

Darwin Initiative Main Annual Report

To be completed with reference to the “Writing a Darwin/IWT Report” Information Note:
(<https://www.darwininitiative.org.uk/resources-for-projects/reporting-forms-change-request-forms-and-terms-and-conditions/>).

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

Submission Deadline: 30th April 2021

Darwin Project Information

Project reference	27-004
Project title	Building future resilience for wildlife and communities in Ambondrobe
Country/ies	Madagascar
Lead organisation	Durrell Wildlife Conservation Trust
Partner institution(s)	DREDD, DRAEP, GSDM, Graine de Vie, Marie Stopes Madagascar
Darwin grant value	£290,410
Start/end dates of project	01 July 2020 – 31 March 2023
Reporting period (e.g., Apr 2020 – Mar 2021) and number (e.g., Annual Report 1, 2, 3)	July 2020 – March 2021 Annual Report 1
Project Leader name	Clarice Nirina
Project website/blog/social media	www.durrell.org/wildlife
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1. Project summary

Impoverishment is one of the main drivers of unsustainable natural resource use and habitat degradation in Madagascar. Eighty percent of Madagascar’s 25.6 million people are living in rural communities with limited access to tools for, or methods of, sustainable natural resource use. Across much of Madagascar, including Ambondrobe, this has led to a continuing cycle of severe environmental degradation, loss of natural resources, reduced biodiversity and further reduction in human wellbeing.

Durrell began working in Ambondrobe in 1998, leading to the designation of the 7,000Ha lake-forest complex as a Protected Area in 2015. As designated PA Manager, Durrell works with local communities to address the principal threats of shifting cultivation, illegal logging, marsh clearance and invasive water hyacinth. These negatively impact human wellbeing and threaten endemic biodiversity, including the Critically Endangered Madagascar side-necked turtle. Situated in the dry west of the country, climate change is also an increasing threat. This project will replicate a model of sustainable rural development activities already being implemented by Durrell at three other sites across Madagascar under a Jersey Overseas Aid funded project to 2022. It will enable communities in Ambondrobe (6400 people in 1000 households) to break the cycle of environmental destruction. The provision of skills training, support and resources will improve food security, financial prosperity, and reproductive health, and enable more robust governance at the local level. In doing so, the pressure that communities exert on Ambondrobe’s natural resources will be reduced. Alongside practical habitat restoration efforts and community-led patrolling, these activities will reduce and begin to reverse the trend of destruction. Activities will help ensure Ambondrobe’s ecosystems provide essential and sustainable services to communities, leading to

increased human well-being and ensuring threatened species are more resilient to anthropogenic threats and climate change.

2. Project partnerships

DREDD (the regional Director of environment and sustainable development)

A courtesy visit to the regional representatives of the Ministries of Environment and Rural Development was organised by the Ambondrobe team in October 2020 to introduce and explain Darwin project 27-004, and to discuss future collaborations with the two involved ministries so they remain engaged with and supportive of the Darwin project implementation. Following discussion with the DREDD team, District level ministry involvement will be at two levels, demonstrating their planned engagement and support:

- Monitoring and follow-up of the reforested area and provision of technical recommendations to improve continued reforestation activities. The reforestation monitoring around the Ambondrobe protected area will commence from May 2021.
- Monitoring and evaluation of patrol group operation and findings on a quarterly basis.

DRAEP (the Regional Director for Agriculture, Farming and Fisheries)

The DRAEP team in Belo sur Tsiribihina, represented by CiRAEP (District of Agriculture, Livestock and Fisheries), was also visited at the beginning of the project to present the new Darwin project. The CiRAEP of Belo sur Tsiribihina participated actively in the training and exchange workshop organised by GSDM (Groupe de Semi-Direct de Madagascar) on the development of Climate Smart Agriculture (CSA) action plans in Ambondrobe. Its participation was very beneficial because as a government technical institution, CiRAEP validated, adjusted and provided many recommendations for the improvement and finalisation of the action plans and technical guidance sheets adapted for the Ambondrobe area.

It was also discussed that the CIRAEP team will participate in evaluating the project's agricultural yields during the harvest period, which will take place from June 2021. In addition, in the case of insect attacks and crop diseases that may arise (as shown by our experience at other sites) and are difficult to treat, CIRAEP has the technical expertise to intervene and support response efforts.

GSDM (Groupe de Semi-Direct de Madagascar)

GSDM is a national structure and at the same time the focal point of the National Task Force on Conservation Agriculture, whose objective is to support the scaling up of conservation agriculture and agro-ecology in Madagascar. Durrell Madagascar is an active member of GSDM since 2018. Given the partnership between Durrell and GSDM for the implementation of the CSA strategies across Durrell's intervention areas, GSDM has been chosen as our main partner in delivering the CSA activities for the current Darwin project in Ambondrobe. Starting in July 2020, we proceeded to develop a new MoU and budget for the activities they are involved in, in this Darwin project. Despite working with them to develop the original proposal and budget, at the point of developing the MoU, GSDM proposed to increase their costs significantly beyond what was originally discussed. We have therefore remodelled their involvement in our CSA activities so that they will be involved only in the first year of the project to help set up the activities and train Durrell staff, who will then be prepared to lead the continuation of activities in Y2 and Y3.

The MoU with GSDM was signed on November 2, 2020. GSDM interventions were divided in two:

- Conducting diagnostic analyses of the socio-economic and agro-pedo-climatic contexts of the area to identify agro-ecological itineraries.
- Training Durrell's staff and partners on CSA techniques using demonstration plots.

For these activities, GSDM has provided their senior experts in conservation agriculture and their specialist in agro-ecological training. The signed MOU is attached to this report as supporting documentation.

Marie Stopes Madagascar

Following the PHE (Population-Health-Environment) approach, Durrell Madagascar formed a partnership with MSM in 2018 to deliver family planning services around its conservation sites. An MOU between both institutions has been in place since 2018 for a multi-year project supported by Jersey Overseas Aid in three main intervention sites (Sofia region, Boeny region and Alaotra region). Therefore, with the new Darwin project, an extension to the current MOU was signed in July 2020 to extend the areas of collaboration at the national level under 27-004.

Being both active members of Madagascar PHE network, Durrell has had a good relationship with MSM since the beginning of the partnership. Activities are arranged and coordinated at the national level as well as at local level. Communication with MSM has improved even further since they appointed a new Grant Manager for their PHE project in 2020, who is responsible for their partnerships and projects with environmental NGOs.

Graine de Vie

Graine de Vie (GdV) is one of the main partners of Durrell in implementing its reforestation strategies across the conservation sites mainly in the Menabe-Antimena region in which Ambondrobe is found. Due to COVID travel restrictions, GdV work activities in establishing village nurseries have been delayed, but Durrell technicians took the initiative to start activities at the village level in late September so that reforestation activities themselves, which are seasonally sensitive, would not be disrupted. We expect that our planned activities with GdV will resume from June 2021, to establish and stock new nurseries, train communities and supply native trees for the new nurseries.

3. Project progress

3.1 Progress in carrying out project Activities.

Outcome Level

0.1 Undertake household surveys in Year 1 and Year 3

The baseline household surveys were carried out in November and December 2020. The related activities are detailed further below in paragraph 8.

0.2 Undertake annual population surveys of key species Madagascar Pond Heron and Madagascar side-necked turtle.

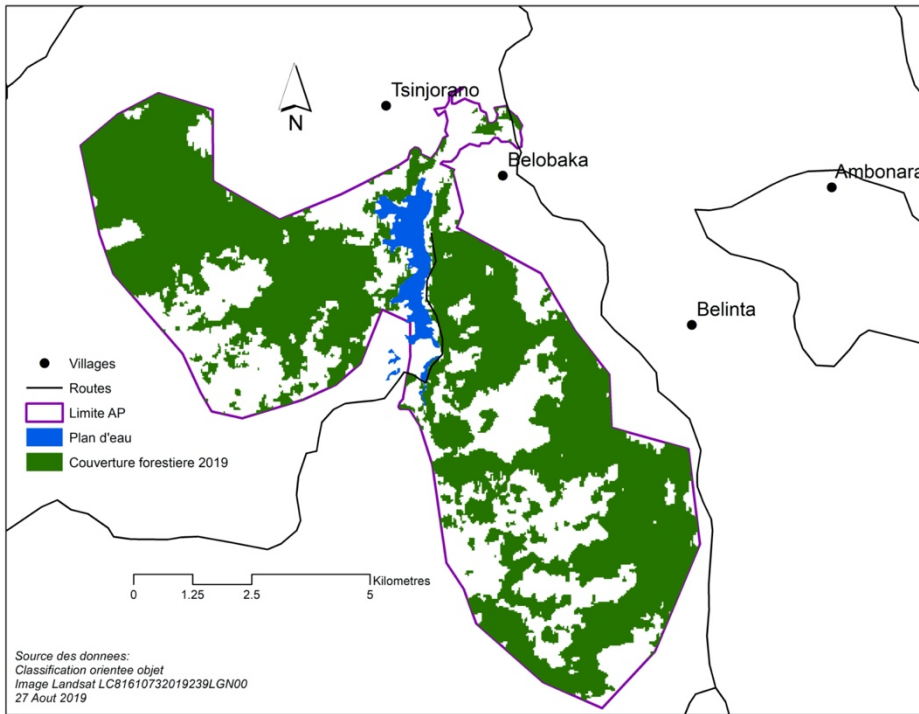
Monthly pond heron surveys have taken place as planned since the start of the project in July. At the end of each month, the team surveyed Lac Ambondrobe and non-permanent satellite lakes and, twice a year in February and July, the team survey all the lakes within the four localities of the Protected Area (Aboalimena, Ankaivo, Belobaka and Andimaky), the farthest being 22km from Lac Ambondrobe. At the lake level, in July 2020, pond herons were recorded on 8 of the 14 lakes, and in February 2021 they were observed on 9 lakes. On Lake Ambondrobe itself, the number of pond heron recorded increased monthly as follows: 4 in July; 7 in September; 19 in October; 107 in November; 132 in December; 168 in January; 283 in February. In March this number decreased to 215 which is to be expected in accordance with seasonal rain and migration patterns.

Madagascar side-necked turtle (rere) surveys took place between 5 November and 8 December 2020 with 621 trap-days (number of traps x no of days). In total, 166 individuals were caught. All levels of age class were caught: 37 adult males, 10 adult females, 72 sub-adults and 47 juveniles. 15 other individuals (1 adult female, 4 sub-adults and 12 juveniles) were caught inadvertently by fishermen but were not harmed. To compare with the last capture sessions, the total numbers of individuals have increased as follows: 38 in 2005; 152 in 2011 and 109 in 2018-2019).

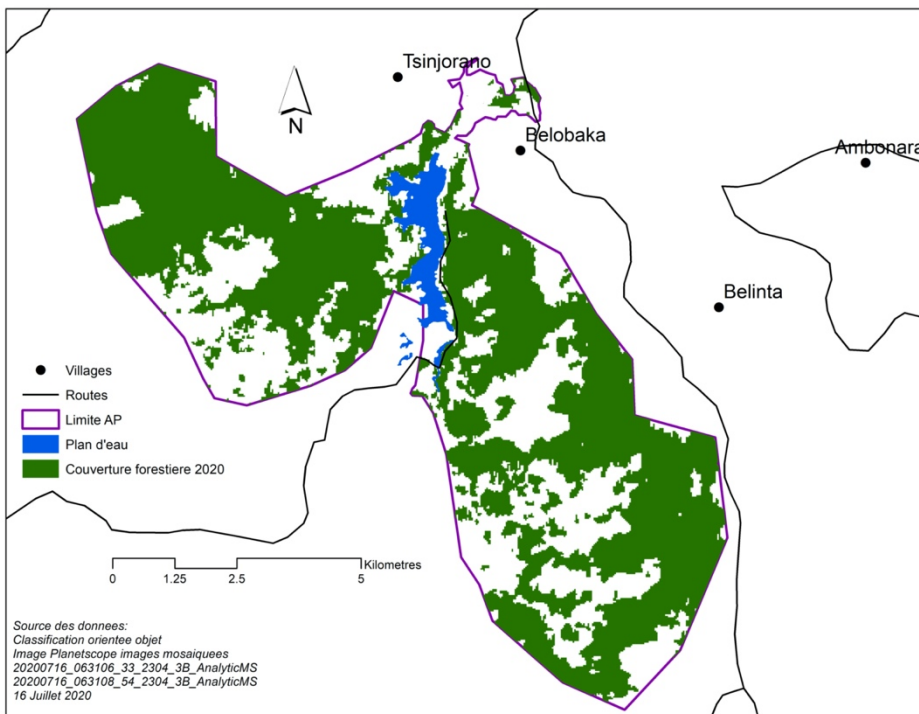
For the rere nest protection, from October 2020 to January 2021, because of collaboration with the local communities 152 nests was measured and protected. The hatch period started in December 2020 and continued to end of March 2021. 1882 babies were hatched. After taking carapace measurements, they were all released in Lake Ambondrobe. During the 12 years of nest protection, this nest number is the second highest number after 158 in 2011-2012, and the number of babies is the best (1389 in 2011-2012) demonstrating the success of patrolling and community nest protection activities and is particularly encouraging given the pressures placed on communities because of the pandemic.

