Darwin Initiative Main Annual Report

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

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

Submission Deadline: 30th April 2024

Darwin Initiative Project Information

Project reference	Flexi-Grant Reference: DIR27S2\1032 Project Reference No: 28-001
Project title	Building wetland resilience in Madagascar; Community-based conservation of Lake Tseny
Country/ies	Madagascar
Lead partner	Wildfowl & Wetlands Trust (WWT)
Project partner(s)	Madagasikara Voakajy ("Mavoa")
Darwin grant value	£339,943.00
Start/end dates of project	01 July 2021 to 31 December 2024[1]
Reporting period	Annual Report 3, 1 April 2023 – 31 March 2024
Project Leader name	Mark Grindley, Senior Project Manager, International
Project website/blog/social media	n/a
Report author(s) and date	Mark Grindley (WWT), Joyeux Vohozanaka, Jelot Hernandez (Madagasikara Voakajy)

1. Project summary

In the last 50 years, around 60% of Madagascar's wetlands have been heavily degraded or completely destroyed. Those remaining are subject to array of pervasive threats from sedimentation, pollution, burning, invasive species and over-harvesting. Despite similar rates of species endemism as the country's forests, and providing vital ecosystem services to millions of impoverished people, the wetlands of Madagascar receive little attention, with the National Ramsar Committee and relevant government departments under-resourced, and lacking a representative examples of best-practice wetland conservation management.

This project generates foundations for long-term resilient conservation management of just one of those important wetlands, Lake Tseny in Port-Bergé, Sofia Region. Lake Tseny is the most intact wetland within the Port Berge KBA, and home to at least eight Threatened species of fish and reptile, and 5,000 people, the majority of whom are dependent upon natural systems for drinking water, sanitation, timber, fuel, livelihoods and wellbeing. The project is providing resilient ecosystem services and sustainable livelihood opportunities for these communities, securing healthy habitat for increasing populations of native biodiversity, and inspiring resilience planning for wetlands nationally. The tools and approaches adopted in this project will be showcased nationally.

[1] Requested by WWT on 12 Jan 2024, and agreed via email on 2 Feb 2024.

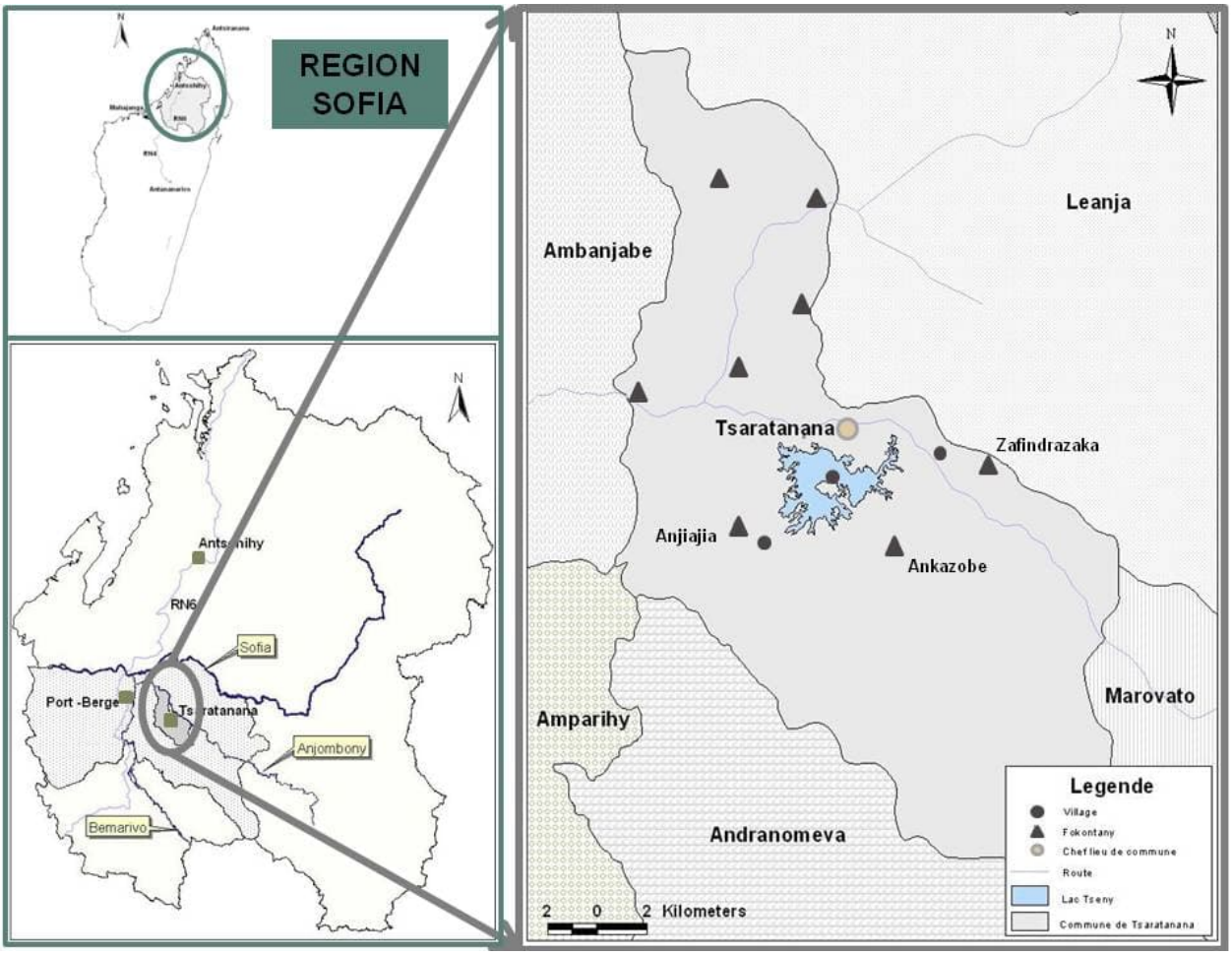

***Figure 1**. Location and site map*

2. Project stakeholders/ partners

The project is being implemented by WWT in cooperation with three main institutional partners.

Madagasikara Voakajy (Mavoa)

With years of relevant experience, Mavoa is leading on setting up local community groups and negotiating and putting in place formal management transfer agreements between them and the government, as well as providing capacity building for them. They will also manage the environmental education and awareness initiatives and the fishery enhancement work.

MAVOA is implementing these activities under a sub-grant agreement that was finalised with WWT as part of the project inception work during the reporting period. They prepare annual workplans with us, in consultation with the other partners, and we hold monthly coordination meetings with them at site level. Mavoa also sits on the project management steering committee, which meets quarterly to monitor progress.

Durrell Wildlife Conservation Trust (DWCT)

DWCT has a small technical role, guiding species assessments, habitat requirements for ecological restoration, and biodiversity monitoring, with a particular focus on the Madagascar big-headed turtle. This is provided through one member of their technical staff, though their involvement during the first year of the project has been quite limited while the necessary baseline information is being collected.

As DWCT inputs are only for some staff time, they are operating under a simple Contract for Services directly to WWT, which was negotiated and signed during the project inception.

Relevant Government departments (fisheries, forestry and environment, agriculture,)

WWT and Mavoa were already working with the relevant government departments in Sofia region, so we were readily able to consult with them during project design. During the inception, we agreed to formalise a mechanism for their engagement on project monitoring, steering and planning for joint activities, with the department of fisheries as the lead from their side. This resulted in a written *Accord de Collaboration*, outlining the implementation arrangements and responsibilities. Regular updates are provided to the regional authorities, and they have also participated in a number of project events, notably the signing of the local community resource management transfer (aka 'VOI') agreements in October 2022.

Other partners

Since their formalisation in October 2022, the main local partners are now the four VOIs; three comprising clusters of villages that are located close to each other, primarily focussed on protection of their watershed forests, and one comprising most of the fishers from the villages around the lake. As the project progresses, these groups have become increasingly central to directing and implementing activities.

3. Project progress

3.1 Progress in carrying out project Activities

Activity	Progress	Notes
1.1 Conduct community consultations for formalised community-based natural resource management transfer agreements	Complete	All consultations completed by March 2022.
1.2 Management Plans developed and agreed by local government	Complete	The VOI plans (transfer agreements) were signed into effect October 2022.
1.3 Constitute membership of VOIs and support elections for leadership groups	Complete	As described in the previous progress report.
1.4 Conduct capacity assessments (resource management, administrative, legal, financial) of groups and develop VOI training plan	Complete	The capacity of group was assessed based on their capacity building between June 2023 to December 2023
1.5 Facilitate a study tour to Lake Sofia to learn from similar successful ongoing schemes	Complete	The exchange visit was made in December 2022 for VOIs to learn about the CBSG process. Due to its success, another study tour is being considered.
1.6 Develop VOI Business Plan to ensure sustainable financing of the associations, including equipment rental and community-based savings groups	In progress	A consultant specializing in inland fisheries is being recruited to do this work.
1.7 Deliver VOI training programme and provide ongoing support	Complete	Training between Jun and Dec 2023 on VOI admin and management (reporting, accounting, application of *Dina* etc)
1.8 Hold community fora 2 times per year in each community to ensure wider accountability	Community fora take place, but not always	Minutes of community meeting 2022 - 2023 are available in Malagasy

Activity	Progress	Notes
	as frequently as planned	
1.9 Hold annual catchment management group meeting	First held in 2022	Second planned before project end.
1.10 Capacity assessment and legacy planning	n/a	Planned for project final year (by December 2024).
2.1 Collect and analyse socio-economic data, including legal and illegal use of the fishery	Complete	Completed Feb 2022; report available.
2.2 Conduct fisheries assessment to map key nursery habitats, potential high-value no-take zones and priority restoration actions to inform Activity 1.2 and Output 3	Complete	Completed 2023; report available.
2.3 Training from fisheries specialist and visit by representatives of other successful community fishery projects to share advice on best-practice and common mistakes	Complete	In July 2023 we invited the inland fisheries specialist from DIRPEB SOFIA to train the 110 VOI members on two topics: (1) Knowledge of inland fisheries laws and (02) Blue economy based on extensive fish farming to reduce threats in Lake Tseny.
2.4 Value chain analysis and fishery business plan agreed alongside local fishers	Delayed	A consultant will be recruited from May 2024, and the study will start in June for four months. The document will be available at the end of September.
2.5 Conduct feasibility study for restocking native species through cage farming	In progress	A feasibility study report will be available at the end of July..
2.6 Update and implement education and awareness programme, including dissemination of information on strict common standards for fishing control	Complete	Awareness raising in the 5 villages around the lake were carried out by fisheries staff and the local patrol team, covering use of regulated fishing nets, prohibition of the 'no take' zone, and respect for fishing closure. Radio broadcasts during the fishing closure (Dec 2022 to Mar 2023) covered the closure and non-use of tight-meshed nets.
2.7 Operate voluntary net exchange programme	The exchange fishnet was purchased in September 2023 and March 2024.	A meeting with DREPEB will be held in May 2024 to discuss and validate together the means of distributing the exchange fishnet, based on the experimental results.

