenance of the nursery. The training was provided by technicians from Durrell and its partners, namely DREDD and the NGO Graine de Vie.	A further 10 community members to be trained for management of nurseries for those established in Y3, in five more villages.
1.4 Undertake weekly nursery maintenance		36 interventions were made after the installation phase of the nursery to perform relining, weeding, reclassification, and cutting of the emergent root.	Nursery maintenance to be continued in Y3
1.5 Undertake annual tree planting (Feb)		164 ha of land was reforested in Y2. We used seedlings produced from nurseries installed in the six villages. These seedlings covered a total of 164 ha of land including 9 Ha in Morarano, 23 Ha in Vohitraivo, 44 ha in Vohibola 33 ha in Vohimenakel/Analanomby and 55 ha in Vohimenabe. 390 people were involved in the direct planting activity (Annex 5.1-5.5) A map of the reforested area was produced (see Annex 4C)	Tree planting to take place in February 2024. At least 120 ha is to be reforested.
1.6 Monitor planted areas		160 road signs were produced to prohibit pastoral activity and the defense of fire in the reforested area. 46 patrols were carried out by patrol and monitoring committees in the reforested area to avoid the threat of fire and pastoral activity. 50 VNA members have been set up to monitor and protect the reforested area.	Ongoing patrols and monitoring of replanted areas by community members.
2. 5km of channels in priority areas are cleared annually of invasive water	2.1 Priority areas for hyacinth clearance and phragmites replanting identified by end FY1	2.1 Priority areas were identified through community consultations in Y1 and ratified during a meeting with 39 community representatives in Y2 (Annex 4b) They provided information on the key areas to be restored in the PA and in the BV outside the PA.	

hyacinth and 75Ha of reed-phragmites are planted by project end, to restore habitat, improve water quality, and increase access to the lake for fishing and ecotourism.	2.2 Area of phragmites planted: 75Ha by project end 2.3 Length of channels cleared annually of invasive water hyacinth: 5km/year	2.2 In total 63 ha of reed phragmites has been restored (19.35 ha planted in Y1, 44 ha in Y2) We are on track to meet our 75 ha target by Y4. See Maps 1 & 2 2.3 A total of 10.9 km of canals have been cleared to date. In Y1, 5.2 km of lengths of the canals were cleared; in Y2 5.7 km of channels were cleared. A further 5 km will be cleared to reach our target in Y3. See Annex 4C
2.1 Plant 25Ha phragmites reed each year (November)		In Y2, 44ha of *Cyperus madagascariensis* and *Phragmites communis* were planted	In Y3 plant a further 25 ha of *Cyperus madagascarensis* and phragmites, before November 2023.
2.2 Undertake water hyacinth clearance annually (November)		5.48 km of canal have been cleared in Y2. An additional 18 ha of invasive aquatic species has been removed from satellite lakes this year. This was used to make 3,000kg of organic compost with members of the FFS. The work is in collaboration with the fishermen, CFL and VOI of Andilana South (Map 3).	In Y3 we will undertake clearing activities to clear 5 km of canals.
3. Local associations (COBAs) within Alaotra Rano Soa (ARS) are effectively managing 40% of the marsh area with c.300 people representing all 33 associations receiving training by end of project.	3.1 Capacity building needs of ARS and COBAs identified by end FY1. 3.2 Number of people receiving capacity development training: c.330 across 33 COBAs by project end 3.3 Infrastructural and equipment needs of ARS and COBAs defined by end FY1. 3.4 Number of new ARS offices built and equipped: 4 by end FY2 3.5 A standardised system for monitoring fishing compliance, developed by ARS in association with Fishing Associations in place by end Q2FY2, and being implemented through FY2 - FY4. 3.6 Area of marsh being directly and effectively managed by ARS and	3.1 Capacity building and training needs were assessed for 33 ILCs through a competency assessment framework. Priority needs were identified and used to develop training on the theme of associative life and law enforcement during Y2. 3.2 A total of 301 board members from the 33 VOIs and from Alaotra Rano Soa were trained in the 9 key competencies from May 2022 to March 2023. See narrative and Annex 4F 3.3 A summary table of training and equipment needs of the ARS and COBA was shared in Y1 and used to purchase and supply these needs in Y2 3.4 Two offices have been built and equipped in Y2. Land has been acquired and the remaining two offices will be completed and functional by the end of Y3. Annex 5.6,5.7 3.5 A monitoring system was developed between ARS, the Regional Fisheries Directorate and members of fishermen's associations in Y1. The implementation of this monitoring system was led by