0.3 Undertake annual assessment of forest cover and marsh quality.

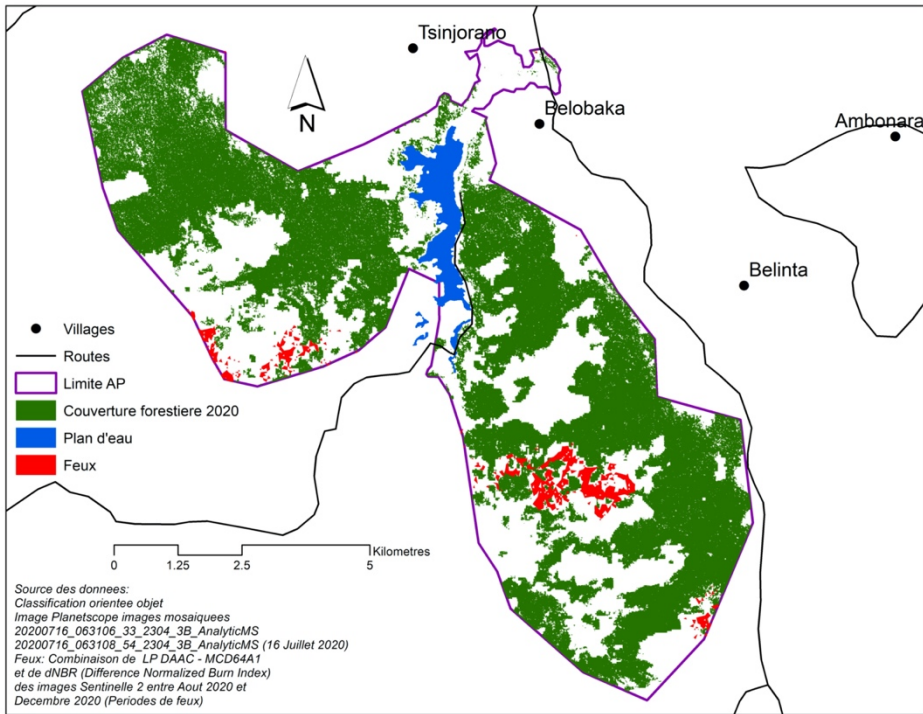
Maps of the forests and marsh distribution in 2020 (map 2) have been created to provide a baseline to measure changes to marsh and forest area throughout the project. 2019 map (map 1) is provided below also as reference, in addition to a map showing the occurrence of fires across the PA (map 3).



Ambondrobe forest/marsh cover - Map 2:



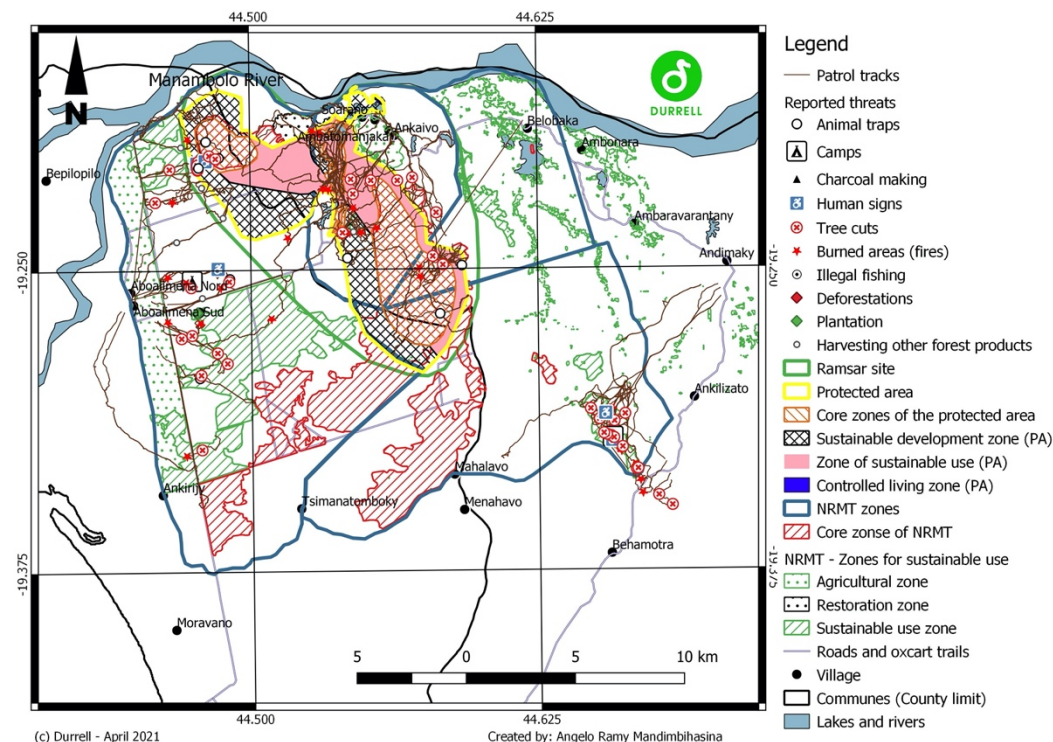
Ambondrobe forest/marsh/fire cover – Map 3:



Output 1

1.1: Undertake community patrols 3-days per week from the 4 local associations in Ambondrobe to record incidences of illegal activity all year. Throughout project.

Patrol activities have continued since the submission of the 27-004 half year report, with a total of 156 patrols between September 2020 and March 2021 (see map below). In this period, 76 patrollers form all 4 groups of villages and 4 Durrell employees have participated in the patrols. They have walked a total distance of 1122.39 km (1st Sept 2020 – 31st March 2021). They have a zone of 12,271 hectares inside the whole complex (NRMT, Ramsar site, and PA) and have reported 84 cases of threats that can be grouped in seven types: tree cuts (48), fires/burned areas (27), signs of human entering in the protected area (5), deforestation (3), plantations (3), illegal camps (2), and illegal charcoal making (1).



1.2: Monthly evaluation of community patrols to feedback and improve performance. Throughout project.

Every month, the Ambondrobe project manager (Clarice Narina), and the field team have met with each patrol group to discuss patrol results and plan patrol routes/itineraries. There has been a decrease in patrol effort since December as community patrollers were preoccupied with agricultural activities as this is the busiest part of the main crop season, and maximising crop yield is their priority at this time. The focus on crop cultivation in Q4 2020 and Q1 2021, has also coincided with the Patrol Coordinator's involvement in negotiating, formalising and operationalising the Natural Resource Management Transfers reducing the amount of time he has had to encourage and convene patrol groups. Patrols in February and March did not achieve the expected number of patrols (48 planned but only 11 patrols conducted in February and 20 in March). This trend was only temporary and planned patrol frequency has now resumed so far in April 2021.

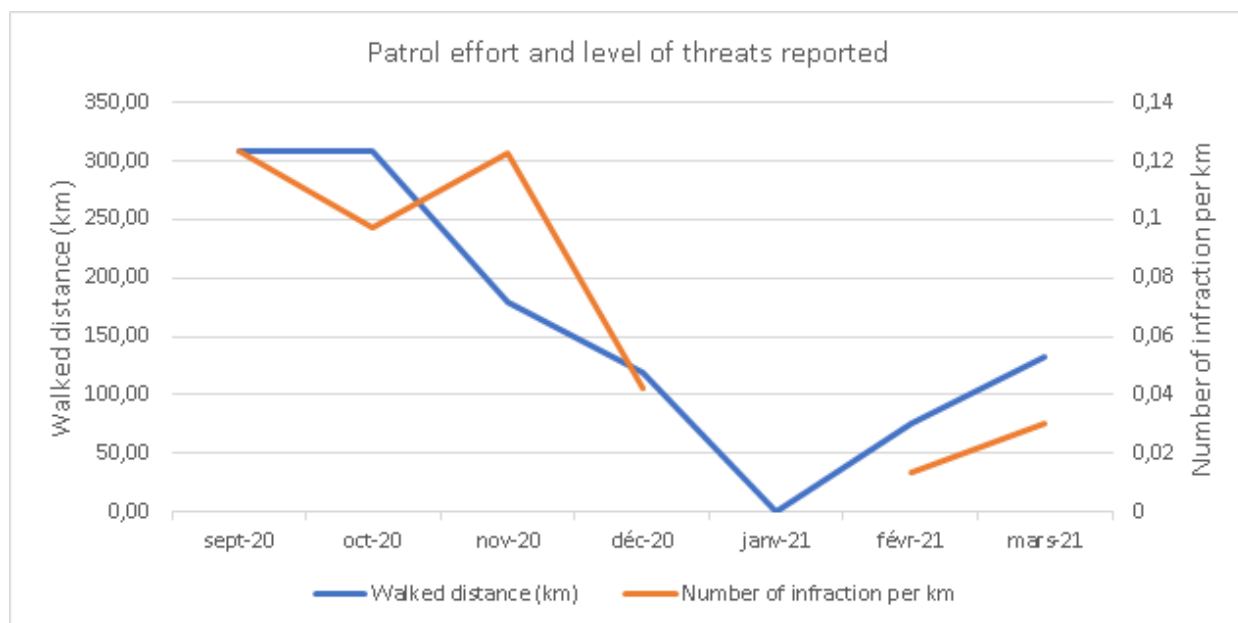


Fig. 1. patrol effort and level of reported threats

As mentioned above, in December 2020, three new Natural Resource Management Transfers were officialised and the one managed by the Ankaivo Village Association was renewed so there are now 4 NRMT functional in Ambondrobe, covering the whole Protected Area and Ramsar Site. These four NRMT are now managed by the existing four village associations and each association has one patrol group. We hope patrol management and efficiency will be better because of the NRMT structure and specification. However, zoning of the PA and those NRMT will need to be renewed, well-marked and communicated, to let local people know what they are permitted to do where, and what they are not. This will be a focus for the next quarter and will also allow patrollers to confidently follow and record authorized tree cutting versus illegal cutting.

1.3: Processing and analysis of data by Durrell's data team in Tana.

SMART patrol data analysis continues as planned. Monthly SMART reports have been produced and are attached to this report as supporting documentation. The tables below show the summary data for patrols conducted between September 2020 and March 2021. Please note: NO patrol data should be made public due to the sensitive nature of this work and the threats to the species, we work to protect.

Table 1. Patrol efforts per month

	Sept-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Total
Number of Days	48	37	24	16	0	11	20	156
Number of participants	46	33	50	19	0	26	30	76*
Person - Days	297	186	163	74	0	56	114	890
Distance (km)	308,66	307,89	179,56	118,79	0	75,43	132,06	1122,39
Number of threats reported.	34	26	14	5	0	1	4	84
Number of threats per kilometre	0,11	0,08	0,08	0,04	N/A	0,01	0,03	0,06

Table 2: Patrol effort per village (group of patrols)

Site	Number of participants	Number of Days	Distance (km)
Aboalimena	24	53	388.38
Andimaka	17	25	171.60
Ankaivo	25	58	470.19
Belobaka	10	20	92.22
Total	76	156	1122.39

1.4: Production of and dissemination of SMART reports to wider Durrell team, Government and law enforcement agencies.

We have produced and disseminated one report per month for July to December 2020. SMART reports for Jul-Aug were provided to Darwin with HYR1 and the remainder are attached to this report. A quarterly report from the first Q of 2021 was also produced and distributed to Law Enforcement and Menabe-Antimena regional partners: DREED, DRAEP and the Bureau of District of Belo and the Regional office in Menabe.

1.5: Train local community patrollers in use of SMART/Cybertracker software in Yr1. Undertake refresher training in Yrs 2 and 3.

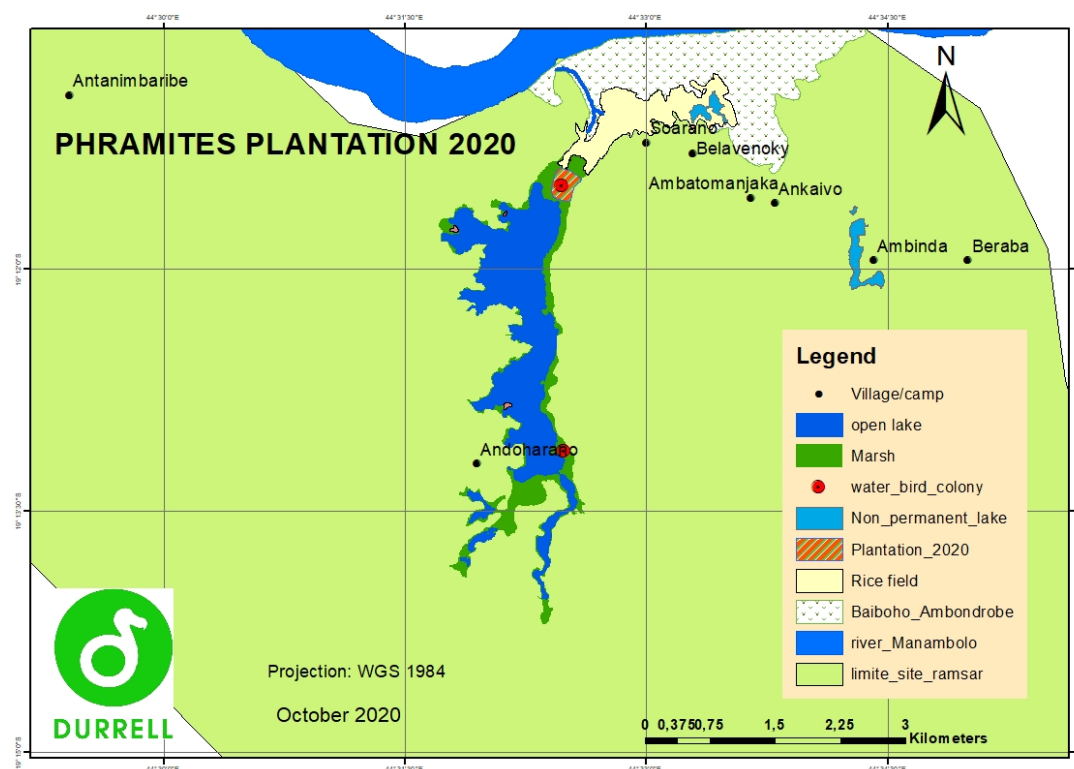
Year 1: There was a training lasting two days held in three villages in November: Aboalimena, Ankaivo and Andimaky (grouping patrollers of Andimaky, Ankilizato, Ampanarena and Belobaka villages). This training was to improve data quality/consistency and patrol efficiency. During this training, patrollers were trained how to use SMART mobile application on smartphones. See photograph below. Also, patrollers were trained to delineate any deforested, burned or planted zones using the SMART mobile software. This training was delivered by two staff from the Durrell data team to 66 people (52 of which were patrollers).