Activity	Progress	Notes
		Distribution of fishnet to fishers will be carried out in July 2024. Two internal reports of the catching sessions (June and October 2023) to evaluate the effectiveness of the fish nets were received from Mavoa.
2.8 Community fishery trust fund established and recommendations from the Business Plan implemented with associated training provided	Planned but not yet conducted	To depend on the document of business plan (see activity 2.4).
2.9 Design and implement fish catch monitoring programme	Completed (July 2023)	Internal reports on the fish-capture session, including the reproduction study, are available.
2.10 Community fishery monitoring and patrols to strengthen compliance with regulatory mesh and fishing season and no-take zones	Started in Jan 2024	Delayed while awaiting govt. approval of the fisheries management plans.
2.11 Annual review of fisher perceptions, scheme, management approval ratings, recommendations for the coming year (independent consultant)	None, as fishing mgt plans not yet in place	Planned for 2024.
3.1 Consolidate all historical imagery and mapping of the lake and wider catchment to assess change over time	Completed (Feb 2024)	Land cover assessment, sedimentation analysis, and drone mapping (further landcover analysis underway).
3.2 Conduct detailed annual habitat/vegetation assessments to generate baseline and monitor change over time	Complete (as a one-off assessment, not annual)	The drone overflight has completed in 2023 and imagery data was stitched. It is now being processed for habitat mapping.
3.3 Conduct assessment of the habitat requirements of, and baselines for, Threatened species at the site	Complete	Vegetation and biodiversity reports submitted with last annual report.
3.4 Develop, and agree with stakeholders, a habitat restoration plan, aligned to CBNRM Association Management plans (see Activity 1.2), and applied research	Restoration plan complete (2023)	Official 'validation' of the plan scheduled for April-June 2024.
3.5 Identify and formalise a local community monitoring team and train on monitoring protocols	Complete	The Lake Surveillance Committee (14 people) was est. and trained in 2022. They are now collecting information.
3.6 Undertake aquatic plant restoration alongside VOIs and local fisher groups	Planned for the 2024 dry season (sept-oct 2024)	The restoration of aquatic plants cannot be undertaken when the lake level is high

Activity	Progress	Notes
3.7 Establish community nursery for lakeside habitat restoration (including in local schools - see Activity 4.4)	Completed	Nursery established in early Aug 23 to provide saplings for 23/24 planting season.
3.8 Undertake lakeside habitat restoration alongside VOIs, including trials for harvestable crops in reforested patches	Ongoing	Lakeside habitat restoration with harvestable crops begun by VOIs and will continue into 2024.
4.1 Conduct a schools competition to develop a single unified project logo and slogan promoting 'healthy nature for healthy people'	Complete	Competition held in Q3/4 of 2023; Reports available.
4.2 Develop a curriculum-linked environmental education programme for local schools, including field elements at the lake	Complete	A learning manual (March 2023) describing the importance and threat to biodiversity at Lac Tseny is now available.
4.3 Conduct teacher training events, with selected teachers nominated as teacher coaches to increase wider adoption of the materials	Complete	The minutes were included in the internal report for Activity 4.1.
4.4 Develop and maintain school environmental ambassador schemes, including school plant nurseries and engaging local school children in restoration schemes	Complete	Report available. We integrated the ecological restoration program into the school curriculum for 2023. As a result, we supervised schoolchildren and teachers in the production of seedlings (filling pots, producing compost, sowing seeds). For planting, reforestation sites were identified by VOIs, and schoolchildren were strongly encouraged to participate. In addition, schoolchildren prepared reforestation plots in their school grounds; 291 schoolchildren and 14 teachers planted 288 seedlings of 3 native species.
4.5 Establish Community Information Points for project and VOI updates, environmental awareness campaigns, publication of project social safeguarding policy and Grievance Mechanisms	Planned	The process of installing the information panels will begin in April 2024.
4.6 Develop and deliver targeted awareness campaigns to focus on importance of wetland ecosystem services, mitigation of key threats, and identification and value of Threatened species	Ongoing	This is one of the weekly activities of Mavoa's local facilitator, who visits all the villages around Lac Tseny to raise awareness of fisheries management, mitigation of threats to the lake and its watersheds, protection of endangered species, and

Activity	Progress	Notes
		support for VOIs. (Weekly work reports are filed.)
4.7 Mainstream project messaging into all activities	Ongoing	
5.1 Ramsar Management Effectiveness Tracking Tool workshop to gather baseline data on current stakeholder knowledge of ecological character, threats, and existing management capacity within the catchment	Completed 2022	The RMETT for Tseny is available final report across all 21 Ramsar sites is also complete (WWT 2024);
5.2 Climate Change Vulnerability Assessment (CCVA) to consolidate baseline information on current status of key species, habitats and livelihoods and associated potential impacts of climate change based on regional modelling	Completed	Completed in early 2023 but the report was not available until this reporting period.
5.3 Multi-Stakeholder Open Standards Conservation Planning process for the catchment to develop a Conceptual Model, providing a greater understanding of current threats and contributing factors	Partly complete	The VOI management plans have are being augmented with a Theory of Change for the next phase of support at the lake.
5.4 Research programme developed and agreed with local government to interrogate the extent, severity and drivers of identified threats in the catchment	In progress	Some research has already taken place but the full research plan is being finalised and will start in 2024 (with UKAid financing through the GCBC).
5.5 Climate change resilient threat mitigation strategies developed for the Lake Tseny catchment and approved by regional government	Complete	Included in the CCVA report; implementation will be part funded by two new projects.
5.6 Funding proposal developed for conservation action in the wider catchment	Complete	A project proposal was submitted to CEPF in 2023 and was revised on request in Jan 2024. We have also secured a UKAid grant to further investigate the drivers of wetland degradation (see below).
5.7 Lake Tseny designated as a Ramsar Site through the Government of Madagascar	Revised	We have determined the site qualifies, but we do not plan to progress the application without strong local support (see 8. Lessons Learned,).
5.8 National Ramsar Committee and all Ramsar Site Managers in Madagascar trained in Climate Change Vulnerability Assessment (CCVA)	Completed	January 2023; report submitted previously.
5.9 Wetland training programme for all managers of important wetlands (in and outside of Ramsar Sites and Protected Areas) to fill knowledge gaps identified in the National Wetland Strategy	Completed	January and February 2023 events; reports available. New wetland training project prepared by WWT and submitted for funding.

3.2 Progress towards project Outputs

Output 1: Five sustainably financed CBNRM Associations are representing the breadth of local society and providing efficient, and legally recognised, management of natural resources in and around Lake Tseny

This activity is largely complete: Five VOIs Associations have been set up and have received transfer of natural resource management from regional government in 2022. The documents of management and management tools were given to VOIs association in 2023, and form the basis for the ongoing support provided by the project; these include the management contract, the management plan, the local regulations (or Dina) on resource use, the VOI status, the VOI work schedule for three years and the minutes of the VOI creation and management committee election. These documents are available in Malagasy. The details of the groups remain the same as reported previously (see Table 1 and Table 2).

***Table 1**. Summary details for the new VOIs membership*

Zone		VOI Anjiajia	VOI Ankazobe	VOI Zafindrazaka	VOI Tsaratanana*	TOTALS
Sub-villages		2	0	2	2	6
Households		120	198	150	500	968
Household size range		3 to 8	3 to 6	3 to 12	3 to 12	n/a
Ave Household		4.34	5.05	3.29	3.60	3.94
Population		**521**	**1000**	**494**	**1800**	**3815**
Of which,	*Male (over 18)*	*85*	*180*	*100*	*350*	*715*
	Female (Over 18)	*95*	*320*	*113*	*450*	*978*
	Under 18	*341*	*500*	*281*	*1000*	*2122*

Source: Management transfer documents for all VOIs, October 2022; figures are attributed to village leaders.

* Focussed primarily on the lake, and comprising mostly fisher-families.

***Table 2**. Summary details for the management zones of the new Lake Tseny VOIs [all figures are in hectares]*

Zone	VOI Anjiajia	VOI Ankazobe	VOI Zafindrazaka	VOI Tsaratanana*	TOTALS
Focal habitat	Watershed to the SW of the lake	Watershed to the S of the lake	Watershed to the E of the lake	Lake, lake margins, some forest	
Fully Protected	106	789	292	58.6¥	**1,245.6**
Traditional Rights	2,179	7213	2474	5	**11,871**
Tree Planting	377	5	5	260	**647**
Cattle grazing, agriculture, housing	1,562	2242	1070	2981	**7,855**
TOTALS	**4,224**	**10,249**	**3,841**	**3,300**	**21,618.6**

Source: Management transfer documents for all VOIs, October 2022; mapping supported by Mavoa.

* Matsabory area is divided into two categories: Fully protected area (49 ha), and Sustainable livelihood use area.
¥ Comprising two sub zones of 53.8 ha and 4.8 ha.