	COBAs by project end: 40% (2020 baseline: 25%-30%) 3.7 Change in community compliance with the PA regulations framework compared to 2020 baseline.	Regional Directorate of Fisheries in Y2. A census recorded 3,224 fishers across 97 associations. Monitoring has so far led to the seizure of six illegal fishing nets. Annex 4H: DRPEB Patrol report 3.6 Four monthly meetings by four zones to discuss Ramsar site conservation activities. See Annex 4F; 3.7 Data from reports collected in Y1 and Y2 are being compiled and will be compared with the 2020 baseline in order to detect any change in community compliance with the regulations framework. To improve the quality of data collected and the capacity of patrollers to detect the existence of violations in their territory, training has been delivered to 105 patrollers in Y2 (Annex 4F, 4J).	
3.1 Undertake a capacity and training needs assessment across all COBAs (Q1 FY2)	Completed Y1. Used to prioritise training delivered in Y2.	Completed Y1	
3.2 Deliver training to COBA members based on results of assessment (FY2)	A total of 301 board members from the 33 VOIs and from Alaotra Rano Soa were trained in the 9 key competencies from May 2022 to March 2023. An additional 87 VOI members received law enforcement training which took place in January and February 2023. It was delivered by the representatives of the ministry MEDD and of the DREDD Alaotra Mangoro.	Completed Y2	
3.3 Undertake an evaluation on effectiveness of training to COBAs (FY3)	For each training, pre and post training evaluations undertaken. The evaluation will take place in Y3.	Planned for Y3	
3.4 Undertake assessment of infrastructural and equipment needs for ARS and COBAs in FY1	An assessment of four ARS offices was completed in Y1 and a summary table of the training and equipment needs of the ARS and COBA shared.	Completed Y1	
3.5 Construct and equip 4 local association offices for ARS and COBAs	Two offices have been constructed and furnished including IT equipment, furniture and storage. Land has been acquired to begin construction of the remaining two offices. They have also been reinforced with security measures including window and door bars.	Two offices will be built in Y3.	
3.6 Develop a standardised system for monitoring fishing in conjunction with fishing federations	The monitoring system developed in Y1 has now been approved by the Regional Directorate of Fisheries who led the implementation of the monitoring system in	Monitoring will continue in Y3.	

		Y2. A census recorded 3,224 fishers across 97 associations. Monitoring has so far led to the seizure of six illegal fishing nets.	
3.7 Carry out regular monthly meetings with ARS		During Y2, there were 12 monthly meetings of ARS board members. The President of the ARS and the Secretary General coordinated this meeting with the objective of overseeing the activities of ARS. About 15 people representing the Watersheds Federation, the Water Users Federations, fishermen and the Marsh Federations met each month to compile the monthly report.	Continue monthly meetings throughout Y3.
3.8 Undertake annual monitoring of fishing in the lake		Seven monitoring and control missions were carried out by the DRPEB (Regional Directorate of Fisheries), the Fisheries Federation and the gendarmes. In total, 300KG of fish seized during the closed fishing season for the year 2022	Continue to undertake annual monitoring of fishing in the lake in Y3.
3.9 Undertake annual assessments of management effectiveness of Alaotra PA		ARS members represented by 200 members grouped in four zones undertook the annual evaluation assessments. The results were used to inform the 2023 annual workplan "Plan de Travail Annuel". A new R-METT Assessment (Ramsar Management Effectiveness Tracking Tool) was conducted by key stakeholders in Y2 to update the previous one conducted in 2018. This will improve planning and management of the RAMSAR site.	Conduct annual assessment and implement recommended activities of the renewed R-METT in Y3.
3.10 Compile annual records of illegal activity from local associations and Government		44 reports and/or complaints are written by the VOI which are transmitted to the DREDD office. Other reports are sent directly to the Amparafaravola Forest Cantonment Office without going to the Durrell Alaotra office. Training was also delivered to 105 patrollers to improve capacity to detect and report illegal activities with the PA.	Continue to compile from LA's and Government annual records of illegal activity in Y3.
4. Approximately 2500 people across 12 villages (7 new) are supported to	4.1 Agricultural productivity, level of chemical inputs and income generation for participating farmers assessed by end FY1.	4.1 Completed in Y1 (check Y2 HYR for results) 4.2 In total 934 farmers have been trained via FFS (411 in Y1; 523 In Y2) 39% of which were women. Target will not be met.	