Depending on the COVID situation in Madagascar, another refresher training is planned to happen in the dry season this year. A SMART Connect server will be installed in the Durrell office in Madagascar and this is planned for May 2021 depending on technician availability and COVID, and the system will be tested by the SMART data team in Antananarivo before it is tested in Ambondrobe across the areas with the best mobile internet network coverage. The purpose of SMART Connect is to reduce the amount of time and resource needed to get patrol data back to the field office. Using SMART Connect will allow data to be uploaded to the server in real time, and available Durrell office staff to access this data whilst patrollers are still on patrol so that any urgent infractions can be immediately followed up on e.g., reported to local authorities so police can be mobilised. If initial tests are successful, patrollers will be trained again on the use of SMART mobile which can send data through the mobile network into the SMART Connect server.

1.6: Plant 10Ha phragmites reed each year

81% achieved: The restoration of the marsh, which is the water bird's breeding area and the fish's spawning area, was carried out by the VOIs in July and August 2020. A total of 8.14 ha of *Phragmites communis* were planted (see map below). 72 people from the fokontany of Ankaivo, composed of the 8 villages and the camps around the lake including 6 women's associations, were involved in this activity which lasted about 72 days. This activity represented a sustained community effort. We are having difficulty prioritising where to plant phragmites for our next effort (Jul-Sept 2021) as there are many potential sites which would benefit and so we are looking into the possibility of using drones for this and will report on progress toward this in our HYR2.



1.7: Undertake water hyacinth clearance annually

The removal of water hyacinths from Lake Ambondrobe took place in September 2020 and was carried out by 28 people from the fokontany of Ankaivo. 11 fiberglass canoes belonging to the VOIs were used to perform the removal. It is estimated that 03 ha of the area occupied by water hyacinths were removed and the operation lasted 15 days.

1.8: Undertake weekly nursery maintenance

Work in the tree nurseries began at the end of September in four sites. Seeds were purchased from a neighbouring VOI in Marofandilia (Menabe region) who are known for collecting indigenous forest seeds. Six endemic seed species collected from local communities were used to set up the nursery pots: *Dalbergia* sp, *Commiphora* sp, *Cordyla madagascariensis*, *Albizzia lebeck*, *Terminalia mantaly*, *Baudouinia rouxvillei*. Three nurserymen were hired and were trained by Durrell's staff to run the three nurseries based in Aboalimena, Belobaka and Andimaky villages. They were also provided with equipment (8 watering cans, 8 jerry cans, 25 spades, 20 cutters and 4 barrows). VOIs and association

members also participated in setting up the nurseries (land clearing, setting up the nursery beds, filling in the pots). Nurserymen were responsible for the follow up and the maintenance of the nurseries and the seedlings. In total, 44,000 seedlings were produced in Aboalimena, Ankaivo and Belobaka nurseries. Germination rates (for *Dalbergia* sp, *Terminalia mantaly*, *Baudouinia rouxvillei*) were not as high as hoped. According to technicians, this may be due to the seed storage condition, delay in setting up the nurseries or lack of treatment of native seeds. In response, we will adapt some of the conditions we can control in the next phase of growing seedlings to try and improve this germination rate.

1.9: Undertake annual tree planting (February).

Because of the delay of the rainy season, the reforestation campaign started in February instead of late December. 36 Ha of reforestation including 44,000 seedlings of indigenous species (*Cordyla madagascariensis*, *Albizia lebeck*, *Commiphora* sp.) were undertaken in the fokontany of Aboalimena, Belobaka, Andimaky and Ankaivo during February and March 2021. Approximately 509 people including members of the 4 VOIs, members of FFS groups and women's associations participated in the planting. 2 Durrell's field-based staffs who were previously trained by the Chef Cantonment de l'Environnement et des Forêts (representative of the Environment ministry at District level) technically supervised the village communities during the plantation. We have therefore almost doubled our planned target of 20Ha reforestation in the first year of this project.

1.10 Monitor planted areas.

Tree plantation was effective since March 2021. It was previously discussed with the DREDD team that they will participate in the monitoring of Ambondrobe reforestation. The first follow-up visit is planned in May 2021. DREDD will use their own framework methods to monitor reforestation success and share this with the project for us to adapt and repeat in our own monitoring efforts as the project progresses.

Output 2

2.1 Recruit Ambondrobe Agricultural technician.

The recruitment for two key project roles was delayed due to COVID-19 but this recruitment process started in September and interviews for the role of Agricultural Technician and Social Coordinator took place week commencing 26 October 2020. The interview committee was composed of Durrell's team in central (Antananarivo), regional (Menabe) and local (Ambondrobe) levels. The successful Agricultural Technician candidate took up the post on November 9, 2020. He is based in Ankaivo Fokontany where the local office of Durrell is in Ambondrobe region.

2.2: GSDM train Durrell staff in climate smart techniques including suitable crop options. September–November (Yr1)

GSDM's work is divided into two parts:

- 1) Conducting diagnostic analyses of the socio-economic and agro-pedo-climatic contexts of the area to identify agro-ecological itineraries. This was done from November 15 to November 20, 2020.
- 2) Training of Durrell's staffs and partners on CSA techniques which took place from December 5 to December 8, 2020.

The training took place in Morondava and was led by GSDM's training coordinator and agro-ecology specialist. Four Durrell staff members (including 2 from Tana) and six other members of Durrell's partners intervening in Menabe region (CiRAEP Belo sur Tsiribihina, Mikajy, Louvain, DREDD Menabe) participated in the training workshop.

During the workshop, the main results of the diagnostic surveys as well as the different CSA work plans (see paragraph 2.3) were discussed between Menabe's partners and feedbacks were provided to improve and to adjust the proposed work plans. Participants had the opportunity to deepen their knowledge about the basic principles and the various options of CSA techniques adapted to Ambondrobe. Specific training tools (clear PowerPoint presentations, films) were used by GSDM to facilitate understanding by participants. Tailored technical guidance itineraries on various crops (rice, sweet potatoes, peanuts, market gardening) using CSA techniques were provided by GSDM as well. The training report developed by GSDM is attached to this report.

2.3: Develop Ambondrobe work plan with support from GSDM. September– November (Yr1)

Four GSDM technicians led by an agro-economist expert have undertaken the diagnostic analyses study. The surveys were undertaken in five specific fokontany (Andimaky, Ankaivo, Belobaka, Aboalimena Avaratsy, Aboalimena Atsimo). Observations, focus groups (with 138 participants including 64 women) and individual surveys (with 45 households) have been carried out.

The types of information collected were:

- Characteristics of the agricultural household.
- Productive resources (physical resources such as land and agricultural equipment, labour resources and use of external labour, financial resources, etc.)
- The main agricultural activities (agriculture and livestock) as well as other sources of income, the practice of agroecology techniques by local farmers.
- The economic and food value chains.
- The aim of these observations is to propose agro-ecological cropping systems tailored to the zone and to local farmers and their implementation strategies.

Four main action plans have been developed depending on the topography, the agricultural season and the type of crops adapted to the zone and frequently used by local communities:

- Agro-ecological system for lowland field during rainy season
- CSA system for lowland rice cultivation
- CSA system for land-clearing cropping
- Agro-ecological system for off-season lowland cropping

These plans will be accompanied by adapted CSA practices such as living hedge practice, agroforestry, organic fertilisation techniques, and biological pest control. Detailed information on the diagnosis study and the recommended practices that this project will be employing in Ambondrobe can be found in GSDM's report attached.

2.4: Identify, create and structure FFS (Farmer Field Schools) groups in each association. September–November (annually)

Following the recruitment of the two key staff members, the local team started to organise sensitisation and information meetings in the nine villages from mid-November. The objectives were to explain the agricultural production activities and the Farmer Field School approach. The Head of fokontany and representatives from the two Communes also participated in these village meetings.

At the same time, the 4 operational VOIs that manage the natural resources around the Ambondrobe PA have reinforced the information and communication about the creation of the FFS pilot groups at village level. For this first year of intervention, the main selection criteria for FFS group's members were:

- Being an active member of the VOI and having participated actively in the VOI's activities.
- Being a landowner.
- Committed to attend training programme organised by Durrell's staffs and to adopt the CSA techniques.

The final lists of FFS group members have been validated by the Head of fokontany and the VOIs presidents. In total, 14 FFS pilot groups with 276 members (including 93 women) have been created and structured in the nine intervention villages. The number of FFS group members vary between 15 and 22 and each association has their own executive members. We have therefore exceeded Y1-Y2 targets (160) and are well on our way to meeting project-end target (320) in terms of FFS member farmers participation.

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

Once the Agricultural Technician had been trained on CSA techniques by GSDM in December, he was responsible for organising the training sessions for the newly FFS groups created. When the FFS groups were formed, training on how to create simplified cropping accounts, and the evaluation of production costs during a crop cycle was provided. Thereafter, as the crop phases progressed, the members of the FFS groups received specific technical training corresponding to the crop phases and their selected crops. From January to April 2021, the training topics provided to the groups were:

- History and basic principles of CSA and conservation agriculture methods
- Soil preparation and row seeding techniques.
- Planting of cover crops (crop association technique)
- Training on pre-sprouting of rice and on improved irrigated rice techniques
- Crop maintenance techniques
- Biological pest control and organic fertilisation

These topics were explained in plenary talks and were directly followed by field practices at the FFS sites. Training tools such as technical sheets guidance based on the CSA techniques were distributed to the FFS groups (example training tools are attached). So far, a total of 171 FFS group members (including 62 women) have received technical training. For the 4 FFS groups who will practice black eyed pea crop, training will start from April 2021 as this is off-season cropping (April to July). Other training topics will still be provided until the end of the cropping season (such as yield assessment and harvest management).

2.6: Implementation of agricultural techniques. December – end project

The 2020-2021 cropping season was marked by the late start of the rainy season. Instead of starting in mid-December, the rain did not arrive until the second week of January, resulting in a delay in the start of the agricultural campaign.

The soil preparation began in January 2021. Following the agro-ecologic diagnosis and works plans developed by GSDM, the types of crops chosen, and best suited, for Ambondrobe are:

- Peanut crop (Fleur 11 variety) associated with leguminous plants (Cajanus, Mucuna, Sesbania, Dolic). The leguminous plants are used as soil cover plants, as soil fertility restoration agent as well as food supplement for the local population.
- Rice crop (varieties X265 and Fofifa 160) associated with Niebe (endive).
- Orange-fleshed sweet potato crop (OFSP) to enhance nutrition to communities.
- Black eyed peas associated with Maize crop (IRAT 200 variety) and Vigna umbellata crops which will be planned to be cultivated during the off-season campaign 2021 (April to July 2021) in the fokontany of Aboalimena, Ankilizato, Ankaivo.

OFSP, as well as most of the leguminous crops (Black eyed peas, Vigna umbellata, Dolic, Cajanus, Mucuna), were chosen as nutritive foods for communities. OFSP is a new crop in Ambondrobe, and we wanted to introduce this innovative crop for its high resilience and adaptation to climate variability and for its food security and nutritional qualities, mainly during the lean season when communities experience food insecurity.

The agricultural inputs (seeds and equipment) provided to FFS groups are detailed in the table below:

Designation	Unit	Quantity
Peanut "Fleur 11" seeds	kg	1,550
Rice seeds	kg	1,200
Maize "IRAT 200" seeds	kg	160
Orange fleshed sweet potato.	kg	250
Sesbania	kg	5
Cajanus	kg	5
Dolic	kg	7
Mucuna	kg	100
Niebe	kg	400
Black eyed peas	kg	600
<i>Vigna umbellata</i>	kg	150
Rope	roll	16
Threshing machine	unit	5
Weeders	unit	7
Ploughs	unit	2
Spades	unit	226

The rice varieties (X 265 and Fofifa 160) are improved seeds produced by the FOFIFA Malagasy national agricultural research centre. They are short-cycle seeds (up to 4 to 5 months), which can adapt to difficult water conditions. The Irat 200 maize and Fleur 11 peanut varieties are also improved short-cycle and highly productive seeds. These seeds were purchased from professional seed suppliers in Morondava (Menabe Region) and Antsirabe (Vakinankaratra Region).