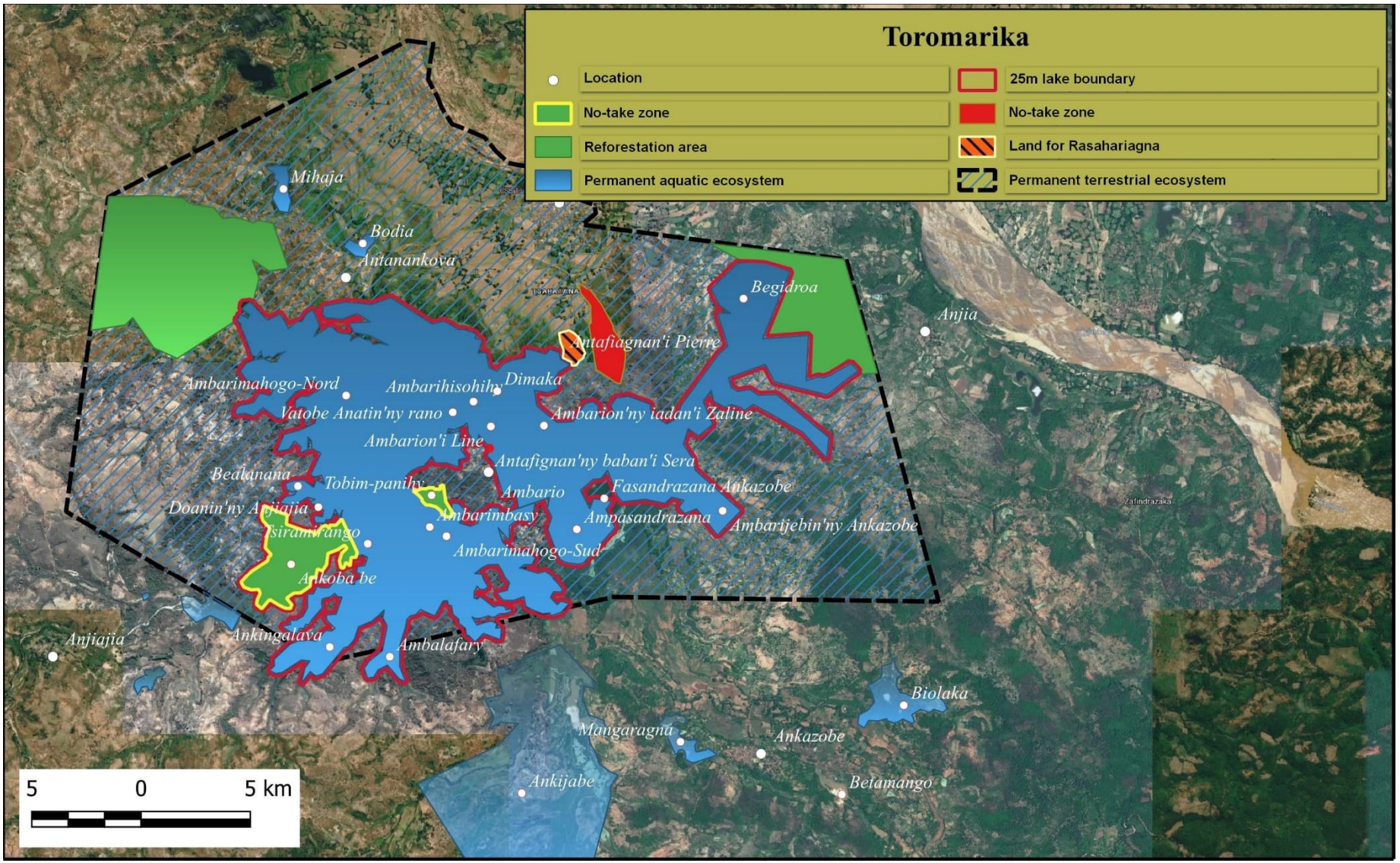

***Figure 2**. Map of Tsaratanana VOI, which is aimed at collective fisheries management*

Source: Management transfer agreement (prepared by Mavoa)

About the plan to establish sustainable financing for the VOI, a consultant specialising in inland fisheries is being recruited to do this work on the business plan.

Under WWT's new strategy to 2030, the Madagascar programme is developing sustainable financing for local wetland managers like the VOIs. Our current focus is on providing access to conservation financing for community groups for activities that relate to VOI and site management plans. Our funding bid for this work from 2023 has yet to receive a response, but we remain hopeful that we can find the necessary support.

Output 2: Fishing regulations are in place and being followed by local and migrant fishers, which, alongside fish habitat restoration areas, is increasing the productivity of the fishery. Fishing communities have new knowledge on value chains and the potential to increase profitability

The experimentation about the Net-exchange was carried out by MV team in cooperation with the Tsaratanana VOI. The first step was an awareness campaign that was launched in early 2023, before the fishing season closed. This was followed by a field test of different fishing techniques to identify the most sustainable and therefore productive.

Net fishing is the main technique used by local fishers, who use two main net types and a range of mesh sizes between 20 mm to 50 mm. To explore the impact of these existing tools, the two net types – 'herring' and sein nets – and four different sizes – 20 mm , 35 mm, 45 mm and 50 mm – were tested with 14 volunteer fishermen over a 20-day period in October 2023, namely mesh sizes. The testing measured 320 catches, with a total of 89kg comprising eight species taken. The main species was tilapia, by number and weight, and none of the pinstripe damba were caught, a result that

For the assessment of reproduction, one thousand forty-seven (1047) individuals were observed including seven hundred and sixty-two (762) females and two hundred and eighty-five (285) males. Out of one hundred and sixty-six (166) female samples dissected, one hundred and thirty-two (132) had eggs and thirty-four (34) other individuals did not have eggs.

Fourteen (14) localities of captures in Lake Tseny were identified as breeding areas after dissection of captured individuals. Two equipment entry and exit logbooks were developed at the site level in Tsaratanana.

***Figure 3**. Covers of the Lake Tseny reforestation plan and Sensitisation and Forest Climate Change Vulnerability Assessment (WWT 2023)*

The value-chain development was delayed while the fishing productivity survey was completed so we have full knowledge of the species and potential catches that might be expected with the new fishing equipment and regulations. This is now in hand, and a consultant is being recruited to help develop the processing of products with the fishers and local fish processors.

Output 3: Quality and extent of aquatic and lakeside habitat increased

It was not possible to begin this activity until the management transfer agreements were signed into effect, in October 2022. Those documents outlined the restoration priorities agreed between the communities and local government, based on zoning that is summarised in Table 2. Between the four VOIs, there is a combined total of 647 ha of land zoned for reforestation, mostly located to protect surface watercourses and therefore reduce sediment runoff into the lake, as well as providing construction materials and firewood.

Following planning meetings in May and June 2023, it was agreed that the main priorities for the current reporting period were to restore the lakeside habitat in key parts of the lake catchment, through a mixture of gap planting with seedlings from either government or community-owned nurseries, or the control of burning and clearing for agriculture. The results of this effort were documentd in the 'Restoration Plan for Lake Tseny and its basin' ([redacted]

According to the local communities' own subsequent reporting about their reforestation efforts, they started by planting about 5000 seeds and seedlings provided by the regional forestry department. Project funds were used to cover some costs for the planting, which was based on the agreed zonations in the management plans.

Regarding subsequent restoration supported by the project, the community nursery for native species was set up in the latter half of 2023, with seedling production begun in December 2023 (Figure 4 ; Figure 5). A local lunch of the 2023-2024 reforestation campaign was held in January and February 2024, by a multidisciplinary team composed of the OMC of Port-bergé, the decentralized technical services of forests and fisheries, and project managers (see report cover, Figure 3).

The launch mission was structured into four major activities: 1) the introduction and orientation of VOI committees in the government's monitoring and evaluation system for reforestation; 2) some community training on reforestation techniques; 3) cooperative enforcement of forest regulations, and; 4) the launch of the 2023-2024 reforestation campaign, with the planting of the first 1000 seedlings from the community nursery (Figure 9), over about 1.4ha:

Locality	Geographical coordinates	Number of seedlings	Reforested area	Reforested species
Tanetinilemenakobona (reforestation site of Ankazobe VOI)	S 15°39'51.0 E 047°52'08.9	1 000 plants	1.4 ha	*Khaya madagascariensis* ; *Anacardium occidentale* ; *Albizia lebbeck*

The mission aimed to resolve the problems linked to the management of natural vegetation and habitat, and to strengthen the capacities of the communities. The approaches adopted during the mission made it possible to achieve the objectives set and obtain convincing results, with village meetings followed by discussions between all stakeholders helping to resolve management conflicts and build community capacity. The guidelines and protocols necessary for reforestation activities were agreed and shared during the planting session.

About the future planting, an activity of diagnostic of all priority areas targeted for restoration will be carried out in May 2024 to collect data for mapping all the targeted areas, and to determine the approximative areas size and the appropriate approach for each site.

Output 4: Increased understanding of the importance of natural systems and biodiversity for livelihoods and wellbeing amongst different socio-economic groups using and living around the lake

To augment our understanding of the importance of natural systems to local communities, and the pressures they are under, the project undertook a climate change vulnerability assessment in April and May 2023 (Figure 4).

The assessment built on the methodology developed by the IUCN in Southeast Asia under the Mekong WET project (Wyatt et al 2021), but subsequently revised by WWT for this project. The assessment found that key species at the site – Malagasy pond heron, pinstripe damba, *Amboaboa* round herring and Madagascar big-headed turtle – are not particularly vulnerable to climate change at the site. However, the potential impact on local livelihoods and indirect pressure on the environment both present significant risks to people and nature. A number of current and potential solutions were identified, which WWT and Mavoa are developing into new funding proposals.

Under this Output we also conducted a drawing, slogan and essay competition in the nine schools around Lake Tseny. Focussing on the importance of Lake Tseny for the protection of globally critically endangered species, the chosen theme was: “Protecting Lake Tseny, the only natural refuge of the Pinstripe damba”

***Figure 4**. Cover of the fish net survey and Lake Tseny Climate Change Vulnerability Assessment*

The competition reached 426 students spread across the nine schools, among which 17 students were adjudged to be the best innovators in the competition, comprising 11 girls and six boys. A modest gift of school equipment was awarded to the best students, including a school bag, pen, dictionary, grammar book and pencil case. In addition, various school materials were distributed to all the schools that participated in the competition, comprising geometric rulers, geographical posters, soccer balls and dictionaries. In this highly impoverished and remote area, these modest gifts were much appreciated.

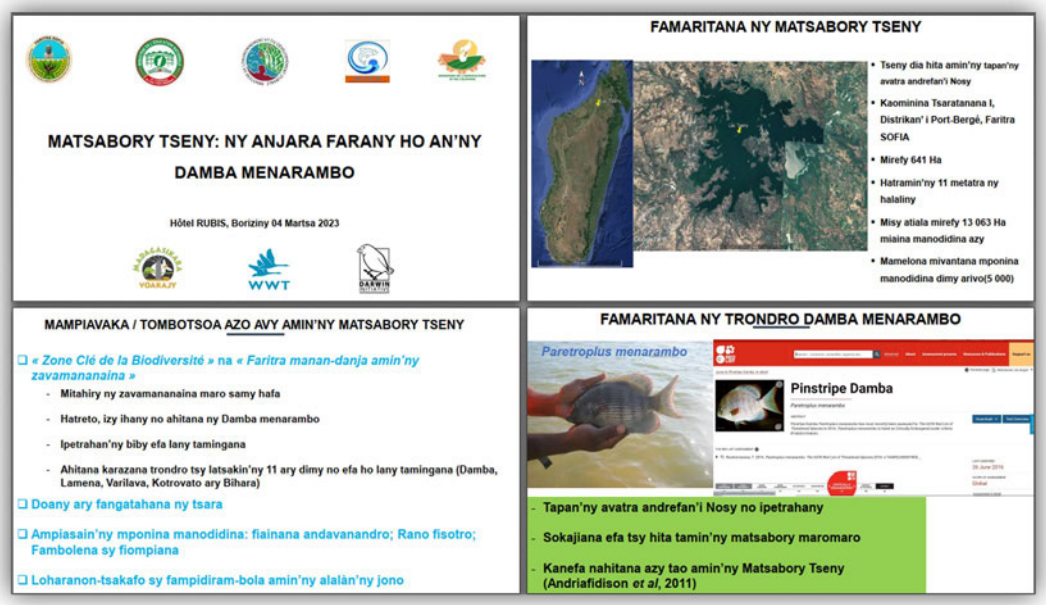

***Figure 5**. First four pages of the awareness materials for communities*

Output 5: Current and future wider threats are understood for the local Tseny catchment, with a conservation strategy developed to mitigate threats into the future, Tseny recognised as a Ramsar Site, and national conservation managers and government staff valuing and able to use tools to plan long-term resilient community-based wetland conservation projects

Drone mapping: After complications with gaining free, prior and informed consent from the local communities in early 2023, the drone mapping was postponed to later in the year and a local specialist was hired instead. The pilot mapped the whole lake ecosystem and most of the catchment, and made a high resolution map after photogrammetry analysis (**Figure 6**). The results (are being used to prepare a digital canopy height model for the site using a new technique that takes advantage of the fact that in drone mapping nearly every area is photographed from more than one angle, allowing relative heights to be calculated. This will assist with long-term monitoring and additional assessments such as calculation of above-ground biomass.