derive greater benefits from their agricultural and natural products whilst utilising natural resources more sustainably.	4.2 Number of farmers trained via Farmer Field Schools: 720 in FY1; 480 in FY2; 480 in FY3 (>30% female participation) 4.3 Area of land on which climate resilient crops and highly nutritional crop varieties are being grown: 360Ha by project end 4.4 Number of basket weavers trained to make basketry products and to use reeds sustainably: 160 4.5 Number of VSLA groups established and participation numbers: 48 VSLA's across 12 villages with c.1,000 members (>60% Female participation) 4.6 Number of COBAs paticipating in annual rural fairs: 8 COBAs including 4 womens associations 4.7 Change in crop production, quantity of basketry products, and income for farmers and basket weavers from FY1 to FY3 without adverse impact on natural resources.	4.3 In total 301.2 ha of land has been cultivated in Alaotra using climate resilient and highly nutritional crop varieties (Y1: 127.97 ha; Y2:173.3 ha). We are on target to achieve 360 ha by project end. 4.4 17 basket weaving groups created. Training and equipment delivered to 252 basket weavers in Y2 4.5 In total 35 VSLA's have been established with 525 members (75% women) (10 VSLA's with 185 members (51% women) in Y1 and 25 VSLA's with 340 members (87% women) in Y2). Annex 5.8. 4.6 Two basket weaving groups and FFS groups participated in "Fier Mada" in Antananarivo in Y2. Due to late start 4.7 Household survey completed in Y1 provided baseline (Annex 4Ei). Data to be collected in Y3 to show change. Annual agricultural surveys completed annually.
4.1 Identify, create and structure FFS groups in each association. September– November (annually)	In Y2, 50 FFS groups were created composed of 529 beneficiaries, including 319 men and 210 women divided into 12 villages.	In Y3, 27 FFS groups will be created, consisting of 270 members.
4.2 Train and support FFS groups in techniques. November – end project	In Y2, 523 FFS members including 210 women were trained on the basic principles of agricultural technique to cope with climate change.	In Y3, an additional 270 FFS members with at least 30% of women will benefit from training
4.3 Implementation of agricultural techniques. December 2021– end project	In Y2, 173.3 ha were cultivated in Alaotra out of the 360 ha final objective of the project. The total farm inputs and equipment supplied are summarized in the narrative report.	In Y3, 80 ha will be cultivated for the application of agricultural techniques in the face of climate change
4.4 Annual agricultural surveys	376 beneficiaries out of the 411 beneficiaries in Y1 were evaluated for the 12 villages. The surveys to be completed by each member	In Y3, 529 Y2 beneficiaries will be evaluated in the 12 beneficiary villages of the project.

		contains self-assessments in relation to the training they have received.	
4.5 Establish VSLA groups in target villages and train members in VSLA process		25 new VSLA groups were created in Y2, equipped and trained 340 members (87% women) from 8 villages. 17 Village Agents trained from 9 villages and 133 group members went on exchange visits.	Minimum of 13 VSLA groups to be created in Y3
4.6 Monthly meetings with VSLA groups to track progress through the full cycle		Attended monthly meetings to provide support and gather data. 7 VSLA groups from Y1 completed full cycle this year (2 groups dissolved, 1 group complete cycle in April 2023). Additional training in financial management provided to 5 groups.	All VSLAs created in Y1 and Y2 will continue to be monitored in Y3. Additional financial management training may be offered.
4.7 Establish and run training for basket weaving		17 basket weaving groups were created and training and equipment delivered to 252 basket weavers	Basket weaving groups to be monitored .
4.8 Take members of the FFS and women's basket weaving associations groups to rural fairs around Alaotra		Two representatives of basket weaving groups and FFS groups participated in "Fier Mada" in Antananarivo	Representatives from Alaotra to be supported to visit national fair in Y3
4.9 Develop market value chains for locally produced products		3 producer organisation groups were created: 1 groundnut producer group with 30 members from which their products will be sold to local groundnut oil producers and 2 chilli producer groups which already have an aggregation contract with MCI with 17 members each making a total of 34 chilli producers. 8Ha of land dedicated to growing high quality peanuts.	We will continue to support existing producer groups, if market opportunities are identified then we will support creation of new producer groups in Y3.
5. Understanding of carbon sequestration capacity of Lake Alaotra's watershed, including lake and marsh, is improved to inform development of external investment opportunities	5.1 High resolution remote-sensing derived habitat map of the marsh and surrounding forest produced and ground truthed by Q3 Y2 5.2 Estimate of carbon carrying capacity of the marsh and surround forest ecosystem by end of Q4 FY2.	5.1 Map completed In Y2: See Map 4 5.2 Planned for Y3 5.3 Planned Y3 5.4 Planned Y3	