FFS demonstration sites have been set up in each village. These sites serve as collective learning, observation and role model sites for FFS members. All practical training on cultivation techniques as well as crop maintenance has been and will continue to be conducted at the FFS sites. The FFS sites also serve as demonstration sites for the village communities to promote the improved CSA techniques. Thereafter, each member practices the learned techniques at their own fields under the guidance of the Agricultural Technician as he makes regular visits. At the time of the yield evaluation, comparison will be made with the results obtained at the FFS reference sites and those of the farmers in their crop fields to ensure learning is effectively translated to farmers' own crop-sites. The FFS members' plots were also geo-referenced to clearly delimit and locate the project's cultivation areas in relation to the boundaries of the Protected Area. This will also allow us to understand what % of farmer cropland is cultivated under CSA techniques demonstrating member engagement with the techniques. In total, 4 FFS sites were set up in Aboalimena, Ankaivo, Belobaka and Andimaky villages. One additional FFS site on black eyed peas and maize crop association will be installed in Ankilizato fokontany from April. In total 68.4 hectares of crop area under CSA techniques has been planted. 42 hectares of black-eyed peas associated with Maize will be planted from April 2021, and necessary seeds and equipment have already been purchased for this.

2.7: Establish school vegetable gardens. September– November (annually)

For this activity in the first year of this project, co-funding was secured from The Ambassador's Special Self Help Fund at the US Embassy in Antananarivo. Four vegetable gardens have been established and are now operational, managed by trained members of the Parent Teacher Associations. Please see attached reports for evidence of the success of this work to date (N.B. These reports are not to be shared publicly or further without the permission of DWCT).

2.8: Annual agricultural surveys

Planned: Harvest period will take place from May to July 2021. Crop yields will be assessed for the FFS group members and the results of the agricultural campaign will be discussed with farmers to identify lessons learned and recommendations for the next crop season.

Output 3

3.1 Recruit Ambondrobe Social Coordinator to lead process.

The recruitment process for the Socio-Coordinator in Ambondrobe was the same as for the Agricultural Technician detailed above. The Socio-Coordinator took up the post from November 16, 2020 and is also based in Ankaivo.

3.2 Assess the feasibility of establishing VSLAs in Ambondrobe

Complete (all activities in this output are on track and we are exceeding Y1 VSLA member targets): A field assessment was carried out in December by Durrell's Agro-Economist coordinator based in Tana and the socio-organiser. The objective was to identify and analyse the existing credit and savings system around the zone, to identify the factors that would facilitate or block the implementation of the approach and subsequently to better orient the implementation strategies of VSLA in the area. A summary of assessments is presented below:

The field studies were undertaken through the following approaches:

- Discussion with local and traditional authorities (Head of villages, villages elders) in three sampled villages: Andimaky, Ankaivo, Aboalimena
- Focus groups with representatives of the 4 VOIs (Vonona ho Maitso, Matezasoa, Magnirisoa Soatalily, and Soa Tahiry)
- Individual interviews with 20 producers per village in the 3 sampled villages.

The following points were noted from the surveys:

- There are not yet any formal financial services (banks and microfinance institutions) in the 2 main communes (Aboalimena and Andimaky) or in the Belo sur Tsiribihina District. To benefit from banking or microfinance services, communities must travel to Morondava (capital of the Menabe region).
- Even without the system, households save money in their own way. However, the amount varies according to the household, its standard of living, and the motivation to save. Moreover, the insecurity issue in the area (existence of the *Dahalo*, who are rural bandits) is a blocking factor for savings at the household level. In addition, more than 80% of the population have seasonal sources of income, i.e., they depend on the sale of agricultural products.

- At harvest time, subsistence farmers sell part of their agricultural production, but they also try to store as much as possible and to build up reserves for the lean season.
- Part of the income from the sale of agricultural products is saved for future household expenses. This money will be put aside or used to buy small animals, or other goods that can be sold if needed (in kind savings).
- People save for recurrent expenses such as school fees, exceptional events such as weddings or funerals, or other unforeseen events (illness or crop failure). They also save for future investments.
- As for the reasons for borrowing, vulnerable people are often forced to borrow and take on debts to pay for daily expenses or to meet medical or other urgent needs. Better-off people (e.g., traders) borrow for working capital and investments. Communities generally make loans from their neighbours (friends or family) and repay them with or without interest or from usurers or collectors with a high interest rate.

Given these findings, the VSLA approach seems to meet the needs of village communities in Ambondrobe in terms of credit and savings for the following reasons:

- Although the approach is still new for the communities around Ambondrobe protected area, the systems are well adapted to the financial capacities and needs of local people.
- The system is flexible because there is existing self-management at group level and so VSLA activity can be integrated to existing institutions.
- Operational costs are minimised, and the interest rate is adapted according to the need and capacity of the group.
- Despite the approach's advantages, communication will be key to ensure communities understand the process and potential benefits, as well as commitments they need to make to participate.

3.3 If feasible, train Ambondrobe staff in VSLA process

Following decision that VSLAs are feasible in Ambondrobe (3.2) 2 field-based staff were trained on eight specific VSLA modules. The training aims to prepare Durrell staffs to implement the intensive phase of the VSLA programme, to mentor and supervise the groups to ensure their success.

The VSLA training modules include:

- Self-assessment and self-selection
- Group creation and management
- Role and responsibility, election of management committees
- Solidarity fund regulations and management of material goods
- Internal regulations on savings and credit
- Development of the group's internal rules
- First savings meeting: account keeping and register.
- First loan disbursement meeting, loan repayment and finalisation of the training

3.4 Establish pilot VSLA groups and train members in VSLA process.

The first-year objectives of the project are to raise awareness of the VSLA approach in the 9 villages, then to create pilot groups to implement and adjust the approach to have a VSLA system that can be scaled up in all villages.

Organising awareness and information campaign at village level

To ensure that all village communities could access information about the VSLA system in an equitable manner (process, membership modalities and services offered in the VSLA), the socio-organiser carried out large-scale sensitisation campaigns in the 9 intervention villages.

This process started with local and traditional authorities and then with local communities. The process was spread over more than one meeting per village, mainly due to COVID restrictions and practicalities. After these visits, 4 VSLA pilot groups were created:

VILLAGE	Number of VSLA pilot groups	Group members	
		Total	Women

ANKAIVO	2	44	18
BELOBAKA	1	20	12
AMPANARENA	1	15	3
TOTAL	4	79	33

Organising module-based training for VSLA members:

The trained socio-coordinator oversaw training for the newly created pilot VSLA groups. The training consists of educating the members on the VSLA process, from the group creation to its autonomy after a 12-month cycle. A training programme that considers the evolution of the group has been designed to guide the groups through the entire VSLA cycle (9 to 12 months).

The trainings are composed of eight foundational VSLA modules: group associative life, leadership and election, solidarity fund regulations, minimum and maximum savings and credit, elaboration of the group's internal regulations, first savings meeting, first loan disbursement meeting, first loan repayment meeting. Training tools in Malagasy version on the eight training modules are made available to the groups. To date, 3 VSLA groups with 64 members (46.8% of them are women) have already received training up to module 6, i.e., finalisation of the group's internal regulations. For all the four groups, training sessions will be completed in April 2021.

Each pilot group were provided with a VSLA tool kit containing:

- 1 large-format 200-page notebook (for accounting and meeting minutes),
- 1 metal box with 3 locks,
- 1 ruler,
- 1 blue pen, 01 red pen,
- 1 calculating machine,
- 2 plastic bowls.

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

Groups will only start the weekly savings and periodic meetings once the training modules are completed. The Durrell socio-coordinator will oversee the groups during the weekly savings and credit meetings. Activities 3.6-3.8 are planned after groups have been trained and are saving.

Output 4

4.1 Develop an operational plan with MSM.

Following the signature of the MOU extension, coordination meeting with MSM Tana was organised in early November 2020 to update the team on the new Darwin project and the intervention approach, then to establish a simple operational plan. Following discussion, it was decided that the MSM family planning (FP) services will be provided through the system of SPO agent (Single Provider Outreach) and the MSM SPO based in the District of Belo sur Tsiribihina will lead and implement the reproductive health actions in Ambondrobe site. Family planning/reproductive health services in the nine villages will be planned at least one month in advance allowing our staff to inform and sensitize village communities, and the SPO to properly organize the on-site interventions for maximum reach during the limited time s/he is there.

4.2 Organise community information meetings on reproductive health in each fokontany.

To launch the project, the Ambondrobe programme team has undertaken courtesy visits to the representative of the Ministry of Health based in the District of Belo sur Tsiribihina and to the responsible of public hospitals in Aboalimena and Andimaky communes to inform and explain the Darwin project and the reproductive health interventions.

From mid-November, mass sensitization meetings were organised in the nine fokontany to inform about the family planning programme in collaboration with MSM. During the village meetings, local and traditional authorities, as well as village elders were consulted specifically to ask their opinions and advice on the project. They were very positive as since last year, the Mahefa project which was run by the government and their partners on WASH and reproductive health aspects was over and after this, no further similar action has been taken. This is changing thanks to this Darwin Initiative project.

A second set of village meetings were organised in early December to inform communities about the first visit of MSM to the nine villages which took place in mid-December. After the community health agents (CHA) that we are going to work with in each village have been selected (see 4.4), the community

sensitizations were conducted jointly by the Socio-Coordinator and the CHAs, and where appropriate, CHAs have undertaken separate home visits to sensitise households instead.

4.3 Collect baseline information and health assessment.

This was part of the baseline surveys undertaken in December 2020. See 0.1.

4.4 Appoint community health workers and carry out reproductive health clinics.

Since 2018, two CHAs were operational in the 9 villages. These CHAs were appointed officially and trained by the health ministry and oversee all aspects of health sensitisation, including reproductive health to prepare communities to attend clinics when they are scheduled.

Following discussion with MSM and the representative of health ministry, the project has decided to start working with one CHA per village (9). They oversee providing information and explanation to communities relating to family planning services (especially the long-term family planning methods) and organising the village visits by the SPO agent. They act also as facilitators between the project, MSM and the communities. Community Health Agents were already operational, set up by the government project mentioned above and so we have been able to re-engage some of these CHAs under this project meaning that they are already very familiar with what is needed and have established relationships with the communities around this subject, and are trusted to share this kind of information. This meant that we could start working with them much sooner than had been planned in our original time frame. To date, two visits were undertaken by the SPO in the 9 villages concerned: the first in December 2020 and the second in March 2021. Before undertaking family planning counselling and practice, the SPO agent conducts awareness-raising and explanation session on the long-term FP methods and answers questions from communities.

The services provided during the two visits are detailed below:

Visit	FP Methods		Number of clients
	Implant	IUD (intra-uterine device)	
December 2020	60	0	60
March 2021	53	12	65

4.5 Community Health Volunteer Training Program developed and launched.

The CHAs have been trained previously by the Ministry of Health on the reproductive health services that can be provided by MSM. However, we think that it is still necessary to organise refresher training around this project's objectives specifically and a time for this is currently being planned.

4.6 Collate monthly reports from MSM.

Following the initial coordination meeting with MSM, it has been agreed that although they do not have formal monthly reporting procedures in place as standard, they will complete a simple template that we will provide, after each SPO clinic has been run. This includes the information provided in the table above and other reflections on success/challenges of the clinic. We have now provided this template to MSM, and they will retrospectively fill it for the first two clinics, and thereafter adopt monthly use of it. For future reports, these collated monthly reports will be provided to Darwin as supporting documentation.

Output 5

5.1 Evaluation of four local associations and assessment of needs undertaken.

The methodology used is based on the "Global Register of Competences for Protected Area Practitioners" (Appleton, 2016) and the "Competency Standard for Protected Area Managers" (REPC, 2013). For this, the following activities were carried out.

The list of all competencies/skills needed for the local associations to ensure effective co-management of the Lake-Forest Complex of Ambondrobe Protected Area was first drawn up (attached). Then, the competencies and skills that are likely to be relevant to the local associations was identified (ref: supporting documentation). The assessment questionnaire has been developed using this new list of competences.

The following four national partners took part in a 2 day-workshop in Antananarivo organised by Durrell Madagascar to define/confirm together the skills, competencies and attitudes needed for the local

associations to ensure effective co-management of the protected area. The broad list of competences and the list of priority competences were reviewed at this meeting, discussed and agreed upon.

- USAID HayTao environmental project,
- 'Réseau des Educateurs et Professionnels de la Conservation à Madagascar' (REPC-MD),
- 'Centre National de Formation de Techniciens Forestiers' (CNFTF),
- Protected Areas Department of the Ministry of Environment and Sustainable Development (MEDD).

(Guided) Self-Assessment of Competencies was the approach chosen to unveil the competencies at the individual level within the four associations of Ambondrobe. One main way in which competencies can be assessed is to review the local association's members existing knowledge, abilities and attitudes, and identify priority areas for strengthening. It is important to note that the self-assessment is not a judgement, but a way to review how well the local association's members can meet their responsibilities for managing the association and the ecosystem/protected area. The themes emerging from self-assessments were discussed further through Individual interview and focus groups.