The climate vulnerability assessment (**Figure 7**) mentioned above also includes an assessment of threats, which is incorporated into the report. These ranged from those which are manageable through the collaborative approach being adopted by the project, such as accidental burning or illegal fishing, to those which require adaptation such as market demand for local produce, costs of agricultural inputs or indeed climate change. These results indicate the importance of equipping the local communities with the means to defend their own rights and meet their own needs.

A second threats assessment used satellite imagery and other data to determine the relative threat to the lake from land use change in the catchment (**Figure 7**). The assessment found that while there has been some deforestation over the past ten years, degradation is more widespread and apparently linked to shifting cultivation. That farming technique does however leave vegetative cover on the land, so while damaging to biodiversity it does not necessarily lead to a large increase in sedimentation, and the lake therefore seems safe from that threat at present.

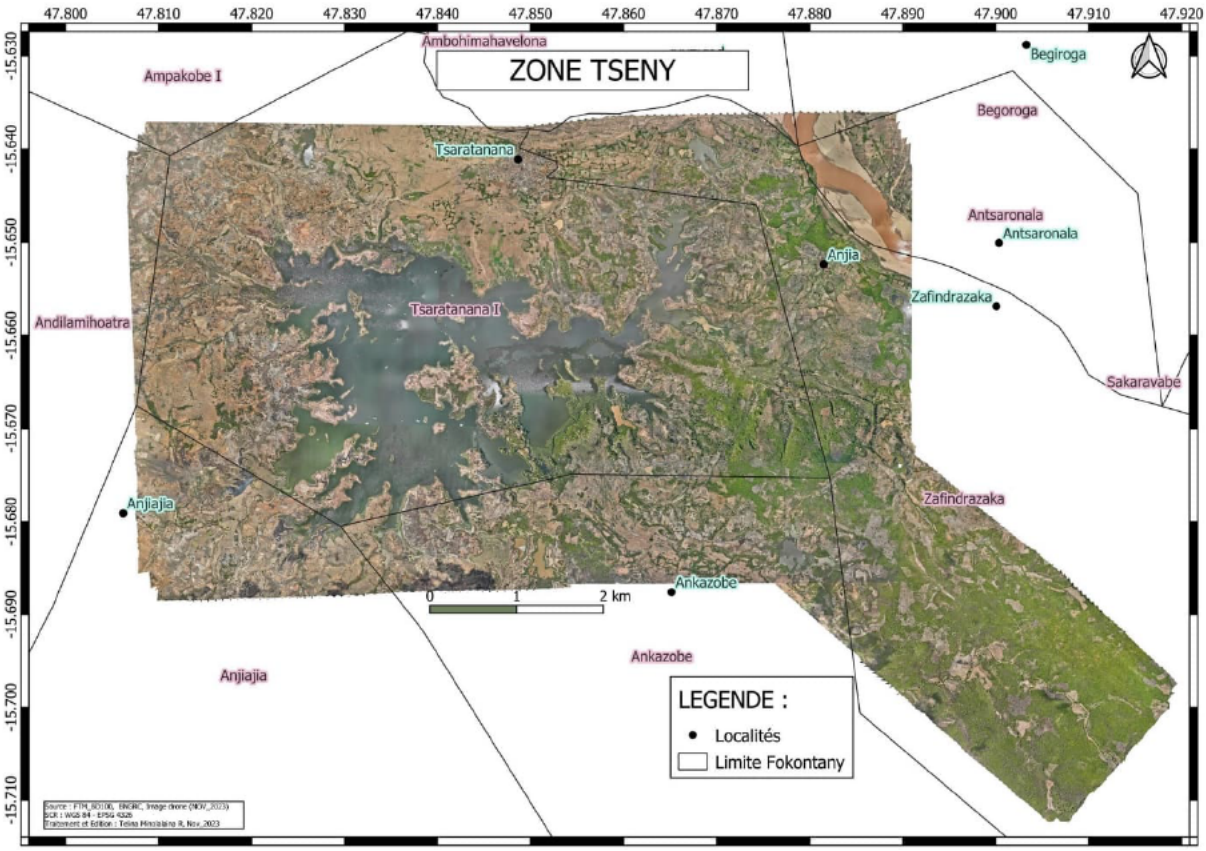

***Figure 6**. Aerial photograph of Lake Tseny, its immediate surroundings and some of the watershed forest*

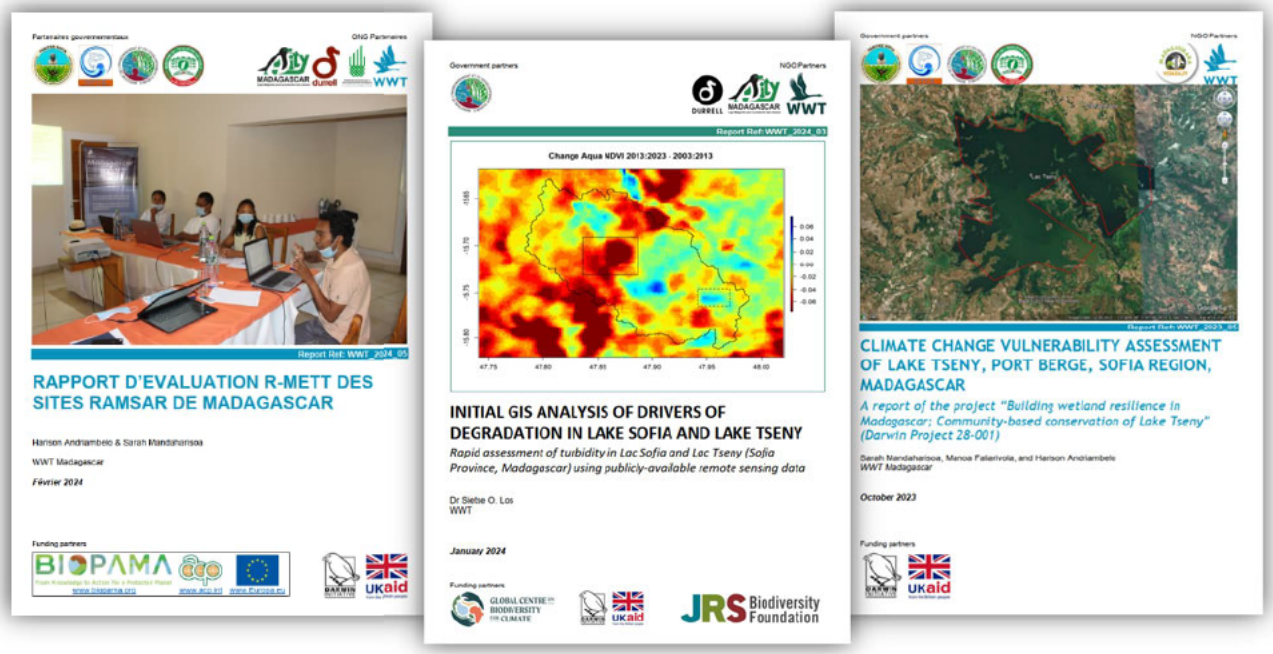

***Figure 7**. R-METT, CCVA and lake threats assessment report covers*

In February 2024, WWT and the Ramsar Focal Point in the Ministry of Environment and Sustainable Development co-hosed the Ramsar Site Managers Annual General. The second event of its kind, participants included managers of most of the country's 21 Ramsar Sites. We used the opportunity to share progress on the project, and to disseminate the results of the RMETT and CCVA assessments for Lake Tseny, as representing current best practice for wetland management as defined by Ramsar and based on our own experience.

3.3 Progress towards the project Outcome

Outcome: Sustainable, representative, and legally recognised community-based management of Lake Tseny catchment results in improved ecosystem services for 5000 local people and enhanced habitat for threatened biodiversity, with techniques showcased nationally.

Indicator 0.1: 5000 people empowered to sustainably manage Lake Tseny through a legally endorsed 'Gelose' management transfer agreement by end of Y1

Four Gelose management transfer agreements were signed off by the local applicants (VOIs) and authorised government bodies in Nov 2022, representing 3815 people.

Indicator 0.2: Like for like monthly income of fishers increases by 20% between Y1 and Y3.

There is no interim figure for this indicator but the baseline data were collected in early 2022 and a re-survey is planned for project year three.

Indicator 0.3 Extent (# of ha) of aquatic vegetation and fringe Phragmites habitat increases by 10% by end of project. Reforestation plots increase forest extent by 5%.

Between the four VOIs, there is a combined total of 647 ha of land already zoned for habitat reforestation and restoration including the aquatic and forest habitats. Since the beginning of the project until now, local people are already planted about 7000 seedlings in the catchment area.

Indicator 0.4 Experimental catch per unit effort of threatened fish species increases by 10% by end of project.

The fish-net survey was much delayed but now gives a baseline for this indicator that we can combine with the initial fisher surveys.

Indicator 0.5 Long-term regional conservation strategy agreed by local communities and Tsaratanana District Government, starting to address threats throughout the local catchment by end of project.

The management transfer agreements cover approximately 90% of the watershed, and are already being enthusiastically implemented by the local groups with the support of the project and local authorities.

Indicator 0.6 At least 40 National Ramsar Committee members, Ramsar Site managers, and Managers of Protected Areas containing important wetland habitat, understand how to use R-METT and VA tools, and VAs taking place in at least 2 other important wetlands.

R-Mett results have now been shared with all 23 Ramsar sites, training provided to an additional 23 managers of 11 Ramsar sites in 2023 and a further 11 in 2024; The CCVA report has so far been shared with 12 individuals. A vulnerability assessment was also conducted in Lake Sofia Ramsar Site.