for sustainable habitat restoration	5.3 Value of habitat restoration to external investors and feasibility of investment through habitat restoration demonstrated by end Q2 FY3. 5.4 If results indicate feasibility is good, number of external companies a proposal for investment in habitat restoration in return for carbon credits is submitted to: 1 by end project		
5.1 Produce a high-resolution map of Alaotra watershed	Completed Y2 See Map 4 and Annex 4C	Completed Y2	
5.2 Confirm academic partner to support blue carbon study	The project has been agreed between Durrell and the Institute of Zoology (IoZ) under the supervision of Dr Clare Duncan (Research proposal Annex 4D). A Masters student was interviewed and identified in Y2.	Student to undertake research in Y3	
5.3 Identify Malagasy Masters student to undertake study	Discussions underway with University of Tana	Student to undertake research in Y3	
5.4 Support Masters student field work	Planned Y3	Planned Y3	
5.5 Produce report based on fieldwork to assess carbon sequestration potential	Planned Y3	Planned Y3	
5.6 If feasible, produce a proposal for supporting habitat restoration via carbon credits	Planned Y3	Planned Y3 depending on results	
5.7 Identify and submit proposal to external company	Planned Y3	Planned Y3 depending on results	

Annex 2: Project's full current logframe as presented in the application form (unless changes have been agreed)

Project Summary	Measurable Indicators	Means of Verification	Important Assumptions
Impact: Community-led management and restoration of the Alaotra Ramsar watershed are providing sustainable long-term benefits and services to people and wildlife, and helping mitigate impacts of climate change.			
Outcome: Enhanced local stewardship is reducing negative impacts on Lake Alaotra's natural environment and improving well-being of c.15,000 people across 12 villages.	0.1 250Ha reforested by end of project. 0.2 Priority gentle lemur habitat increased to 6,000 Ha (from 4,100Ha 2019 baseline). 0.3 No decrease in gentle lemur population during project (2019 baseline: 2,000-2,500 individuals). 0.4 Marsh burning does not exceed 500Ha/year in each year of the project (2014-2019 average 500Ha/year). 0.5 Subjective well-being indicators improved by end of project. (Global Person Generated Index; % households who are satisfied with life; % who feel their actions are worthwhile; % who felt anxious yesterday; % who felt happy yesterday). 0.6 Measures of food insecurity in intervention villages improved by end of project (Assessed via Household Food Insecurity Access; Months of Adequate Household Food Provisioning and the Food Consumption Score Nutritional Quality Analysis scales). 0.7 The proportion of households who believe they have the power to influence decision making in their communities has increased by end of project cf. start 0.8 Improved economic independence and resilience; % of households using VSLAs to manage	0.1 Replanting and monitoring reports; drone footage. 0.2 Drone mapping and GIS maps. 0.3 Annual gentle lemur survey reports (transects and drone). 0.4 Analysis of annual land sat images, on the ground GPS, daily MODIS alert fire from Maryland University. 0.5 Household surveys in FY1 and FY3. 0.6 Household surveys in FY1 and FY3. 0.7 Household surveys in FY1 and FY3. 0.8 Household surveys in FY1 and FY3. **(Note: FY = Financial Year)**	No significant reduction in current level of political stability.