These results were obtained following individual interviews with 10 of the 27 Local Association Executive Board members. A further 96 local community members participated in the focus groups.

Results showed that the board members have little to no experience or confidence in almost all required competences and skills for managing a protected area at this executive level. For instance, for the protected area management principle which reads "establish regular and systematic planning and monitoring of management activities", annual work plans are available but without support, there is no implementation or follow-up as association executive members described without exception that they do not know what is required or how to do it.

All the other members showed basic levels of competence for almost of the competences especially in terms of patrolling and ecological monitoring. For these activities, it was noted that additional support from Durrell would be useful including training in the use of SMART software and providing equipment such as smartphones – we are working with patrollers in this area (see Output 1). Local association members who are not patrollers also showed good levels of competence in terms of 'identifying signs and evidence of unauthorised activities and security threats in the field' (LAR01), given that they know very well the local context, specifically the threats and pressures of natural resources in their territory.

However, in terms of law enforcement, most of them require extensive competence development and training. This is also true for firefighting which is an important finding. Fire management is one of the biggest issues in this area and the local association's members use very simple techniques to manage it but require more specialized training and appropriate equipment. Their capacity to 'plan, manage and monitor awareness and educational activities' (AWA 01) needs also to be strengthened if behaviour change activities in the region are to be successful. Finally, there is a lack of understanding on how to 'avoid, prevent and report dishonest and/or illegal practices' (FPC04) and this will be a key focus of the new training curriculum.

5.2 Develop training curriculum based on evaluation and needs assessment.

This is now taking place based on the results of 5.1.

5.3-5.9 will take place in Y2 and are on schedule to be delivered as planned.

3.2 Progress towards project Outputs

Output 1: Improved community engagement reduces negative impacts on and is actively restoring lake and forest habitat by 2023.

The first year of the project has met with extremely high levels of engagement especially with regard tree planting and marsh restoration activities. In total, 581 people have taken part in participatory tree planting and marsh restoration activities. A further 76 community members are involved as patrollers. Fewer patrols than planned took place in January and February as patrollers have prioritised their crop cultivation activities. This is always a consideration when patrollers are drawn from agrarian communities, and we do not see this as representing a lack of engagement with the project or its PA management objectives. Rather it is a necessity for rural communities particularly following the fears around financial security caused by the pandemic. We are already seeing an increase in patroller participation in April 2021 and threats identified have declined steadily since September 2020 to the present (even accounting for the reduced distance patrolled).

Output 2: Provision of Climate Smart Agriculture training through Farmer Field Schools leads to increased crop yields, improving income generation and food security for over 300 households whilst reducing harmful environmental impacts by 2023.

We are making excellent progress toward this impact. The baseline was 0 as there has been no agricultural resource/training provision of this kind to date in Ambondrobe. As detailed above, from this baseline we have created 14 FFS pilot groups with 276, 171 of these farmers have received training with training for the remaining farmers planned in the coming months. A total of 68.4ha are being cultivated under the CSA methods, with another 42ha planned before the end of this crop season. We can fully expect to be meeting this output's target of improving income generation and food security for 300+ households by project end. The specific information supporting this will be gathered as part of the harvest agricultural assessment and data will be available by HYR2.

Output 3: Sustainable financial tools and market-based opportunities are developed for 9 fokontany and reach at least 270 individual members (60% of which are women) by 2023. Despite setbacks caused by pandemic restrictions, we have made strong progress on this output's activity and overall goals. To date, 3 VSLA groups with 64 members (46.8% of them are women) have already been created as pilot groups and received initial training. Again, the baseline was 0 as no microfinance alternatives are offered in the region. Based on our previous experience at other sites, once the initial pilot groups are operational and word spreads about peoples' experiences, then the number of groups/members recruited is usually larger than it has been in the initial year of the project (initial cycle of the VSLA). We therefore anticipate achieving or exceeding this output's target by 2023.

Output 4: All households across 9 fokontany in Ambondrobe have access to reproductive health support by 2023 to make choices concerning family planning and household wellbeing.

All 9 fokontany (circa 1200 households) have already been visited by the SPO and have had access to the SPO clinics. Community Health Agents (CHAs) are in place (one per fokontany) and will continue to work as facilitators between the project, MSM and the communities.

Output 5: Local governance capacity and community cohesion is increased across 4 local associations (193 community members) through the provision of capacity building, improved local association infrastructure and social events.

The measurable indicator to have achieved by the end Yr1 was a good governance training curriculum, focused on community leaders' skills and preparedness for PA management. This indicator is not fully reached within the time frame because of the COVID-19 restrictions but is near completion. However, the evaluation of four local associations and their training needs assessment has been completed with the participation of 106 association members. The list of competences and the list of the priority capacity needs for the four local associations are attached. Activities 5.2 and 5.3 are our priority for the next phase of the project. The COVID situation is currently getting worse again in Madagascar with local lockdowns and travel restrictions in place. If we can recommence community gatherings within the next quarter, then we are confident we can be back on schedule by AR2 with regard delivery of good governance training for local association members.

3.3 Progress towards the project Outcome

The wellbeing of c.6400 people in 1000 households across 9 fokontany is enhanced and negative impacts on natural environment decreased in Ambondrobe by 2023.

We are confident of the ability of our indicators to measure progress toward the project outcome. The combination of infractions identified, reduction in harmful agricultural practices, area of cropland under cultivation by each farmer and the areas of marsh restored/trees replanted, provides a range of indicators from which to understand whether negative impacts to the natural environment are being reduced by this project. The household surveys can also help to link trends in threats to the natural environment and project activities. Our annual agricultural assessments and the two household surveys will together help us to understand whether, and the ways in which, project activities are contributing to human wellbeing (economic, social, security etc.).

As the number of individual people now directly involved with the project is already c.1103, despite delays to the project start and community activities (due to COVID), we are confident that we are making good progress toward our outcome and that, through the scaling up that will be possible through Y2 &

Y3, we will be able to improve the wellbeing of people in 1000 households across Ambondrobe by project end.

3.4 Monitoring of assumptions

Assumptions are listed. Where the same assumption applies to multiple outputs it is not duplicated.

Outcome:

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

Comments: Political stability was disrupted by demonstrations organized by opponents in Antananarivo in February 2021 but ultimately these were brought under control by the government in power. Technical services are functioning normally.

Assumption 2: Landsat etc. continue to offer imagery for free and it is readily available to us.

Comments: To date, the imagery service offered by Landsat is functional and free.

Assumption 3: Safety of field staff and local communities is maintained - no serious threats or incidents to staff and villagers.

Comments: Despite the presence of dahalo (bandits) in some villages, the safety of field staff and local communities is maintained - no threats or serious incidents for staff and villagers. Activities can be carried out normally.

Assumption 4: Engagement from local communities towards the goals of the PA and rural development activities does not decrease negatively impacting recruitment of community staffing.

Comments: The commitment of local communities to PA objectives and rural development activities is not diminishing. On the contrary, it improves with the creation of a new VOI group and the motivation of the VOIs to work with the FFS groups.

Output 1:

Assumption 3: Engagement from local communities towards the goals of the PA does not decrease negatively impacting recruitment of community staffing.

Comments: The commitment of local communities to PA objectives and rural development activities is not diminishing. On the contrary, it improves with the creation of a new VOI group and the motivation of the VOIs to work with the FFS groups.

Output 2:

Assumption 1: Environmental conditions change to negatively impact growing seasons and crop productivity e.g., increased cyclone activity, lack of rains/prolonged drought.

Comments: Environmental conditions have changed a bit and have a slight impact on growing seasons and crop productivity. Indeed, there was a delay in the rains, resulting in a prolonged drought until December 2020. But then the rain fell, and the team was still able to catch up with the crop calendar.

Output 3:

Assumption 1: Feasibility study shows not feasible due to insecurity reasons – keeping cash in a centralized and known location is not safe. Savers cannot be engaged in the schemes and therefore the schemes are not viable.

Comments: The feasibility study concluded that the VSLA can be implemented even if there are minor risks associated with the existence of dahalo.

Assumption 2: Community members default on the commitments to the VSLA during the process. To prevent this, a verbal agreement is established between members and unanimous agreement is needed regarding the amount members must pay in each month.

Comments: Community members made commitments to VSLA because of the outreach process on the approach. An agreement is made between the members regarding the amount that the members must pay each month.

Assumption 3: Theft of project savings occurs during implementation.

Comments: The members of VSLA groups have taken the maximum precaution to avoid theft of their groups' savings by distributing the keys to the chests to 3 different people. No theft of savings to date.

Output 4:

Assumption 1: Community members do not react negatively to reproductive health interventions. Financial or other circumstances do not force MSM to withdraw from the project partnership during project implementation.

Comments: Community members are receptive to reproductive health interventions. The results obtained are good for year 1. The project's partnership with Marie Stopes Madagascar has been working well so far. MSM is in a growth phase with new projects funded by UKAID.

Output 5:

Assumption 3: Willingness to engage from local associations and fokontany chiefs.

Comments: Following the sensitization made by the project staff, the community, local associations and heads of fokontany have shown their willingness to engage in training activities organized by the project.

Assumption 4: The government contributes towards office building costs.

Comments: The municipality, the fokontany and the community are ready to contribute to their beneficiary contributions for the construction of fokontany offices.

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

Impact: Improved community well-being and protected area management is ensuring Ambondrobe's dry forest and wetlands are protected providing vital ecosystem services; improved ecological resilience and havens for threatened species.

Progress toward this impact is evidenced in our responses to section 4 and 6 below, and in reporting progress against objectives above. The project's baseline household wellbeing survey, completed in December 2020, will provide the basis from which we hope to demonstrate improved community wellbeing and more effective protected area management at the local level. This data will be viewed alongside biological indicators e.g., aerial forest/marsh coverage data and species surveys, and patrol data to assess project impact across Ambondrobe's social and natural systems.

4. Contribution to the Global Goals for Sustainable Development (SDGs)

SDGs 1 (No poverty) and 2 (Zero hunger) - the project has supported peanuts and rice cropping which are both food and cash crops and are expecting to see an increase in yields with the improved techniques, whilst the area a household is able to cultivate has increased from an average of 0.2/0.3 to 0.5 ha of land. Through the pilot VSLAs introduced in the last year, communities will be able to continue to use credit to expand their agricultural investments or to diversify their livelihoods.

SDG 3 (Good health and well-being) - 9 communities in Ambondrobe have been provided with improved knowledge of and access to long-term family planning methods leading to improved reproductive health of women.

SDG 5 (Gender equality) - the work regarding reproductive health has given women greater freedom of choice which will provide more opportunities for women to participate in business and entrepreneurial activities, as has been seen by their active participation in VSLA activities over the last year – pilot VSLA groups with 64 members of which 46.8% are women, have already been created and received initial training. This also contributes to SDG 9 (Industry, innovation and infrastructure).

SDG 13 (Climate Action), 15 (Life on land) - 171 of farmers have received training in climate smart agricultural techniques with 68.4ha being cultivated under CSA methods, contributing to both these SDGs.

SDG 14 (Life below water) - 14 ha of Phragmites communus were planted, 3 ha of the area occupied by water hyacinths were removed, 36 Ha of reforestation including 44,000 seedlings of indigenous species (Cordyla madagascariensis, Albizzia lebeck, Commiphora sp.) were undertaken and CSA techniques introduced, which will all contribute to improving the quality of Lac Ambondrobe.

SDG 16 (Peace, justice and strong institutions) - the evaluation of four local associations and their training needs assessment has been completed with the participation of 106 association members. SDG 17 (Partnerships for the goals) - We have been working in partnership with local associations, communities, local NGOs and local government.

5. Project support to the Conventions, Treaties or Agreements

This project demonstrably supports CBD objectives by promoting and facilitating sustainable use of natural resources (Target 3, also ITPGRFA), fair and equitable sharing of benefits from the utilisation of natural resources (Target 16, also ABS), and the transfer of appropriate knowledge and technologies to embed agricultural and Protected Area management practices that minimise adverse impact on biodiversity (Target 11). These principles are exemplified by work under the projects FFS/CSA and VSLA initiatives. Through providing training to Local Associations and working with local groups to undertake marsh and forest restoration activities, knowledge and skills for conservation and Protected Area management practices are increased and embedded. These activities are intended to reduce loss of these habitats (Target 5), help ensure ecosystems provide essential services (Target 14), enhance ecosystem resilience (Target 15) and protect populations of threatened species (Target 12), namely the Critically Endangered Madagascar fish eagle and Madagascar side-necked turtle, and the Endangered Madagascar pond heron. In doing so, the project contributes directly to achieving the strategic objectives of Madagascar's National Biodiversity and Action Plan 2015-2025 and its national goals of 1% annual reforestation for all Protected Areas. In line with the Ramsar Convention mission, this project is actively promoting the wise use of wetlands through sustainable implementation of environmentally sound agricultural practices (including use of short-cycle, disease and drought resilient genetic varieties), through which we hope to increase household nutrition, crop yield and income whilst alleviating pressures on wetland habitats and dependent species - changes which our M&E plan has been established to capture. This approach attempts to address the underlying causes of biodiversity loss, whilst protecting and advancing agricultural and economic development for some of the world's poorest communities (Aichi Strategic Goal A/Target 1 & 4; Strategic Goal B/Target 7). Durrell Madagascar are in regular contact with the CBD, CITES and Ramsar Focal Points in Madagascar and is a National Ramsar Committee member. At this point, we do not have specific news/developments to report in relation to this interaction but will seek opportunities to strengthen interaction specifically around this project over the course of the next project year.