3.4 Monitoring of assumptions

Assumptions (by level)	Comments
Outcome-level	
The political situation within Madagascar remains stable and no restrictions are imposed on NGOs.	This assumption holds.
Public health restrictions do not prevent project activities from taking place.	No restrictions have been imposed since the last report and the site remains open to national and international staff.
Project partnership with local government remains strong and all stakeholders remain supportive of management transfer to local communities.	We have established a strong local government liaison and communication, and they are remain well engaged.

Assumptions (by level)	Comments
Local community associations respect commitments to democratic processes and encourage participation of under-represented groups.	This assumption appears to be holding, and the VOI committees were elected fairly by the communities.
Local fishing communities maintain strong relationships with migrant fishers to agree equitable use and management models.	There have been no major conflicts between local and migrant fishers since the project began.
Output-level	
All sectors of society engage with management transfer process and support wider project initiatives, including community-based savings groups and equipment rental schemes, which have been designed to fill existing needs.	The management transfers were completed with no major grievances encountered and strong support from government agencies. The savings and rental activities are yet to be launched.
Local government honour legal community rights to manage natural resources and do not interfere with democratic processes.	Local government fully supported the management transfer agreements, and has sought to control illegal migrant fishers entering the lake.
Local and migrant fishers are willing to engage in a long-term process to improve fisheries.	Local fishers are generally supportive of improving fisheries management, but not all are convinced of the need to replace their micro-mesh nets. Migrant fishers have largely ceased using the lake now political patronage has been removed.
Local community association patrolling and enforcement can be done safely and efficiently at the lake.	No unforeseen barriers or risk have emerged to date for this activity.
There are no unforeseen barriers to standard restoration methods that work elsewhere locally.	No unforeseen barriers have emerged to date. A restoration risk analysis is included in the restoration plan for the catchment. We will however need to analyse/manage the longer-term risk of restoration activities failing.
Community members from all villages and sectors of society engage with the project.	Mavoa reports strong engagement across the local communities.
Schools continue to support comprehensive programmes of environmental education provided by project staff.	The schools have been very supportive of the project awareness interventions thus far.
Good climate projection models are made available to the project.	We have opted to use climate data from the World Bank Climate Knowledge Portal, which is free to use.
A full programme of research on wider threats can be undertaken safely and effectively within the project period.	The initial social-economic, fisheries and mapping surveys are now complete. Wider threats from sedimentation have been assessed using remote sensing data.
National Ramsar Committee members remain engaged with the capacity building activities identified in the draft National Wetland Strategy.	This remains the case. For example, the Ramsar site managers general meeting in Feb 2024 was attended by the Ramsar focal point from the ministry of environment and sustainable development.

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

Impact: *Lake Tseny catchment provides resilient ecosystem services and sustainable livelihood opportunities for communities, secure healthy habitat for increasing populations of native biodiversity, and inspires resilience planning for wetlands throughout Madagascar.*

Since the beginning of the project until now, both the local community and the project team have noticed that the lake Tseny catchment management actions have brought the return of many populations of aquatic biodiversity, including the Madagascar flying fox and some aquatic bird species. While anecdotal, and possibly a reflection of greater attention being put on these indicators, the result is nonetheless encouraging.

We are also pleased to report that our assessment of sedimentation as a driver of wetland degradation in Lake Tseny found that the primary source is from rainfall and runoff, but that rates are not particularly high at present. This is good news, since WWT have identified sedimentation from erosion as probably the most pressing wetland conservation issue in Madagascar. Moreover, the reforestation plots identified by the participating communities in Lake Tseny lie in the highest erosion-risk areas around the lake, meaning they could offer strong evidence of the efficacity of community management to minimise this threat.

4. Project support to the Conventions, Treaties or Agreements

Aichi Targets. Our main contribution thus far has been towards Aichi Targets 1, 2, 4, 6, 11, 14. We also feel that have started to make a meaningful contribution towards target 5 (loss of natural habitats), 12 (protection of threatened species), and 14 (restoration of ecosystems services), although the level of this contribution cannot currently be quantified.

Ramsar Convention. We have made a contribution to Strategic Goal 1 (addressing the drivers of wetland loss and degradation), Strategic Goal 2 (effectively conserving and managing the Ramsar site network) – including by confirming that the site qualifies as a globally important wetland under at least seven out of nine Ramsar criteria – and Strategic Goal 3 (wisely using all wetlands).

Global Goals for Sustainable Development. The project has yet to show any impact on the SDGs related to poverty, hunger, human health or sanitation (numbers 1, 2, 3 and 6), but may have helped address gender inequality as the site (goal 5), and our engagement on fisheries management should contribute to goal 12 (responsible production). Our climate vulnerability work clearly contributes to goal 13 (climate action), and establishment of user rights and responsibilities for wetland and catchment habitats supports goal 15 (‘life on land’).

5. Project support to poverty reduction

The sustainable, representative, and legally recognised community-based management of Lake Tseny and its catchment results in improved ecosystem services for something like 4000 local people and their children. This reduces their vulnerability to climate change and reduced the risk of unsustainable use both of the fishery, of land and of forest resources.

In addition, the application of law through the local *dina* by the VOIs contribute to manage conflicts between local and migrants fishers who take the same benefits from the lake. A reduction of conflict is an important factor in poverty reduction and increased quality of life.

The proper application of opening and closing dates for fishing contributes to improving the productivity of the lake, which thus improves income of the community through the local trade of fish products. The collectivisation of responsibility for implementing these rules has bee greatly improved through the establishment of the VOIs.

6. Gender equality and social inclusion

Please quantify the proportion of women on the Project Board[2].	**29%** The two project NGO partners (WWT and Mavoa) are represented on the Project Steering Group by two senior managers, one female and one male. The two executive officers from each on the PSG is male. The main government representative providing project oversight is female. Overall 2/7
Please quantify the proportion of project partners that are led by women, or which have a senior leadership team consisting of at least 50% women[3].	**100%** Both project partners (Mavoa and MEDD Ramsar Focal Point) are led by women.

Our revised climate vulnerability assessment methodology makes explicit the need to separate and reconcile the different societal roles and potential impacts of climate change on women and men, and this is reflected in the fact that across five villages we were able to maintain a female/male ratio of about 5:6 over the 103 people consulted.

Also, the overall number of adults (ie, over 16) women and men represented in the VOIs is 978 and 715 respectively, representing a female to male ratio of approximately 4:3; see Table 1. (Gender-disaggregated figures for under 16s are currently not collected.)

Despite these successes, customary gender imbalances persist, especially in positions of leadership or influence such as the VOI management committees. This reflects traditional hierarchies, which are not easily challenged. Male dominance in decision-making is reflected in the make-up of the VOI management committees, which are almost exclusively male. However, through inclusionary approaches to research and planning, we have had success in giving a voice to the concerns of women and ensuring they are considered within project activities. We are also considering hiring a facilitator to further develop a gender strategy for our community based natural resource management work, as this challenge is not restricted to Lake Tseny.

7. Monitoring and evaluation

Project monitoring systems were agreed and put in place during the project inception period and rely on regular, structured meetings to report on and review progress against the detailed indicators identified in the project log frame. We have continued with the higher-level monitoring outlined in the last progress report through this reporting period:

- Monthly Project Management Team meetings; these primarily focus on coordination, logistics and budgeting, and monitoring the project at the level of activities.
- Project Steering Group (PSG) meetings; these are held to coincide with Darwin reporting, and bring together senior managers from the partners to review progress at the Output level against the Output indicators.

As noted in our last annual report, we see these processes as an essential component of longer-term lake management support, and it is therefore considered particularly important to make them work as a key aspect of project sustainability. We will modify these processes as the project is phased out in its last year.

[2] A Project Board has overall authority for the project, is accountable for its success or failure, and supports the senior project manager to successfully deliver the project.
[3] Partners that have formal governance role in the project, and a formal relationship with the project that may involve staff costs and/or budget management responsibilities.

8. Lessons learnt

From the beginning of the project to this point, the project executive team has learned some lessons from carrying out the activities.

Firstly, awareness-raising activities need to be reinforce as the people living in the lake Tseny catchment area generally has a lower education level. This makes difficult to work with them to implement the project. We have already carried out some awareness-raising activities but they are not sufficient to promote widespread engagement in the project in the local communities. The adoption of the mass awareness methods like organising a biodiversity festival in Lake Tseny and getting schools more involved in all activities of the project have already proved successful I this regard and we aim to build on those successes.

Throughout the project, we mainly worked with VOI members to implement all activities. We noted that it is enough to engage entire of local people and make them feel advantageous from the project. So, we need to consider the whole of the people in the implementation of all activities to facilitate their understanding of the objectives and importance of the project on their livelihood. Moreover, further supporting local communities to develop their livelihoods sources would be an alternative to reduce over-exploitation and dependence on natural resources in the near future.

We have agreed with Mavoa that the project should not promote a Ramsar site nomination until there is good local support. Protected areas in other areas in Madagascar (and indeed internationally) have been seen as depriving communities of access and rights. While that does not generally apply to the Ramsar Convention, which encourages sustainable use, there is a danger that proceeding too quickly with the nomination could alienate local people. It also makes sense to have strong evidence that they are able to manage the site, and are able to collaborate and engage fairly with the local authorities, before proceeding. Under Malagasy law, Ramsar recognition does not afford any specific legal protection and it therefore also makes sense to build a strong local constituency of agencies to support the local management, with the knowledge that Ramsar recognition could then 'reward' these efforts and potentially provide access to external financing.

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

Four comments were provided during the review of the previous annual report:

No.	Comment	Discuss with BCFs Admin	Next half year report	Next Annual Report	No response needed
1	In the list of activities progress, it was not always clear which activities had been progressed or completed during the reporting period, and which during Y1. Please clarify this in the next AR.			X	
2	Please discuss whether women could be leveraged into complementary positions of influence within communities, since it seems unlikely that they will achieve roles directly within the VOI management committees. See comments in section 7.			X	
3	Please submit the minutes for the management/M&E meetings with the next AR.			X	
4	Some Output-level indicators are not SMART, mainly because they are not time-bound. Please change these indicators and ensure you include the time dimension.	X			

These have been addressed as follows:

No. 1 Our table of progress attempts to put the progress during the reporting period in context, and to also note the overall (cumulative) status of progress against each activity. To address the reviewer comment we have added specific timings/dates for events, especially 'completion' of specific activities or delivery of specific outputs.

No. 2 We having noted our response in 6. Gender equality and social inclusion. However we have not yet made any major breakthroughs in this area.

No. 3 Minutes will be provided along with this report.

No. 4 We have addressed this in the current version of the report, with the intended completion dates indicated in red text.

10. Risk Management

- No new risks have arisen in the last 12 months that were not previously accounted for.
- The project has made no significant adaptations to the project design to address changes to risk.