	their savings and value of savings has increased by end of project cf. start.		
Outputs: **1**. 12 community nurseries, together producing c.100,000 saplings annually to enable 120Ha reforestation annually within priority zones by project end.	1.1 Restoration plan for 722,500Ha Alaotra Ramsar watershed including priority sites and plant species composition developed by end of FY1 1.2 Number of nurseries capable of producing c.10,000 saplings per year established through project: 10 by end FY2; 12 by end FY3 1.3 Number of nursery technicians trained across all nurseries: 24 1.4 Area reforested each year 50Ha in FY1; 100 Ha in FY2; 120Ha in FY3	1.1 Reforestation plan; GIS maps produced for each priority; research report, final list of target species for reforestation produced. 1.2 Photos, nursery records and reports, training records and reports. 1.3 Planting and monitoring reports. 1.4 Reports, photos. .	Engagement with regional authorities continues to be productive. Continued community willingness to engage with and participate in project initiatives. The project is able to engage with the Governments RFR project and it is continued over the forthcoming years so that land tenure via reforestation can happen for rural communities and people. Seed survival in nurseries is not compromised by external events beyond our control e.g. disease, extreme weather.
2. 5km of channels in priority areas are cleared annually of invasive water hyacinth and 75Ha of reed-phragmites are planted by project end, to restore habitat, improve water quality, and increase access to the lake for fishing and ecotourism.	2.1 Priority areas for hyacinth clearance and phragmites replanting identified by end FY1 2.2 Area of phragmites planted: 75Ha by project end 2.3 Length of channels cleared annually of invasive water hyacinth: 5km/year	2.1 GIS map of sites based on landsat, drone, lemur surveys and community consultation. 2.2 Planting records; photographs; aerial photography. 2.3 Clearance effort records; photographs; aerial photography	No significant reduction in current level of political stability/ Continued community willingness to participate in project initiatives.
3. Local associations (COBAs) within Alaotra Rano Soa (ARS) are effectively managing 40% of the marsh area with c.300 people representing all 33 associations receiving training by end of project.	3.1 Capacity building needs of ARS and COBAs identified by end FY1. 3.2 Number of people receiving capacity development training: c.330 across 33 COBAs by project end 3.3 Infrastructural and equipment needs of ARS and COBAs defined by end FY1. 3.4 Number of new ARS offices built and equipped: 4 by end FY2 3.5 A standardised system for monitoring fishing compliance, developed by ARS in association	3.1 Training and Capacity Needs Analysis report 3.2 Attendance records (aggregated by gender); training reports. 3.3 Infrastructural and equipment needs report. 3.4 Photographs; short report and equipment inventory. 3.5 Document outlining system and guidelines adopted. 3.6 Annual RMETT evaluations of PA management effectiveness conducted	No significant reduction in current level of political stability. Continued community willingness to participate in project initiatives.

	with Fishing Associations in place by end Q2FY2, and being implemented through FY2 - FY4. 3.6 Area of marsh being directly and effectively managed by ARS and COBAs by project end: 40% (2020 baseline: 25%-30%) 3.7 Change in community compliance with the PA regulations framework compared to 2020 baseline.	3.7 Records of illegal activity in the PA gathered from local associations and Government agencies records.	
4. Approximately 2500 people across 12 villages (7 new) are supported to derive greater benefits from their agricultural and natural products whilst utilising natural resources more sustainably.	4.1 Agricultural productivity, level of chemical inputs and income generation for participating farmers assessed by end FY1. 4.2 Number of farmers trained via Farmer Field Schools: 720 in FY1; 480 in FY2; 480 in FY3 (>30% female participation) 4.3 Area of land on which climate resilient crops and highly nutritional crop varieties are being grown: 360Ha by project end 4.4 Number of basket weavers trained to make basketry products and to use reeds sustainably: 160 4.5 Number of VSLA groups established and participation numbers: 48 VSLA's across 12 villages with c.1,000 members (>60% Female participation) 4.6 Number of COBAs paticipating in annual rural fairs: 8 COBAs including 4 womens associations 4.7 Change in crop production, quantity of basketry products, and income for farmers and basket weavers from FY1 to FY3 without adverse impact on natural resources.	4.1 Agricultural surveys. 4.2 FFS attendance records (aggregated by gender); training reports. 4.3 Annual agricultural surveys; household surveys. 4.4 Attendance records (aggregated by gender); training reports. 4.5 Attendance records (aggregated by gender); training reports. 4.6 Attendance records (aggregated by gender); photos. 4.7 Annual agricultural surveys; household survey results; analysis of annual land sat images, on the ground GPS, daily MODIS alert fire from Maryland University to assess marsh burning/deforestation; patrol reports to assess anthropogenic pressures.	Environmental conditions do not change drastically to negatively impact growing seasons and crop productivity e.g. increased cyclone activity, lack of rains/prolonged drought. Community members default on the commitments to the VSLA during the process. Theft of project savings occurs during implementation.