6. Project support to poverty alleviation

Expected beneficiaries of the project are local communities in the 9 villages surrounding the Ambondrobe protected areas. These communities include also the 4 VOIs who are the local managers of the PA's natural resources. The local economy is mainly in the primary sector and more than 95% of local population lives mainly from agriculture (mainly rice farming), fishing, livestock and the exploitation of the natural resources. Most households live on an income of less than \$2/day. Besides, many have been affected by the restrictive measures caused by the establishment of the PA.

The project will help vulnerable communities to directly improve their livelihoods and income through improved agricultural productivity. Besides, through the project, sustainable local systems are put in place for better financial management of household cash flow to enable them to cope with difficult periods such as the lean season and climatic hazards. The well-being of the population is also improved as households can now access health services such as family planning. In addition, the project will help to improve VOI's skills in good governance and environmental resource governance in order to make PA and natural resource management effective.

At this stage, direct impacts on poverty reduction cannot yet be measured. However, in the short term, we expect an improvement of income for the target beneficiaries. In fact, for agricultural activities we have supported peanuts and rice cropping which are both food and cash crops. If before with traditional techniques, the average yields were respectively 1.5 tons/ha and 2 tons/ha for rice and peanuts crops, with the improved techniques, we are expecting an increase in yields ranging from 3 tons/ha for rice and 3.5 tons/ha for peanuts. Furthermore, while before a household could only cultivate an average of 0.2 to 0.3 ha of land, with the support of the Darwin project, the cultivated area has increased to approximately 0.5 ha.

In addition, financial education training will build the capacity of beneficiaries to better manage financial benefits and with the VSLA system, communities will be able to continue to use credit to expand their agricultural investments or to diversify their livelihoods. As already mentioned, the VSLA system will help directly vulnerable households to access funds to cope with health, children's education issues and to cope with the effects of natural disasters (cyclones, flooding).

Certain activities provide indirect incentives to the communities (VOIs, patrollers, village communities) to encourage them to fulfil their roles and responsibilities in managing and conserving the natural resources and biodiversity. For instance, to join the FFS groups one must be an active member of VOI. CSA techniques are targeting crop productivity enhancement but also adaptation and mitigation to the

negative effects of climate change. Moreover, family planning services are providing a long-term and sustainable solutions to food security, community wellbeing and biodiversity conservation efforts.

Patrollers have received payment of 8,000 Ariary per day for patrolling. As a maximum, they have each received 96,000 Ariary per month if they have been able to complete the 12 patrols planned. Patrol effort have been completed for October in all 4 villages but slightly reduced since November. This income contributes to improving ranger's lives.

7. Consideration of gender equality issues

Nine communities in Ambondrobe have been provided with improved knowledge of and access to long-term family planning methods leading to improved reproductive health of women, giving women greater freedom of choice which will provide more opportunities for women to participate in business and entrepreneurial activities, as has been seen by their active participation in VSLA activities over the last year. Pilot VSLA groups with 64 members of which 46.8% are women, have already been created and received initial training.

8. Monitoring and evaluation

Durrell Madagascar has an M&E system developed under our concurrent JOA-funded conservation livelihoods project. Since the two projects are very similar, this project's M&E framework has been developed in line with the JOA project but adapted to suit the Ambondrobe context. To date, the systems and processes used internally to monitor and evaluate the project have been working as planned through Year 1 (9 months). The Evaluation Assistant who will support the team to conduct annual agricultural surveys in the field following the harvest is currently being recruited.

Following the development of the Monitoring-Assessment Plan and to collect the achievement data, monitoring tools were developed from the main project indicators, both for objectives and for activities. At the outcome and output level, the data will be collected mainly during the initial evaluation by household surveys at the beginning of the project (complete) and at the end of the project. The tools used will therefore be the household questionnaires and the interview guides. We are confident of their efficacy having made some changes from the first survey of this kind that we undertook at three other sites in Madagascar in 2018. For the activity level, the data will be collected regularly by the field staff. The tools used will be the tracking sheets, which are sent monthly or quarterly (depending on the activity) to the Evaluation Assistant and the Monitoring-Evaluation Manager.

One of the project's top priorities for 2020 was the implementation of the baseline household survey. Despite the COVID-19 pandemic, this assessment was completed by the end of 2020. The biggest evolution of the data collection method compared to conventional methods has been the development of the data collection tool on Android tablet which has significantly increased efficiency of data collection and analysis. Based on the project's agreed indicators, the methodological framework was refined ahead of the survey in September and October 2020. Three investigators were recruited to carry out the survey with 270 households in the nine villages of Ambondrobe. Training on questionnaires and tablet use with the three investigators took place from 17-20 November 2020 at Durrell's office in Antananarivo.

Questionnaires were developed during October and November 2020, with questions being drawn largely from those used in the baseline JOA project study but adapted to suit Ambondrobe's context e.g., the types of produce and particular environment/social challenges. Finella Gray, our Database Manager, developed this questionnaire under Epi Info 7 for Android mobile.

Field data collection was carried out from 24 November - 5 December 2020 and was completed successfully. Adding to the quantitative survey, qualitative interviews with administrative staff (Medical Inspector, Chief CISCO) of the district capital (Belo on Tsiribihina) were carried out to add some more context to the information captured in the household surveys.

The table below summarizes the number of households surveyed per village:

COMMUNE	VILLAGE	Number of Households
Aboalimena Atsimo	Aboalimena	30
Aboalimena Avaratsy	Aboalimena	30
Ankirijy	Aboalimena	12
Ankaivo	Andimaky	30
Belobaka	Andimaky	30
Ambaravaratany	Andimaky	30
Andimaky	Andimaky	30

Ampanarenana	Andimaky	30
Ankilizato	Andimaky	30
TOTAL		252

Currently the data is being cleaned and pre-processed with the support of a Data Processing Consultant. These data will then be transferred to Rachael Gerrie, M&E Officer in the UK, for processing with R software, before being analysed in Excel. A full report will be available and forwarded to Darwin in June 2021.

Improving collaboration with partners for information sharing among partners/stakeholders is an ongoing process and is central to the project so that its result can improve practice among other stakeholders in Ambondrobe and Madagascar more widely. We are in regular contact with The Regional Directorate of Sustainable Development (DREDD), the Regional Directorate of Agriculture, Livestock and Fisheries (DRAEP) and the various NGOs (Marie Stopes Madagascar, etc.) to exchange information on the progress of the project and the problems encountered, and the monitoring/reporting mechanisms in place for this appear to be working well as evidenced by the supporting documents attached to this report.

9. Lessons learnt.

We have found it particularly useful to involve the technical services of the regional Ministries and other regional stakeholders, including VOI leaders, for agricultural activities in a public way to raise the profile of the project. This seems to have encouraged the recruitment of participants to the Farmer Field School groups and raise confidence in CSA methods, and local staff members also feel supported by the recognition of regional technical services. Considering the possible fluctuation in the growing season is an important learning for us, and our strong recommendation to similar projects is to be prepared for late/early rains etc. where possible and build flexibility into the project for this.

The collaboration with the two CHA (Community Health Agent) of each village has led to good results on Family Planning and we would recommend this approach to others. It has helped a lot to get this project operational quickly particularly as they were already familiar with the approach through a previous initiative. The involvement of older children in maintaining school gardens is working particularly well, especially in main crop season time as parents and teachers can have other priorities. We have found it very useful and instructive to have the gender approach built into each activity using % or number targets. This helps us focus on how we approach member recruitment and messaging, and we are confident of its importance in achieving our main objectives.

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

First annual review – no feedback received at half year review.

11. Other comments on progress not covered elsewhere.

Please see attached commentary on risks/delays posed to the project by the worsening COVID-19 situation in Madagascar.

12. Sustainability and legacy

Given the delay in starting the project, the team's efforts were mainly focused on catching up on project activities. However, during the start of the project, the Darwin project and its missions were presented and discussed with the project's main partners and local authorities at district, communes, fokontany levels.

At this early stage of the project, we have noted a significant expression of interest from the communities in relation to Darwin's activities, particularly for agricultural activities, for which we have received many requests to join the FFS groups. Although some agro-ecology techniques were quite new, the uptake of these techniques by the farmers did not encounter many constraints. Moreover, thanks to the FFS sites, we are also beginning to see the interest of community villagers in the CSA techniques promoted in the demonstration sites.

Since the start of the project, we have involved local grassroots community representatives such as VOIs, patrollers, CHAs and local authorities (Chef de Fokontany) as widely as possible including during introductions to the project activities, and verification of eligibility criteria during selection processes. So far, the project has made a lot of effort to build the capacity of these grassroots structures to enable them to have the skills needed to carry out their roles and responsibilities. The empowerment and capacity

building of local communities are necessary for the sustainability and legacy of the actions, and this continues to be a central focus of the project.

13. Darwin identity

On notification of success, the project was presented to and discussed with Darwin's partners (e.g., GSDM, MSM and Graine de Vie) so that the partners could review the objectives of the project and plan their contribution to project activities. Likewise, the Darwin project was presented to other partners intervening in Ambondrobe protected area such as USAID Mikajy, COKETES (GEF/UNEP) so that there could be synergy and coordination in the implementation of activities. As Durrell is also an active member of the PHE (Population-Health-Environment) network in Madagascar, the Darwin project and partnership with MSM were presented during the coordination meeting of PHE members. The Darwin logo has featured in presentations during all these stakeholder meetings.

Darwin's logo was used in the training materials (like the agricultural technical guidance sheet) used with the communities and in GSDM official reports relating to agro-ecology diagnostic survey in Ambondrobe and CSA training to Durrell's staffs and partners. Darwin's logo will also be put on to the two newly built wells (see attached reports to US Embassy SSH fund). Awareness raising materials for communities and for use by Community Health Agents such as banners and posters which incorporate the Darwin's logo are being produced also.

14. Impact of COVID-19 on project delivery

In general, the Menabe region (City of Morondava) is a city that has suffered from the Covid-19 pandemic. However, the Belo sur Tsiribihina District and its surrounding communes including the two rural municipalities of Aboalimena and Andimaky and the nine Ambondrobe project villages, have fortunately not seen any cases or symptoms of COVID-19 to date.

To mitigate potential COVID-19 infection, and according to Malagasy state directive, Durrell's team respects the following rules:

- The number of participants at a meeting may not exceed 50
- A physical distance of 1m between participants at a meeting is respected
- Wearing a mask at the meeting is required
- Use of alcohol gel is required
- Most of the meeting can be in plenary (i.e., lecture led rather than activity led).
- Durrell is responsible for the provision of the necessary safety materials used at the meeting.

Cases are rising across Madagascar and whilst we have excellent procedures in place to mitigate the risk of disruption to project activities, if cases continue to increase and restrictions to travel and meetings are made more severe than they currently, the following activities are likely to be affected:

- Family Planning Awareness raising with Marie Stopes (although MSM have always had a permit to continue working throughout the pandemic so disruption would only be caused to this activity in the very worst-case scenario).
- All activities that require large meetings such as FFS and VSLA training, and periodic progress review meetings.
- Smart training by Durrell's central staff members due to the travel and lockdown restrictions in Antananarivo.
- The forest cover study would need to be postponed if staff were not able to travel to Ambondrobe from Antananarivo.

15. Safeguarding

Please tick this box if any safeguarding or human rights violations have occurred during this financial year.

If you have ticked the box, please ensure these are reported to: ODA.safeguarding@defra.gov.uk as indicated in the T&Cs.

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.

16. Project expenditure

TO FOLLOW

Table 1: Project expenditure during the reporting period (1 April 2020 – 31 March 2021)

Project spend (indicative) since last annual report	2020/21 Grant (£)	2020/21 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				

Highlight any agreed changes to the budget and **fully** explain any variation in expenditure where this is +/- 10% of the budget. Have these changes been discussed with and approved by Darwin?

Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2020-2021

Project summary	Measurable Indicators	Progress and Achievements April 2020 - March 2021	Actions required/planned for next period.
<p>Impact Improved community well-being and protected area management is ensuring Ambondrobe's dry forest and wetlands are protected providing vital ecosystem services; improved ecological resilience and havens for threatened species.</p>		<p>At this stage, impacts are not yet tangible, but the following facts are noted: I) The number of Side-necked turtle's nests observed (152 nests between October and January 2021) is very high (the best number was observed in 2011-2012 with 158 nests). II) 276 beneficiary households around Lake Ambondrobe no longer use chemical inputs (fertilisers and pesticides).</p>	
<p>Outcome The wellbeing of c.6400 people in 1000 households across 9 fokontany is enhanced and negative impacts on natural environment decreased in Ambondrobe by 2023.</p>	<p>0.1 Area of dry forest by end Yr3 is at least 5,300Ha (current area 5,467Ha) representing a decrease in deforestation rate from current 2.1% to less than 1%</p>	<p>Maps of the forests and marsh distribution in 2020 have been drawn up as an initial reference. The decrease in forests and marsh areas will be calculated from 2021 onwards.</p>	<p>Field verification will be planned in June 2020.</p>
	<p>0.2 Improve area of quality marsh within 50Hectares by 60% from 2020 baseline</p>	<p>This year, we started with the restoration of 08.14 ha of marsh area.</p>	<p>For Y2, the target will be increased to 12 ha to close the gap with Y1.</p>
	<p>0.3 Populations of threatened Madagascar Pond Heron and Madagascar side-necked turtle at least same in 2022/23 compared with 2020 baseline</p>	<p>There was a gradual increase in the number of pond herons: 4 in July; 7 in September; 19 in October; 107 in November; 132 in December; 168 in January; 283 in February. A decrease in numbers (215) was noted in March due to seasonal rainfall and migration patterns.</p> <p>For the protection of side-necked turtles, 152 nests were measured and protected between October 2020 and January 2021. 1,882 babies hatched</p>	<p>Continue population monitoring in Y2 of project.</p>

	between December 2020 and March 2021.	
0.4 Subjective well-being indicators (Global Person Generated Index; % households who are satisfied with life; % who feel their actions are worthwhile; % who felt anxious yesterday; % who felt happy yesterday) improved by end Yr3	Household surveys have been conducted (Nov-Dec 2020) to establish baseline information for indicators 0.4-0.8. This data is currently being cleaned and analysed and will be made communicated to Darwin at the next HYR.	Y2: Clean, analyse and present baseline household survey data. Y3: Conduct follow up household survey to establish project impact.
0.5 Measures of food insecurity (assessed via Household Food Insecurity Access; Months of Adequate Household Food Provisioning and the Food Consumption Score Nutritional Quality Analysis scales) in intervention villages improved by end Yr3	As above	
0.6 By project-end, 100% of women aged 15-49 in nine villages are aware of long-term family planning methods and how to access reproductive healthcare services	As above	
0.7 The proportion of households who believe they have the power to influence decision making in their communities has increased by end Yr3	As above	
0.8 Improved economic independence and resilience (% of households using VSLAs to manage their savings and value of savings) has increased by end Yr3	As above	
Output 1. Improved community engagement reduces negative impacts on and is actively restoring lake and forest habitat by 2023.		
1.1 In each year of the project, 12 patrols per month are undertaken across 1440Ha forest and lake within Ambondrobe PA.	From September 2020 to March 2021, 156 number of days of patrolling have been undertaken by 76 patrollers. A total of 1122,39 km of distance were walked and 84 cases of threats have been reported. Patrolling continues monthly for remainder of project.	
1.2 4 village patrol groups (28 patrollers) trained in use of smartphone devices a SMART/Cybertracker patrolling software by end Yr1.	In total 52 village patrollers from 4 villages (Aboalimena, Ankaivo, Andimaky, Belobaka) have been trained on the use of smart/Cybertracker software.	
1.3 10Ha phragmites marsh replanted each year to improve quality of 50ha marsh area by 60% by Y3; total 30Ha restored by Yr3.	8.14 ha of marsh have been restored. The main constraints were the difficulty to identify the plantation area. In Y2, the use of the drone to target the restoration zone will be recommended.	

	1.4 5Ha invasive water hyacinth removed from lake each year	3 ha of lake area have been cleaned from invasive water hyacinth.
	1.5 Maintain current levels of sapling production across four community nurseries to enable 20Ha reforestation per year; 60Ha total	In total, 44,000 seedlings were produced in Aboalimena, Ankaivo and Belobaka nurseries. Nursery and subsequent reforestation activities continue as scheduled throughout Y2 and Y3.
	1.6 20Ha replanted Yr1; 20Ha replanted Yr2; 20Ha replanted Yr3	36 Ha of reforestation including 44,000 seedlings of indigenous species (<i>Cordyla madagascariensis</i> , <i>Albizia lebeck</i> , <i>Commiphora sp.</i>) were undertaken in the fokontany of Aboalimena, Belobaka, Andimaky and Ankaivo during February and March 2021
Activity 1.1 "Undertake community patrols 3-days per week from the 4 local associations in Ambondrobe to record incidences of illegal activity all year. Throughout project"		156 community patrols have been carried out between September to March 2021. The meeting of patrollers with the Chef de Cantonment will be organised in May 2021.
Activity 1.2. Monthly evaluation of community patrols to feedback and improve performance. Throughout project		Every end of the month, a meeting to collect data, to develop a monthly planning and to assess the patrollers is carried out. The meeting of patrollers with the Chef de Cantonment will be organised in May 2021.
Activity 1.3. Processing and analysis of data by Durrell's data team in Tana. Ongoing throughout project		The patrol data is stored securely and on a monthly upload basis, then the Durrell team undertake monthly data processing, analysis and report write-up/adaptive management. Continues the same planned schedule during Y2 and Y3.
Activity 1.4. Production of and dissemination of SMART reports to wider Durrell team, Government and law enforcement agencies. Throughout project		The SMART report has been shared with DREDD, CEF as well as the 2 mayors of Andimaky and Aboalimena Communes (Andimaky and Aboalimena) A SMART Connect server will be installed in the Durrell office in Tana in May 2021. The objective of the server is to reduce the time and resources required to return patrol data to the field office. Using SMART Connect will allow data to be uploaded to the server in real time, and Durrell 'staffs will be able to access to this data so that any infractions can be immediately identified and followed up.
Activity 1.5. Train local community patrollers in use of SMART/Cybertracker software in Yr1. Undertake refresher training in Yrs2 and 3.		Refresher training will be planned in Y2 but depending on the covid-19 situation.
Activity 1.6. Plant 10Ha phragmites reed each year (August)		In 2020, the restoration of 8.44 Ha marshes was carried out with the participation of communities and women's associations. Marsh restoration will be planned in August 2021. The use of drone to identify potential marsh plantation area will be piloted.

Activity 1.7. Undertake water hyacinth clearance annually (November)	Water hyacinth clearance has been removed from 3 ha of Ambondrobe lake in November 2020.	To be continued according to schedule in November 2021.
Activity 1.8. Undertake weekly nursery maintenance.	In 2020, 3 nurserymen were recruited to ensure watering and maintenance of saplings in the 3 nurseries.	In Y2, partnership with GdV will be developed and GdV will provide training to the nurserymen and will support the implementation of nurseries.
Activity 1.9. Undertake annual tree planting (February)	36 Ha of reforestation including 44,000 native species of saplings (<i>Cordyla madagascariensis</i> , <i>Albizia lebeck</i> , <i>Commiphora sp.</i>) have been carried out.	
Activity 1.10. Monitor planted areas & hyacinth regeneration.	Monthly monitoring missions are undertaken by patrollers and Durrell's field staff to oversee the reforestation zone and the existence of the water hyacinth.	Reforestation monitoring will be carried out by CEF from June 2021
Output 2. Provision of Climate Smart Agriculture training through Farmer Field Schools leads to increased crop yields, improving income generation and food security for over 300 households whilst reducing harmful environmental impacts by 2023.	2.1 Agricultural productivity, chemical inputs and crop varieties have been assessed for all 9 fokontany by end of 2020.	These parameters are included in the baseline household surveys report which is near-completion and will be shared as part of the next HYR.
	2.2 160 farmers trained via Farmer Field Schools (FFS) in Yr2 and Yr3 (320 total) (>30% female participation)	171 farmers (including 62 women) have been trained on CSA techniques and on improved cropping techniques.
	2.3 Farmers adopt improved agricultural techniques and are cultivating climate resistant crops and highly nutritional crop varieties on a greater proportion of their land	In total 68.4 hectares of crop area targeting staple crops and high nutrition value crops are cultivated under CSA and agroecology techniques
	2.4 Cropland managed using chemical pesticides and fertilizers has decreased from Y1 to Yr3	As 2.1
	2.5 Agricultural yields and income for famers growing new crops has increased from Y1 to Y3.	As 2.1
	2.6 Vegetable gardens established at 4 primary schools and 1 secondary school by end Yr2 and producing crops by end Yr3	4 primary school vegetable gardens already established as co-funding secured. Harvest of first crop season will take place from June 2021 and gardens will be resown from September. Darwin funding will now supplement the implementation of market garden activities and fully take over the funding of these activities from October 2021.

Activity 2.1. Recruit Ambondrobe Agricultural technician	1 agricultural technician has been hired in November 2020.	
Activity 2.2. GSDM train Durrell staff in climate smart techniques including suitable crop options. September–November (Yr1)	4 Durrell's staffs were trained by GSDM on CSA/CA techniques	
Activity 2.3. Develop Ambondrobe work plan with support from GSDM. September– November (Yr1)	An action plan tailored to Ambondrobe contexts were developed with the support from GSDM.	
Activity 2.4. Identify, create and structure FFS groups in each association. September– November (annually)	14 FFS groups were created and structured.	Continue to recruit new FFS members and create new FFS groups as scheduled.
Activity 2.5. Train and support FFS groups in techniques. November – end project	171 FFS group members were trained on the CSA and agroecology techniques.	Continue to train and support FFS groups members (existing and new) as scheduled.
Activity 2.6. Implementation of agricultural techniques. December – end project	68.4 hectares of crop area under CSA techniques has been planted.	
Activity 2.7. Establish school vegetable gardens. September– November (annually)	See 2.6 above.	
Activity 2.8. Annual agricultural surveys (October)		Agricultural yields surveys will be planned from June 2021.
Output 3. Sustainable financial tools and market-based opportunities are developed for 9 fokontany and reach at least 270 individual members (60% of whicare women) by 2023.	3.1 By end 2020 feasibility of implementing a VSLA in each village is established through expert advice and interviews	A feasibility study was carried out by Durrell's Agro-Economist Coordinator in Antananarivo to tailor the VSLA approach to Ambondrobe site prior to implementation.
	3.2 By Yr2 end, 3 pilot VSLA with over 60% female participation will have completed one full cycle with progress assessed by membership and value of savings	3 VSLA groups including 64 members (46.8% of them are women) have been created. Members will be trained on VSLA specific modules and will afterwards start saving money.
	3.3 By end Yr3 VSLAs operational in all 9 fokontany accounting for approx. 10% of adult population in each village, of whom 60% are women	
	3.4 12 members from the 4 local Women's Associations attend regional fair in Morondava each year of project.	
	3.5 Market value chains for local products and services identified by end Yr2	

Activity 3.1. Recruit Ambondrobe Social Coordinator to lead process.	Social Coordinator was recruited in November 2020.	
Activity 3.2. Assess the feasibility of establishing VSLA's in Ambondrobe	A feasibility analysis relating to the establishment of the VSLA approach was undertaken.	
Activity 3.3. If feasible, train Ambondrobe staff in VSLA process	2 Durrell's field staff members have been trained on VSLA approach and modules.	
Activity 3.4. Establish pilot VSLA groups and train members in VSLA process.	3 VSLA pilot groups were created and 64 VSLA members have been trained on VSLA modules.	VSLA groups will start saving from April 2021.
Activity 3.5. Monthly meetings with VSLA groups to track progress through the full cycle		Once the VSLA groups will start saving (from April 2021), monthly meetings will be carried out.
Activity 3.6. Roll out VSLA to all other fokontany.		
Activity 3.7. Take members of the Women's associations to annual regional fair in Morondava		Will only be possible when COVID risks have reduced enough to make it safe.
Activity 3.8. Research and identify market value chains for locally produced products		
Output 4. All households across 9 fokontany in Ambondrobe have access to reproductive health support by 2023 to make choices concerning family planning and household wellbeing.	4.1 By end Yr1, MSM community health workers have established contact and organized initial workshops in the 2 communes reaching people in 9 fokontany	9 CHAs have been appointed and mass sensitization has been organised in the 9 fokontany to inform and to sensitize village communities about the family planning programme undertaken by MSM and Durrell.
	4.2 By end Yr2, active reproductive health programs are operational in the 2 communes reaching people in 9 fokontany	2 visits of MSM agent have already been organised in the 9 fokontany to provide long-term family planning services to communities.
	4.3 By end Yr2, a Community Health Volunteer Training Program (CHV) has been launched, with the first volunteers promoted by communities in Yr2 and trained in Yr3	We have already achieved this indicator as trained and experienced CHA/CHVs are operational in all project communities, recruited from dormant networks set up under a previous WASH project in Ambondrobe. These CHAs will be provided with further training in Y2.
	4.4 100% of females aged 15-49 in 9 fokontany have access to regular (quarterly) reproductive health clinics by end Yr3; all women aged 15-49 are aware of contraceptive choices and where to access them	Ongoing. All households can now access SPO clinics, and these are running on a quarterly basis with the next to be held in June 2021.