11. Other comments on progress not covered elsewhere

Noting the impacts of mass migration in the commune of Tsaratanàna I since 2023, in particular on the forests managed by the VOIs, a sensitization and mixed forest control activity was launched at the beginning of 2024 with Mavoa team and with participation of all regional partners. This activity was carried out in order to solve all problems related the illegal exploitation of forest.

12. Sustainability and legacy

The sustainability of management of Lake Tseny as well as of wetland conservation in Madagascar more generally are central to the missions of both WWT and Mavoa, and are at the core of the project. We are therefore pleased to report that good progress has been made, with the VOIs showing increasing commitment to their objectives and greater involvement in the design, implementation and review of activities, such as the reforestation, mixed forest patrolling, fisheries management and net exchange. This commitment bodes well for the next significant step in the evolution of local management at the site, when the VOIs must review their management transfer agreements after their first three years (ie, in 2025), whence they will be revised and renewed for a further twenty years. Although the completion of that work lies outside of the scope of the current project, it is paving the way with its integrated approach to commitment support for the implementation of forest and fisheries stewardship. In preparation for the support they will need for the next phase in their community based natural resource management journey, WWT and Mavoa are both actively seeking additional finance, and two new project will come on line before the end of this Darwin grant to secure its legacy.

13. Darwin Initiative identity

We have ensured strong visibility of the Darwin Initiative in all project activities, and represented the project at World Wetland Day, where we presented the progress of the project and the activities to implement in the 2024 work plan. The best practices have been also shared with all wetlands managers in Madagascar during the Ramsar Site Managers AGM.

14. Safeguarding

Has your Safeguarding Policy been updated in the past 12 months?	Yes; WWT adopted a slightly modified version of the IUCN ESMS in March 2023
Have any concerns been investigated in the past 12 months	No
Does your project have a Safeguarding focal point?	Yes; Harison [redacted], Country Coordinator
Has the focal point attended any formal training in the last 12 months?	Harison received a one-day introduction to the ESMS in May 2023
What proportion (and number) of project staff have received formal training on Safeguarding?	All five WWT Madagascar field staff working on the project
Has there been any lessons learnt or challenges on Safeguarding in the past 12 months? Please ensure no sensitive data is included within responses. We have not experienced any safeguarding issues on this project. Further, no formal grievances have been registered through our established mechanism.	
Does the project have any developments or activities planned around Safeguarding in the coming 12 months? If so please specify. Further training is planned for the whole of the WWT Madagascar team, which is being put together by the WWT Head of Safety Management, Ms Adele [redacted], and the WWT Senior Project Manager responsible for this project, Mr Mark [redacted]. We are also updating the ESMS for our Tseny project in 2024, in preparation for the next 3-5 years of project support at the site. This will be undertaken with participation of Mavoa staff as well as participating local communities.	

15. Project expenditure

Table 3. *Project expenditure during the reporting period (1 April 2022 – 31 March 2023)*

Project spend (indicative) since last Annual Report	2023/24 Grant (£)	2023/24 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)	[redacted]			
Consultancy costs				Some activities not carried out.
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items (see below)				
Monitoring & Evaluation*				
Others				Activities not carried out e.g. Student bursaries and conferences
TOTAL	**126,468**	**112,997.51**		

* This line was not required in the budget template when the original project was prepared.

Table 4. Project mobilising of matched funding during the reporting period (1 April 2023 – 31 March 2024)

	Matched funding secured to date	Total matched funding expected by end of project
Matched funding leveraged by the partners to deliver the project.	Approximately [redacted] of staff time was allocated by WWT in FY 2023/24.	We currently expect around [redacted] of match funding will have been contributed.
Total additional finance mobilised by new activities building on evidence, best practices and project (£)	We have secured around £140,000 over three years from GCBC for lake Tseny, beginning in 2024. This is for participatory research into nature-based solutions to climate change impacts, building on the CCVA undertaken by this project.	Mavoa has requested a further [redacted] from CEPF to continue key community support activities with WWT; their application was successful and the project is expected to be contracted by Q2 2024.

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

From the beginning of the project to this point, with the support of the relevant regional government we have finally succeed to set up four VOIs associations and the transfer of natural resources management has been completed. These associations have been trained and are currently operational now. Furthermore, we have been able to begin habitats restoration activities in the lake Tseny catchment area since 2023.

I agree for the Biodiversity Challenge Funds Secretariat to publish the content of this section.

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

Project summary	SMART Indicators	Progress and Achievements April 2023 - March 2024	Actions required/planned for next period
Impact Lake Tseny catchment provides resilient ecosystem services and sustainable livelihood opportunities for communities, secure healthy habitat for increasing populations of native biodiversity, and inspires resilience planning for wetlands throughout Madagascar.		Lessons from Tseny are already being shared with other wetlands in Madagascar, hopefully inspiring them. And work with local communities so far has put in place a strong foundation for improved management for both biodiversity and livelihoods.	[redacted]
Outcome Sustainable, representative, and legally recognised community-based management of Lake Tseny catchment results in improved ecosystem services for 5000 local people and enhanced habitat for threatened biodiversity, with techniques showcased nationally.	0.1 5000 people empowered to sustainably manage Lake Tseny through a legally endorsed 'Gelose' management transfer agreement by end of Y1	0.1 3,815 people are now involved in legally-recognised sustainable resource management through four management transfer agreements.	0.1 The VOIs may recruit new community members into their ranks, but this is not something the project is actively pursuing.
	0.2 Like for like monthly income of fishers increases by 20% between Y1 and Y3.	0.2 Not yet evaluated	0.2 An income / perceptions survey will be undertaken in the final six months of the project.
	0.3 Extent (# of ha) of aquatic vegetation and fringe Phragmites habitat increases by 10% by end of project. Reforestation plots increase forest extent by 5%.	0.3 The reforestation plots represent 3% of the total area under the VOIs, and they already planted about 3.5 ha of it (0.5%). No aquatic vegetation was planted yet as it was not considered a priority by the local communities.	0.3 Further forest restoration planting in 2024 will help increase this figure. We will also plant the first aquatic vegetation in September.
	0.4 Experimental catch per unit effort of threatened fish species increases by 10% by end of project.	0.4 Experimental catch of threatened species has been started by project team and now in progress.	0.4 The review of monitoring results will be completed in 2024.
	0.5 Long-term regional conservation strategy agreed by local communities and Tsaratanana District Government, starting to address threats throughout the local catchment by end of project	0.5 The VOI agreements represent the initial, short-term strategy on which longer-term management will build, and it already proving capable of	0.5 A theory of change for the catchment will identify strategic priorities at this phase of the Tseny programme concludes.

	0.6 At least 40 National Ramsar Committee members, Ramsar Site managers, and Managers of Protected Areas containing important wetland habitat, understand how to use R-METT and VA tools, and VAs taking place at least 2 other important wetlands.	addressing threats throughout the catchment. 0.6 Around 30 wetland conservation professionals have so far been introduced to RMETT or trained in CCVA methods; a CCVA was undertaken in Lake Sofia.	0.6 No further action is planned, but we will monitor take-up of the methodology through the next annual Ramsar Site Managers AGM.
Output 1. Five sustainably financed community institutions (VOIs) are representing the breadth of local society and providing efficient, and legally recognised, management of natural resources in and around Lake Tseny.	1.1 800 households, with proportional representation of all sectors of society (e.g. gender, socio-economic group, professional group, belief system) have been engaged in management transfer consultations and management group elections in Y1, with women representing at least 50% of membership. 1.2 Community-based natural resource management plans agreed for three lake-side associations for coordinated and zoned management of Lake Tseny, and signed off by local and district government by end of Y1 1.3 Community-based natural resource management plans agreed for two forest associations to coordinate and zone management of the surrounding forest fragment. Signed off by local and district government by end of Y2 1.4 Community-based savings groups in place, generating sufficient revenue to cover operations for all community associations by end of Y3 1.5 Final project assessment of community assessment of natural resources is rates 'good' or better by 75% of all sectors of society	1.1 968 households are represented in the management transfer agreements. Of the adult members of the new VOIs, 978 are women and 715 men. 1.2 Natural resource management plans for one new lakeside association (VOI) comprising fisheries from several villages was signed off by local and district authorities in October 2022. 1.3 Natural resource management plans for three new forest associations (VOIs) were signed off by local and district authorities in October 2022. 1.4 No new groups formed yet, but initial consultations were held and planning is well underway. 1.5 No yet due.	

1.1 Conduct community consultations for formalised community-based natural resource management transfer agreements		Completed	n/a
1.2 Management Plans developed and agreed by local government		Completed	n/a
1.3 Constitute membership of VOIs and support elections for leadership groups		Completed	n/a
1.4 Conduct capacity assessments (resource management, administrative, legal, financial) of groups and develop VOI training plan		Completed.	n/a
1.5 Facilitate a study tour to Lake Sofia to learn from similar successful ongoing schemes		The exchange visit was made in December 2022 for VOIs to learn about the CBSG process.	n/a
1.6 Develop VOI Business Plan to ensure sustainable financing of the associations, including equipment rental and community-based savings groups		Agreement reached with the VOIs on the business plan; Terms of Reference for the planning prepared	Complete the business planning consultancy and report for inclusion into follow-up actions.
1.7 Deliver VOI training programme and provide ongoing support		Ongoing mentoring was provided.	Continue to support, but encouraging self-sufficiency.
1.8 Hold community fora 2 times per year in each community to ensure wider accountability		2-3 community fora were held in Oct and Dec 2023 to set up the enforcement committees and patrol teams, with a cumulative total of 764 people in attendance.	One or possibly two further fora will be held in each community.
1.9 Hold annual catchment management group meeting		Eight further community meetings were held in July, October and December, with 305 people in attendance.	At least one more forum per community is planned.
1.10 Capacity assessment and legacy planning		There are insufficient resources to undertake a stand alone capacity assessment, but VOI support needs are assessed during regular meetings on specific project activities.	A legacy plan will be prepared in the final year of the project.
Output 2. Fishing regulations are in place and being followed by local and migrant fishers, which, alongside fish habitat restoration areas, is increasing the productivity of the fishery. Fishing communities have new knowledge on	2.1. Net exchange programme ensuring <5% of users of the fishery are not abiding by legal mesh-size regulations in Y2 2.2. Community-association patrol reports showing that at least 90% of fishing activity abides by local	2.1 A participatory experiment to test the effectiveness of the nets before the exchange was carried out in 2023. The net-exchange is planned for 2024. 2.2 The Lake Surveillance Committee (14 people) undertook awareness efforts and began patrol activities towards the end of 2023. They have received training	