5. Understanding of carbon sequestration capacity of Lake Alaotra's watershed, including lake and marsh, is improved to inform development of external investment opportunities for sustainable habitat restoration	5.1 High resolution remote-sensing derived habitat map of the marsh and surrounding forest produced and ground truthed by Q3 Y2 5.2 Estimate of carbon carrying capacity of the marsh and surround forest ecosystem by end of Q4 FY2. 5.3 Value of habitat restoration to external investors and feasibility of investment through habitat restoration demonstrated by end Q2 FY3. 5.4 If results indicate feasibility is good, number of external companies a proposal for investment in habitat restoration in return for carbon credits is submitted to: 1 by end project	5.1 GIS maps and aerial photography; report 5.2 Report 5.3 Report 5.4 Proposal	Academic partner for carbon content estimation remains committed to the project, or alternative partnership identified. Carbon storage potential of Lake Alaotra is feasible for carbon credit investment.

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)

Outcome monitoring activities
0.1 Undertake household surveys in FY1 and FY3
0.2 Undertake annual population surveys of key species Alaotra gentle lemur
0.3 Undertake annual assessment of marsh quality and area reforested

Output 1
1.1 Produce map of Alaotra watershed and with key stakeholders identify priority areas for marsh restoration and terrestrial reforestation
1.2 Establish nurseries in 15 villages in FY2 and 2 further villages in FY3
1.3 Train local communities in nursery maintenance and care
1.4 Undertake weekly nursery maintenance
1.5 Undertake annual tree planting (February)
1.6 Monitor planted areas

Output 2
2.1 Plant 25Ha phragmites reed each year (November)
2.2 Undertake water hyacinth clearance annually (November)

Output 3
3.1 Undertake a capacity and training needs assessment across all COBAs (Q1 FY2)
3.2 Deliver training to COBA members based on results of assessment (FY2)
3.3 Undertake an evaluation on effectiveness of training to COBAs (FY3)
3.4 Undertake assessment of infrastructural and equipment needs for ARS and COBAs in FY1