Activity 4.1. Develop an operational plan with MSM.	An operational plan was developed jointly with MSM.	
Activity 4.2. Organise community information meetings on reproductive health in each fokontany	Mass sensitization meetings have been organised in the 9 fokontany from November to December 2020	
Activity 4.3. Collect baseline information and health assessment.	Baseline information and health assessment were undertaken in the global baseline studies in December 2020.	Baseline report is near completion and will be included in our next HYR.
Activity 4.4. Appoint community health workers and carry out reproductive health clinics.	9 CHAs have been appointed and 125 women have benefited from family planning services.	
Activity 4.5. Community Health Volunteer Training Program developed and launched.		
Activity 4.6. Collate monthly reports from MSM.	2 intervention reports retrospectively developed by MSM.	
Output 5. Local governance capacity and community cohesion is increased across 4 local associations (193 community members) through the provision of capacity building, improved local association infrastructure and social events.	5.1 By end Yr1, a good governance training curriculum, focused on community leaders, has been developed through the evaluation of 4 local associations and their primary needs.	An evaluation of the 4 local associations was undertaken to identify the competencies and skills needed to enhance the association's capacity in good governance and in managing the natural resources around the protected area.
	5.2 By end Yr2, training programme delivered and impact assessed in Yr3	On schedule. Bespoke training programme in development and we will begin implementation as soon as COVID allows, and in small groups, outdoors at first if necessary.
	5.3 By end Yr2, 4 administration offices have been built and have information boards showing Protected Area regulations, patrol updates etc. in words and images.	
	5.4 % of households participating in local associations has increased at end Y3 cf. Yr1.	
	5.5 Number of decisions supporting development and environment at the local, commune and regional level has increased at end Y3 cf. Yr1.	
	5.6 180 people from the 9 fokontany engaged in annual football competitions each year.	

Activity 5.1. Evaluation of four local associations and assessment of needs undertaken	An evaluation of competencies/skills was undertaken for the 4 local associations.	
Activity 5.2. Develop training curriculum based on evaluation and needs assessment		Training curriculum is in development.
Activity 5.3. Deliver training programme to community leaders		Scheduled for Y2.
Activity 5.4. Undertake an assessment of impact of training programme		
Activity 5.5. Establish agreements and protocols with communities for construction of association offices		Scheduled for Y2.
Activity 5.6. Identify contractor to construct offices		
Activity 5.7. Procure materials and construct offices and noticeboards		
Activity 5.8. Monthly meetings with local associations		Scheduled.
Activity 5.9. Organise and hold annual football competition		Not possible until COVID risks are low enough to make it safe. Therefore, this activity is not currently planned.

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
<p>Impact: Improved community well-being and protected area management is ensuring Ambondrobe's dry forest and wetlands are protected providing vital ecosystem service; improved ecological resilience and havens for threatened species. (Max 30 words)</p>			
<p>Outcome: (Max 30 words)</p> <p>The wellbeing of c.6400 people in 1000 households across 9 fokontany is enhanced and negative impacts on natural environment decreased in Ambondrobe by 2023.</p>	<p>0.1 Area of dry forest by end Yr3 is at least 5,300Ha (current area 5,467Ha) representing a decrease in deforestation rate from current 2.1% to less than 1%</p> <p>0.2 Improve area of quality marsh within 50Hectares by 60% from 2020 baseline.</p> <p>0.3 Subjective well-being indicators (Global Person Generated Index; % households who are satisfied with life; % who feel their actions are worthwhile; % who felt anxious yesterday; % who felt happy yesterday) improved by end Yr3</p> <p>0.4 Measures of food insecurity (assessed via Household Food Insecurity Access; Months of Adequate Household Food Provisioning and the Food Consumption Score Nutritional Quality Analysis scales) in intervention villages improved by end Yr3</p> <p>0.5 By project-end, 100% of women aged 15-49 in nine villages are aware of long-term family planning methods and how to access reproductive healthcare services.</p> <p>0.6 The proportion of households who believe they have the power to influence decision making in their communities has increased by end Yr3</p> <p>0.7 Improved economic independence and resilience (% of households using</p>	<p>0.1 Global Forest cover data; satellite imagery; ground-truthing; drone footage</p> <p>0.2 Satellite imagery; drone footage; ground-truthing</p> <p>0.3 Household surveys in Yr1 and Yr3</p> <p>0.4 Household surveys in Yr1 and Yr3</p> <p>0.5 Household surveys in Yr1 and Yr3; MSM visit reports; CPR data.</p> <p>0.6 Household surveys in Yr1 and Yr3</p> <p>0.7 Household surveys in Yr1 and Yr3</p>	<p>No significant reduction in current level of political stability.</p> <p>Landsat etc. continue to offer imagery for free and it is readily available to us.</p> <p>Safety of field staff and local communities is maintained – no serious threats or incidents to staff and villagers.</p> <p>Engagement from local communities towards the goals of the PA and rural development activities does not decrease negatively impacting recruitment of community staffing.</p> <p>Experimental testing of novel indicator to test financial resilience in the household survey is in line with our assumptions.</p>

	VSLAs to manage their savings and value of savings) has increased by end Yr3.		
Outputs: 1. Improved community engagement reduces negative impacts on and is actively restoring lake and forest habitat by 2023.	<p>1.1 In each year of the project, 12 patrols per month are undertaken across 1440Ha forest and lake within Ambondrobe PA</p> <p>1.2 4 village patrol groups trained in use of smartphone devices and SMART/ Cybertracker patrolling software by end Yr1.</p> <p>1.3 10Ha phragmites marsh replanted each year to improve quality of 50ha marsh area by 60% by Y3; total 30Ha restored by Yr3.</p> <p>1.4 5Ha invasive water hyacinth removed from lake each year.</p> <p>1.5 Maintain current levels of sapling production across four community nurseries to enable 20Ha reforestation per year; 60Ha total.</p> <p>1.6 20Ha replanted Yr1; 20Ha replanted Yr2; 20Ha replanted Yr3</p>	<p>1.1 Monthly SMART patroller reports</p> <p>1.2 Training attendance records; training reports</p> <p>1.3 Photographs; planting reports</p> <p>1.4 Photographs; reports</p> <p>1.5 Nursery reports</p> <p>1.6 Planting records; photographs</p>	<p>No significant reduction in current level of political stability</p> <p>Safety of field staff and local communities is maintained – no serious threats or incidents to staff and villagers</p> <p>Engagement from local communities towards the goals of the PA does not decrease negatively impacting recruitment of community staffing.</p> <p>Environmental conditions do not change so that they negatively impact reforestation activities e.g., increased cyclone activity, lack of rains/prolonged drought.</p>
2. Provision of Climate Smart Agriculture training through Farmer Field Schools leads to increased crop yields, improving income generation and food security for over 350 households whilst reducing harmful environmental impacts by 2023.	<p>2.1 Agricultural productivity, soil quality, chemical inputs and crop varieties have been assessed for all 9 fokontany by end of 2020.</p> <p>2.2 160 farmers trained via Farmer Field Schools (FFS) in Yr2 and Yr3 (320 total) (>30% female participation)</p> <p>2.3 20% of cropland being used to cultivate climate resistant and highly nutritional crop varieties at Yr2 end; 40% by end Y3.</p>	<p>2.1 Agricultural surveys</p> <p>2.2 FFS attendance records (aggregated by gender); training reports.</p> <p>2.3 Annual agricultural surveys; household surveys</p> <p>2.4 Annual agricultural surveys; household survey results</p> <p>2.5 Annual agricultural surveys; household survey results</p>	<p>Environmental conditions change to negatively impact growing seasons and crop productivity e.g., increased cyclone activity, lack of rains/prolonged drought.</p>

	<p>2.4 Cropland managed using chemical pesticides and fertilizers has decreased from Y1 to Yr3.</p> <p>2.5 Agricultural yields and income for famers growing new crops has increased from Y1 to Y3.</p> <p>2.6 Vegetable gardens established at 4 primary schools and 1 secondary school by end Yr2 and producing crops by end Yr3.</p>	<p>2.6 Community surveys; reports from school Parents' Associations; annual agricultural surveys.</p>	
<p>3. Sustainable financial tools and market-based opportunities are developed for 9 fokontany and reach at least 270 individual members (60% of which are women) by 2023.</p>	<p>3.1 By end 2020 feasibility of implementing a VSLA in each village is established through expert advice and interviews.</p> <p>3.2 By Yr2 end, 3 pilot VSLA with over 60% female participation will have completed one full cycle with progress assessed by membership and value of savings.</p> <p>3.3 By end Yr3 VSLAs operational in all 9 fokontany accounting for approx. 10% of adult population in each village, of whom 60% are women.</p> <p>3.4 12 members from the 4 local Women's Associations attend regional fair in Morondava each year of project.</p> <p>3.5 Market value chains for local products and services identified by end Yr2.</p>	<p>3.1 Results of workshop; household savings survey; villagers' testimonies; final report</p> <p>3.2 VSLA documents and annual report</p> <p>3.3 VSLA documents and annual reports</p> <p>3.4 List of participating members in regional fair</p> <p>3.5 Socio-economist report</p>	<p>Feasibility study shows not feasible due to insecurity reasons – keeping cash in a centralized and known location is not safe.</p> <p>Savers cannot be engaged in the schemes and therefore the schemes are not viable.</p> <p>Community members default on the commitments to the VSLA during the process. To prevent this, a verbal agreement is established between members and unanimous agreement is needed regarding the amount members must pay in each month.</p> <p>Theft of project savings occurs during implementation.</p>
<p>4. 1000 households across 9 fokontany in Ambondrobe have access to reproductive health support by 2023 to make choices concerning family planning and household wellbeing.</p>	<p>4.1 By end Yr1, MSM community health workers have established contact and organized initial workshops in the 2 communes reaching people in 9 fokontany.</p>	<p>4.1 Meeting and attendance records; feedback interviews with communities</p> <p>4.2 Reports provided by MSM summarizing actions, community</p>	<p>Community members do not react negatively to reproductive health interventions.</p> <p>Financial or other circumstances do not force MSM to pull out of the project</p>

	<p>4.2 By end Yr2, active reproductive health programs are operational in the 2 communes reaching people in 9 fokontany.</p> <p>4.3 By end Yr2, a Community Health Volunteer Training Program (CHV) has been launched, with the first volunteers promoted by communities in Yr2 and trained in Yr3.</p> <p>4.4 100% of adults in 9 fokontany have access to regular (quarterly) reproductive health clinics by end Yr3; all women aged 15-49 are aware of contraceptive choices and where to access them.</p>	<p>reception and contraceptive prevalence rate (CPR).</p> <p>4.3 Workshop attendance records; CHV identification, CHV attendance records</p> <p>4.4 Reproductive health indicators e.g., CPR, ASC training records, household survey results, MSM visit records.</p>	<p>partnership during project implementation.</p>
<p>5. Local governance capacity and community cohesion is increased across 4 local associations (approximately xx community members) through the provision of capacity building, improved local association infrastructure and social events.</p>	<p>5.1 By end Yr1, a good governance training curriculum, focused on community leaders, has been developed through the evaluation of 4 local associations and their primary needs.</p> <p>5.2 By end Yr2, training programme delivered, and impact assessed in Yr3.</p> <p>5.3 By end Yr2, 4 administration offices have been built and have information boards showing Protected Area regulations, patrol updates etc. in words and images.</p> <p>5.4 % of individuals participating in local associations has increased at end Y3 cf. Yr1.</p>	<p>5.1 Evaluation reports; training curriculum printed.</p> <p>5.2 Course attendance; post-training assessments</p> <p>5.3 Photographs of fokontany offices and noticeboards in use.</p> <p>5.4 Household surveys Y1 and Y3</p> <p>5.5. Meeting minutes: records of bylaws passed.</p> <p>5.6 Participation records; photos; football competition results.</p>	<p>No significant reduction in current level of political stability</p> <p>Safety of field staff and local communities is maintained – no serious threats or incidents to staff and villagers.</p> <p>Willingness to engage from local associations and fokontany chiefs.</p> <p>The government contributes towards office building costs.</p>

	<p>5.5 Number of decisions supporting development and environment at the local, commune and regional level has increased at end Y3 cf. Yr1.</p> <p>5.6 180 people from the 9 fokontany engaged in annual football competitions each year.</p>		
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Annex 3: Standard Measures

Table 1 Project Standard Output Measures

Cod e No.	Description	Gender of people (if relevant)	Nationalit y of people (if relevant)	Year 1 Total	Year 2 Tota l	Year 3 Tota l	Tota l to date	Total planne d during the project
7	Number of (i.e., different types - not volume - of material produced) training materials to be produced for use by host country			3				13
20	Estimated value (£'s) of physical assets to be handed over to host country(ies)			█				█
21	Number of permanent educational/training/rese arch facilities, structures, or organisations to be established and then continued after Darwin funding has ceased			17				53
22	Number of permanent field plots and sites to be established during the project and continued after Darwin funding has ceased			14				28
23	Value of resources raised from other sources (i.e., in addition to Darwin funding) for project work			█				█

Table 2 Publications - NONE

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)

Annex 4 Onwards – supplementary material (optional but encouraged as evidence of project achievement)

List of supporting documents (see OneDrive link):

- Monthly SMART patrol reports
- Q1 patrol report to project partners and stakeholders
- Report on training undertaken with patrollers
- Report on training needs assessment with VOI members
- List of competencies used in VOI training needs assessment
- Q1 and Q2 report to US Ambassador to Madagascar's Special Self Help Fund regarding establishment of Market Gardens
- Training materials created for use by Farmer Field School members
- Various photographs of project activities

Checklist for submission

	Check
Is the report less than 10MB? If so, please email to Darwin-Projects@ltsi.co.uk putting the project number in the Subject line.	Yes
Is your report more than 10MB? If so, please discuss with Darwin-Projects@ltsi.co.uk about the best way to deliver the report, putting the project number in the Subject line.	Supporting docs in folder
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.	Yes
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.	No
Have you involved your partners in preparation of the report and named the main contributors	Yes
Have you completed the Project Expenditure table fully?	To follow
Do not include claim forms or other communications with this report.	