value chains and the potential to increase profitability.	regulations, including respect of no take zones in Y2 2.3 Zones allocated for nursery habitat have conservation strategies, and 8 ha restored by end of project. 2.4 80% of both male and female fishers report perceived increase in productivity and desire to continue following local regulations by end of Y3. 2.5 Fish catch per unit effort increases by 15% by the end of Y3 2.6 Value Chain Analysis published for the fishery in local language by end of Y2. 2.7 A feasibility study is published for restocking native species through cage farming at Lake Tseny by and of project by end of project. 2.8 60% of both male and female fishers receive technical support for the valuation and market research of the Lake Tseny fishery by the end of Y3.	from DRPEB[4] for patrols. The regional environment department and DRPEB have returned the document to the VOIs at the end of 2023. 2.3 The restoration plan is underway, with 3.5 ha planted in 2023. Further planted should be completed before the conservation plan is devised. 2.4 Fisheries Production Evaluation Committee (12 for the 4 VOIs) was established by DRPEB in 2022. A methodology (with outline and simplified formula) was developed by DRPEB. This includes informal surveys of fishermen.. A survey will be carried out towards the end of the project to assess the improvement in productivity. 2.5 A Fisheries Production Evaluation Committee (12 for the 4 VOIs) was established by DRPEB in 2022. A methodology (with outline and simplified formula) was developed by DRPEB. The report is due in 2024, and will include a final evaluation of the improvement in productivity. 2.6 A consultant specializing in inland fisheries will be recruited to do this work in project Y3. 2.7 An initial consultation was made with the fishing communities in 2023. Free-range farming is more advantageous compared to cage farming, in relation to the cost, local consultation efforts, infrastructure monitoring. The feasibility study was initiated in 2022 for above-ground breeding, including the identification of land, and will be finalised before the end of the project. 2.8 The market research is still outstanding.	
2.1 Collect and analyse socio-economic data, including legal and illegal use of the fishery		Completed	n/a
2.2 Conduct fisheries assessment to map key nursery habitats, potential high-value no-take zones and priority restoration actions to inform Activity 1.2 and Output 3		Completed	n/a

[4] DRPEB = Direction Regionale de la Peche et de l'economie blue.

2.3 Training from fisheries specialist and visit by representatives of other successful community fishery projects to share key advice on best-practice and common mistakes to avoid		Provided by the fisheries department, during the international mangrove day event (see separate report) and during an exchange visit with fisheries managers in Lake Kinkony in 2023.	n/a
2.4 Value chain analysis and fishery business plan agreed alongside local fishers		Nothing significant undertaken.	A consultant specializing in inland fisheries is being recruited so this activity can be completed in the project extension period.
2.5 Conduct feasibility study for restocking native species through cage farming		The research is complete and the report is in preparation.	Report to be completed by end July.
2.6 Update and implement education and awareness programme, including dissemination of information on strict common standards for fishing control		Nine target schools around the lake involved, following the school year; also World Wetland & World Env Days	Further support and events are planned, but dependent on new funding.
2.7 Operate voluntary net exchange programme		Net testing has raised interest with fishers and their concerns have been incorporated into the programme.	Net exchange will take place as per the plan agreed with the fishers and fisheries department.
2.8 Community fishery trust fund established and recommendations from the Business Plan implemented with associated training provided		Initial planning and consultations undertaken.	Business plan will be completed.
2.9 Design and implement fish catch monitoring programme		Community Surveillance Team established in 2022, now collecting data. New methodology was prepared by the district fisheries dept.	Ongoing monitoring by the trained local team.
2.10 Community fishery monitoring and patrols to strengthen compliance with regulatory mesh and fishing season and no-take zones		The Lake Surveillance Committee (14 people) are making awareness efforts and are undertaking patrols. They have received training from DRPEB for patrols.	Regular patrols by Community Surveillance Team, reporting back to DRPEB.
2.11 Annual review of fisher perceptions, scheme, management approval ratings, recommendations for the coming year (independent consultant)		The first survey was completed in 2022. Due to complexity and cost, we do not plan another within the life of the project.	A resurvey will be required for the renewal of the VOI agreements but after the end of this project.
Output 3. Quality and extent of aquatic and lakeside habitat increased.	3.1 Open water aquatic vegetation increases by 10% by end of Y3. 3.2 80% survival rate of planted peripheral habitat (inc. Phragmites spp, Tamarindus indica, Pourpartia sylvatica) at end of project	3.1 Not yet due. 3.2 No peripheral habitat was planted to date; this indicator will be measured in 2024.	

	3.3 Percentage of key habitat for threatened species rated 'good' by expert working group increases by 25% by end of project. 3.4 Zero habitat loss in Y3 of project.	3.3 Not yet due. 3.4 Implementation of activities in the restoration plan is planned for 2024	
3.1 Consolidate all historical imagery and mapping of the lake and wider catchment to assess change over time		Partially complete, based on aerial imagery from 1960s, recent analysis of remote sensing data, and new drone mapping from 2023.	A drone mapping report is in preparation.
3.2 Conduct detailed annual habitat/vegetation assessments to generate baseline and monitor change over time		Baseline mapping complete.	n/a
3.3 Conduct assessment of the habitat requirements of, and baselines for, Threatened species at the site		Included withing the CCVA assessment (2023).	n/a
3.4 Develop, and agree with stakeholders, a habitat restoration plan, aligned to CBNRM Association Management plans (see Activity 1.2), and applied research programme to monitor efficacy		The restoration plan is completed, but needs to be approved by the regional authorities.	The final review and approval process is scheduled for Q2 2024.
3.5 Identify and formalise a local community monitoring team and train on monitoring protocols		The Lake Surveillance Committee (14 people) was est. and trained in 2023. They are now collecting information.	Provide any additional support that may be reasonably requested and within our ability to provide.
3.6 Undertake aquatic plant restoration alongside VOIs and local fisher groups		Planning with the VOIs completed.	To be undertaken from September to October 2024.
3.7 Establish community nursery for lakeside habitat restoration (including in local schools - see Activity 4.4)		Complete in 2023.	Second season of seedling production planned.
3.8 Undertake lakeside habitat restoration alongside VOIs, including trials for harvestable crops in reforested patches		Reforestation by VOIs association has started since 2023	Lakeside habitat restoration protocol due to start 2024
Output 4. Increased understanding of the importance of natural systems and biodiversity for livelihoods and wellbeing amongst different socio-economic groups using and living around the lake.	4.1 12 information panels are in place in all villages to inform rules and regulation on the management of natural resources 4.2 70% of fishers and market sellers are able to identify, and are aware of rules and regulations around, threatened species by Y2	4.1 Rules and regulations on the management of natural resources nearly finalised. Erection of the panels is planned for the second quarter of 2024 4.2. The monitoring of this indicator has been delayed until the final year of the project.	

	4.3 Understanding of the importance of nursery habitats and no-take zones increases by 80% amongst lake users by Y2 4.4 60% of wider community members associate a healthy lake to health and wellbeing by end of project 4.5 300 school children have received a dedicated curriculum-linked programme of environmental education and at least 75% believe that their actions can affect the future of the environment, and in-turn, their own futures.	4.3 Detailed information on these topics was not available until fishing regulations were agreed in 2023. The monitoring of this indicator has been delayed until the final year of the project. 4.4 Not yet due. 4.5 360 school children and 17 teachers have received a dedicated curriculum-linked programme of environmental education from the project to date. An assessment of awareness levels is planned for 2024.	
4.1 Conduct a schools competition to develop a single unified project logo and slogan promoting 'healthy nature for healthy people'		Complete	n/a
4.2 Develop a curriculum-linked environmental education programme for local schools, including field elements at the lake		Complete	n/a
4.3 Conduct teacher training events, with selected teachers nominated as teacher coaches to increase wider adoption of the materials		Complete	n/a
4.4 Develop and maintain school environmental ambassador schemes, including school plant nurseries and engaging local school children in restoration schemes		Complete	n/a
4.5 Establish Community Information Points for project and VOI updates, environmental awareness campaigns, publication of project social safeguarding policy and Grievance Mechanisms		Complete	n/a
4.6 Develop and deliver targeted awareness campaigns to focus on importance of wetland ecosystem services, mitigation of key threats, and identification and value of Threatened species		Complete	n/a
4.7 Mainstream project messaging into all activities		Complete	n/a
Output 5. Current and future wider threats are understood for the local Tseny catchment, with a conservation strategy developed to mitigate threats into the future, and national conservation	5.1 Ramsar Management Effectiveness Tracking Tool (R-METT) used to identify perceived threats in Y1, with relevant applied research projects interrogating options for threat mitigation by Y3.	5.1 RMETT was carried out in April 2022, and the results used to help define new interventions at the lake (eg, under new projects by WWT and Mavoa)	

managers and government staff valuing and able to use tools to plan long-term resilient community-based wetland conservation projects.	5.2 Climate Change Vulnerability Assessment (CCVA) and Mitigation Plan completed for species, habitat and livelihoods at Lake Tseny in Y2. 5.3 In Y3, an Open Standards conservation strategy has been agreed for the Lake Tseny catchment, generating conceptual models and results chains that link threat mitigation with measurable improvements in biodiversity targets and ecosystem services. 5.4 National training courses, designed in-line with Madagascar's National Wetland Strategy, attended by 80% of Ramsar Site Managers and the National Ramsar Committee, showcasing tools and approaches of the Lake Tseny project by project end.	5.2 Completed early in Y3, report now available. 5.3 Planning is underway and will be completed in 2024. 5.4 CCVA training was provided to the 11 organisations managing all 21 Ramsar sites in 2023, ie 100% of the Ramsar site management bodies. *(NB: These tools and approaches are also being incorporated into WWT's global Wetland Learning Hub project, which is currently funded by the Darwin Initiative.)*	
5.1 Ramsar Management Effectiveness Tracking Tool workshop to gather baseline data on current stakeholder knowledge of ecological character, threats, and existing management capacity within the catchment		Complete in April 2022.	n/a
5.2 Climate Change Vulnerability Assessment (CCVA) to consolidate baseline information on current status of key species, habitats and livelihoods and associated potential impacts of climate change based on regional modelling		Completed in 2023 and report submitted with this report	n/a
5.3 Multi-Stakeholder Open Standards Conservation Planning process for the catchment to develop a Conceptual Model, providing a greater understanding of current threats and contributing factors		Only preparatory work so far	Due for completion in 2024
5.4 Research programme developed and agreed with local government to interrogate the extent, severity and drivers of identified threats in the catchment		A draft Research plan is available (linked to the new Following the Water project)	Consultations are planned for July/August 2024 to finalise the initial participatory research for 2024/25.
5.5 Climate change resilient threat mitigation strategies developed for the Lake Tseny catchment and approved by regional government		Initial strategies are outlined in the CCVA report, but not sufficiently detailed to be implementable.	Selected strategies will be tested via the research programme for applied nature-based solutions.
5.6 Funding proposal developed for conservation action in the wider catchment		Completed (successful application submitted to GCBC; awaiting final	Other opportunities will be pursued as they arise.

	decision on CEPF application. Both in partnership with MAVOA and the VOIs)	
5.7 Lake Tseny designated as a Ramsar Site through the Government of Madagascar	Ramsar eligibility identified and documented in 2022 (see biodiversity survey report).	No further actions currently planned (see 8 Lessons Learned).
5.8 National Ramsar Committee and all Ramsar Site Managers in Madagascar trained in Climate Change Vulnerability Assessment (CCVA)	Complete (training held in Antananarivo on 9 Feb 2023 for 25 managers of 11 organisations, collectively managing most of Madagascar/s 21 Ramsar sites)	n/a
5.9 Wetland training programme for all managers of important wetlands (in and outside of Ramsar Sites and Protected Areas) to fill knowledge gaps identified in the National Wetland Strategy	This is part of WWT's wider programme to establish a 'Wetland Learning Hub' for in-service training of wetland professionals, which has been successfully piloted and is now in Phase II with funding from the Darwin Initiative.	Madagascar and Sofia Region are target locations for trainings in 2024 or 2025.