3.5 Construct and equip 4 local association offices for ARS and COBAs

3.6 Develop a standardised system for monitoring fishing in conjunction with fishing federations

3.7 Carry out regular monthly meetings with ARS

3.8 Undertake annual monitoring of fishing in the lake

3.9 Undertake annual assessments of management effectiveness of Alaotra PA

3.10 Compile annual records of illegal activity from local associations and Government

Output 4

4.1 Identify, create and structure FFS groups in each association. September– November (annually)

4.2 Train and support FFS groups in techniques. November – end project

4.3 Implementation of agricultural techniques. December 2021– end project

4.4 Annual agricultural surveys

4.5 Establish VSLA groups in target villages and train members in VSLA process

4.6 Monthly meetings with VSLA groups to track progress through the full cycle

4.7 Establish and run training for basket weaving

4.8 Take members of the FFS and women's basket weaving associations groups to rural fairs around Alaotra

4.9 Develop market value chains for locally produced products

Output 5

5.1 Produce a high-resolution map of Alaotra watershed

5.2 Confirm academic partner to support blue carbon study

5.3 Identify Malagasy Masters student to undertake study

5.4 Support Masters student field work

5.5 Produce report based on fieldwork to assess carbon sequestration potential

5.6 If feasible, produce a proposal for supporting habitat restoration via carbon credits

5.7 Identify and submit proposal to external company

Annex 3: Standard Indicators

Table 1   Project Standard Indicators

DI Indicator number	Name of indicator using original wording	Name of Indicator after adjusting wording to align with DI Standard Indicators	Units	Disaggregation	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
DI-D12	0.1 250Ha reforested by end of project.	Area of degraded forest that are under active restoration	Area (hectares)	Forest	105	160		265	250
DI-D04	0.3 No decrease in gentle lemur population during project (2019 baseline: 2,000-2,500 individuals).	Stabilised species population (relative abundance) within the project duration.	% Increase	Gentle lemur	0	0		0	0
DI-D16	0.5 Subjective well-being indicators improved by end of project. (Global Person Generated Index; % households who are satisfied with life; % who feel their actions are worthwhile; % who felt anxious yesterday; % who felt happy yesterday).	Number of households reporting improved livelihoods	Households	Well-being	0	0		0	%Improvement by end of project
DI-D02	0.6 Measures of food insecurity in intervention villages improved by end of project (Assessed via Household Food Insecurity Access; Months of Adequate Household Food Provisioning and the Food Consumption Score Nutritional Quality Analysis scales). 0.8 Improved economic independence and resilience; % of households using VSLAs	Number of households whose climate resilience, food security or financial security has been improved.	Households	Food security; Financial security	0	0		0	% increase in households

DI Indicator number	Name of indicator using original wording	Name of Indicator after adjusting wording to align with DI Standard Indicators	Units	Disaggregation	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
	to manage their savings and and value of savings has increased by end of project cf. start.								
DIB05	0.7 The proportion of households who believe they have the power to influence decision making in their communities has increased by end of project cf. start	Number of heads of household with perceived increased influence in local governance	Households	Gender; age group	0	0			% increase of households
DI-B01	1.1 Restoration plan for 722,500Ha Alaotra Ramsar watershed including priority sites and plant species composition developed by end of FY1	Number of new/improved habitat management plans available and endorsed	Number	Ramsar site; Restoration	0	1		1	1
DIA01	1.3 Number of nursery technicians trained across all nurseries: 24	Number of people from local stakeholders completing structured and relevant training as seed nursery technicians	Number Number	People Local communities Gender Typology (reforestation - seed nursery technician) Hours	0 0	14 6		14	24 6

DI Indicator number	Name of indicator using original wording	Name of Indicator after adjusting wording to align with DI Standard Indicators	Units	Disaggregation	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
DI-D12	2.2 Area of cyperus madagascarensis and phragmites planted: 75Ha by project end	Area of degraded or converted ecosystems that are under active restoration	Area (ha)	Marsh habitat/wetland ecosystem Species planted	19.35 ha	44 ha		63.35 ha	75 ha
DI-D12	2.3 Length of channels cleared of invasive aquatic species	Area of degraded or converted ecosystems that are under active restoration	Area (ha) KM of channels cleared	Marsh habitat/wetland ecosystem; Species cleared	0 5.2 km (chann els)	18.007 ha (lake) 5.5 km (chann els)		18.007 ha lake area + 10.7km channel s cleared	NA 15km
DI-A01	3.2 Number of people receiving capacity development training: c.330 across 33 COBAs by project end	Number of people from key local stakeholders completing structured and relevant training (COBA capacity development)	People	People Females; Age group;Stakehol der group (Community – COBA); Typology (law enforcement and association management)	0	305		305	330
DI-A03	3.2 Number of people receiving capacity development training: c.330 across 33 COBAs by project end 4.2 Number of farmers trained via Farmer Field Schools: 720	Number of local organisations with improved capability and capacity as a result of project.	Number of organisati ons benefittin g from DI-AO1	Organisation type: COBA -local association	10 0	125 33		135 33	158 33

DI Indicator number	Name of indicator using original wording	Name of Indicator after adjusting wording to align with DI Standard Indicators	Units	Disaggregation	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
	in FY1; 480 in FY2; 480 in FY3 (>30% female participation)			Farmer field school	0	50		50	77
	4.4 Number of basket weavers trained to make basketry products and to use reeds sustainably: 160			Basket weaving	0	17		17	NA
	4.5 Number of VSLA groups established and participation numbers: 48 VSLA's across 12 villages with c.1,000 members (>60% Female participation)			VSLAs	10	25		35	48
DI-D11	4.7 Change in crop production, quantity of basketry products, and income for farmers and basket weavers from FY1 to FY3 without adverse impact on natural resources.	Number of people benefitting from improved sustainable agriculture practices and are more resilient to weather shocks and climate trends.	Farmers/income	People Gender	0	0		0	% farmers with increased income
DI-A11	4.7 Change in crop production, quantity of basketry products, and income for farmers and basket weavers from FY1 to FY3 without adverse impact on natural resources.	Number of sustainable livelihood enterprises that are profitable (at least a year after establishment).	Basket weaver groups/income	People Gender	0	0		0	% basket weaving groups with increased income/making profit
DI-A03	4.2 Number of farmers trained via Farmer Field Schools: 720 in FY1; 480 in FY2; 480 in FY3 (>30% female participation)	Number of people from key local stakeholders completing structured and relevant training (agricultural – farmer field schools)		People Gender	411 259M: 152W	523 313M: 210W		934	
				Villages	0	12		12	

DI Indicator number	Name of indicator using original wording	Name of Indicator after adjusting wording to align with DI Standard Indicators	Units	Disaggregation	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
				Organisation type (Community - Farmer field schools); Typology (agricultural techniques)					
DI-A03	4.4 Number of basket weavers trained to make basketry products and to use reeds sustainably: 160	Number of people from key local stakeholders completing structured and relevant training (Basket weaving)		People Women Villages Organisation type (community - basket weavers/association); Typology (basketry techniques)	0 0	252 252		252 252	160
DI-A03	4.5 Number of VSLA groups established and participation numbers: 48 VSLA's across 12 villages with c.1,000 members (>60% Female participation)	Number of people from key local stakeholders completing structured and relevant training (VSLA)	People	People Women Villages Organisation type (community - VSLAs); Typology (financial	80 40 8	0 0 0		80 40 8	1000 600 12

DI Indicator number	Name of indicator using original wording	Name of Indicator after adjusting wording to align with DI Standard Indicators	Units	Disaggregation	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
				savings and loans)					
DI-B07	3. Local associations (COBAs) within Alaotra Rano Soa (ARS) are effectively managing 40% of the marsh area with c.300 people representing all 33 associations receiving training by end of project. 4.2 Number of farmers trained via Farmer Field Schools: 720 in FY1; 480 in FY2; 480 in FY3 (>30% female participation) 4.4 Number of basket weavers trained to make basketry products and to use reeds sustainably: 160 4.5 Number of VSLA groups established and participation numbers: 48 VSLA's across 12 villages with c.1,000 members (>60% Female participation)	Number of people participating in community-based management groups *Risk of double count: Some people may participate in more than one community-based group*	People	People Gender Scheme type: COBA -local association Farmer field school Basket weaving VSLAs Producer groups	491 0 259M; 152F 0 40M; 40W 0	1535 330 319M; 210F 252 102M; 258W 64		2026 330 578M; 362F 252 142M; 298W 64	2500 300 160 1000
DI-D01	3.6 Area of marsh being directly and effectively managed by ARS and COBAs by project end: 40% (2020 baseline: 25%-30%)	Hectares of habitat under sustainable management practice	Area	Protected area Marsh habitat/wetland ecosystem Extent of habitat	0	0	0		40%

DI Indicator number	Name of indicator using original wording	Name of Indicator after adjusting wording to align with DI Standard Indicators	Units	Disaggregation	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
				disaggregated by pre-project and post project sustainably managed are					
DI-D10	4.3 Area of land on which climate resilient crops and highly nutritional crop varieties are being grown: 360Ha by project end	Area of improved sustainable agriculture practices benefitting people to be more resilient to weather shocks and climate trends	Area (ha)	Typology (climate resilient crops being grown)	127.97 Ha	173.3 ha		301.27	360

In addition to reporting any information on publications under relevant standard indicators, in Table 2, provide full details of all publications and material produced over the last year that can be publicly accessed, e.g. title, name of publisher, contact details, cost. Mark with an asterisk (*) all publications and other material that you have included with this report.

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)

Checklist for submission

	Check
Different reporting templates have different questions, and it is important you use the correct one. Have you checked you have used the **correct template** (checking fund, type of report (i.e. Annual or Final), and year) and **deleted the blue guidance text** before submission?	
Is the report less than 10MB? If so, please email to BCF-Reports@niras.com putting the project number in the Subject line.	
Is your report more than 10MB? If so, please discuss with BCF-Reports@niras.com about the best way to deliver the report, putting the project number in the Subject line.	
Have you included means of verification? You should not submit every project document, but the main outputs and a selection of the others would strengthen the report.	
Do you have hard copies of material you need to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number. However, we would expect that most material will now be electronic.	
If you are submitting photos for publicity purposes, do these meet the outlined requirements (see section 16)?	
Have you involved your partners in preparation of the report and named the main contributors	
Have you completed the Project Expenditure table fully?	
Do not include claim forms or other communications with this report.	