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

Project Summary	SMART Indicators	Means of Verification	Important Assumptions
Impact: Lake Tseny catchment provides resilient ecosystem services and sustainable livelihood opportunities for communities, secure healthy habitat for increasing populations of native biodiversity, and inspires resilience planning for wetlands throughout Madagascar.			
Outcome: Sustainable, representative, and legally recognised community-based management of Lake Tseny catchment results in improved ecosystem services for 5000 local people and enhanced habitat for threatened biodiversity, with techniques showcased nationally.	0.1 5000 people empowered to sustainably manage Lake Tseny through a legally endorsed 'Gelose' management transfer agreement by end of Y1 0.2 Like for like monthly income of fishers increases by 20% between Y1 and Y3. 0.3 Extent (# of ha) of aquatic vegetation and fringe Phragmites habitat increases by 10% by end of project. Reforestation plots increase forest extent by 5%. 0.4 Experimental catch per unit effort of threatened fish species increases by 10% by end of project. 0.5 Long-term regional conservation strategy agreed by local communities and Tsaratanana District Government, starting to address threats throughout the local catchment by end of project 0.6 At least 40 National Ramsar Committee members, Ramsar Site managers, and Managers of Protected Areas containing important wetland habitat, understand how to use R-METT and VA tools, and VAs taking place at at least 2 other important wetlands.	0.1 Community association 'Gelose' agreement signed by government 0.2. Fisher diaries, surveys and market assessments. 0.3 Drone mapping and ground-truthed habitat assessments 0.4 Project staff adopting consistent catch and return methods targeting threatened species. 0.5. Strategies resulting from an Open Standards conservation plan are signed by local communities, with activities featuring in District Plans. Funding proposal developed by project partners. 0.6. Capacity Assessment survey. VA reports.	The political situation within Madagascar remains stable and no restrictions are imposed on NGOs. Public health restrictions do not prevent project activities from taking place. Project partnership with local government remains strong and all stakeholders remain supportive of management transfer to local communities. Local community associations respect commitments to democratic processes and encourage participation of under-represented groups. Local fishing communities maintain strong relationships with migrant fishers to agree equitable use and management models.

Project Summary	SMART Indicators	Means of Verification	Important Assumptions
Outputs: **1**. Five sustainably financed community institutions (VOIs) are representing the breadth of local society and providing efficient, and legally recognised, management of natural resources in and around Lake Tseny.	1.1 800 households, with proportional representation of all sectors of society (e.g. gender, socio-economic group, professional group, belief system) have been engaged in management transfer consultations and management group elections in Y1, with women representing at least 50% of membership. 1.2 Community-based natural resource management plans agreed for three lake-side associations for coordinated and zoned management of Lake Tseny, and signed off by local and district government by end of Y1 1.3 Community-based natural resource management plans agreed for two forest associations to coordinate and zone management of the surrounding forest fragment. Signed off by local and district government by end of Y2 1.4 Community-based savings groups in place, generating sufficient revenue to cover operations for all community associations by end of Y3 1.5 Final project assessment of community assessment of natural resources is rates 'good' or better by 75% of all sectors of society	1.1 Social surveys in Y1, Y2, and Y3. Election and membership records. Reports from community consultations 1.2. Signed plans. 1.3 Signed plans. 1.4 Community association financial records. 1.5 Social survey at end of project.	All sectors of society engage with management transfer process and support wider project initiatives, including community-based savings groups and equipment rental schemes, which have been designed to fill existing needs. Local government honour legal community rights to manage natural resources and do not interfere with democratic processes.
2. Fishing regulations are in place and being followed by local and migrant fishers, which, alongside fish habitat restoration areas, is increasing the productivity of the fishery. Fishing communities have new knowledge on	2.1. Net exchange programme ensuring <5% of users of the fishery are not abiding by legal mesh-size regulations in Y2	2.1. Community patrols and checks at boat launch sites.	Local and migrant fishers are willing to engage in a long-term process to improve fisheries.

Project Summary	SMART Indicators	Means of Verification	Important Assumptions
value chains and the potential to increase profitability.	2.2. Community-association patrol reports showing that at least 90% of fishing activity abides by local regulations, including respect of no take zones in Y2 2.3 Zones are allocated for nursery habitat have conservation strategies, and 8 ha restored by end of project. 2.4 80% of both male and female fishers report perceived increase in productivity and desire to continue following local regulations by end of Y3. 2.5 Fish catch per unit effort increases by 15% by the end of Y3 2.6 Value Chain Analysis published for the fishery in local language by end of Y2. 2.7 A feasibility study is published for restocking native species through cage farming at Lake Tseny by and of project by end of project. 2.8 60% of both male and female fishers receive technical support for the valuation and market research of the Lake Tseny fishery by the end of Y3.	2.2 Patrolling reports. 2.3. Nursery habitat restoration report 2.4 Social survey of fishers (data disaggregated by gender and other factors). 2.5 Ecosystem service assessment, including catch counts/weights, interviews and analysis of local fish available at village markets 2.6 Value Chain Analysis report 2.7 Feasibility Report 2.8 Training report. Partnership agreement with operators	Local community association patrolling and enforcement can be done safely and efficiently at the lake.
3. Quality and extent of aquatic and lakeside habitat increased	3.1 Open water aquatic vegetation increases by 10% by end of Y3. 3.2 80% survival rate of planted peripheral habitat (inc. *Phragmites spp, Tamarindus indica, Pourpartia sylvatica*) at end of project	3.1 Drone maps and restoration reports 3.2 Vegetation assessment	There are no unforeseen barriers to standard restoration methods that work elsewhere locally.

Project Summary	SMART Indicators	Means of Verification	Important Assumptions
	3.3 Percentage of key habitat for threatened species rated 'good' by expert working group increases by 25% by end of project. 3.4 Zero habitat loss in Y3 of project.	3.3 Expert working group baseline and endline assessments. Habitat monitoring by project teams. 3.4 Vegetation assessment	
4. Increased understanding of the importance of natural systems and biodiversity for livelihoods and wellbeing amongst different socio-economic groups using and living around the lake	4.1 12 information panels are in place in all villages to inform rules and regulation on the management of natural resources 4.2 70% of fishers and market sellers are able to identify, and are aware of rules and regulations around, threatened species by Y2 4.3 Understanding of the importance of nursery habitats and no-take zones increases by 80% amongst lake users by Y2 4.4 60% of wider community members associate a healthy lake to health and wellbeing by end of project 4.5 300 school children have received a dedicated curriculum-linked programme of environmental education and at least 75% believe that their actions can affect the future of the environment, and in-turn, their own futures.	4.1 Photos and information posters. 4.2 Targeted surveys and ID assessments (data disaggregated by gender and other factors). 4.3 Baseline and endline social surveys (data disaggregated by gender and other factors). 4.4 Baseline and endline social surveys (data disaggregated by gender and other factors). 4.5 Environmental education appraisal report. Assessments to verify if children can name activities that they believe they can do to help maintain a healthy environment for themselves and for plants and animals.	Community members from all villages and sectors of society engage with the project. Schools continue to support comprehensive programmes of environmental education provided by project staff.
5. Current and future wider threats are understood for the local Tseny catchment, with a conservation strategy developed to mitigate threats into the future, and national conservation	5.1 Ramsar Management Effectiveness Tracking Tool (R-METT) used to identify perceived threats in Y1, with relevant applied research projects interrogating options for threat mitigation by Y3.	5.1 R-METT report. Research plans. Research reports	Good climate projection models are made available to the project.

Project Summary	SMART Indicators	Means of Verification	Important Assumptions
managers and government staff valuing and able to use tools to plan long-term resilient community-based wetland conservation projects.	5.2 Climate Change Vulnerability Assessment (CCVA) and Mitigation Plan completed for species, habitat and livelihoods at Lake Tseny in Y2. 5.3 In Y3, an Open Standards conservation strategy has been agreed for the Lake Tseny catchment, generating conceptual models and results chains that link threat mitigation with measurable improvements in biodiversity targets and ecosystem services. 5.4 National training courses, designed in-line with Madagascar's National Wetland Strategy, attended by 80% of Ramsar Site Managers and the National Ramsar Committee, showcasing tools and approaches of the Lake Tseny project.	5.2 VA report and mitigation plan 5.3 Catchment conservation plan agreed by communities and regional government 5.4 Attendance records, Training report	A full programme of research on wider threats can undertaken safely and effectively within the project period. National Ramsar Committee members remain engaged with the capacity building activities identified in the draft National Wetland Strategy.

Activities (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)

1.1 Conduct community consultations for formalised community-based natural resource management transfer agreements
1.2 Management Plans developed and agreed by local government
1.3 Constitute membership of VOIs and support elections for leadership groups
1.4 Conduct capacity assessments (resource management, administrative, legal, financial) of groups and develop VOI training plan
1.5 Facilitate a study tour to Lake Sofia to learn from similar successful ongoing schemes
1.6 Develop VOI Business Plan to ensure sustainable financing of the associations, including equipment rental and community-based savings groups
1.7 Deliver VOI training programme and provide ongoing support
1.8 Hold community fora 2 times per year in each community to ensure wider accountability
1.9 Hold annual catchment management group meeting
1.10 Capacity assessment and legacy planning
2.1 Collect and analyse socio-economic data, including legal and illegal use of the fishery
2.2 Conduct fisheries assessment to map key nursery habitats, potential high-value no-take zones and priority restoration actions to inform Activity 1.2 and Output 3
2.3 Training from fisheries specialist and visit by representatives of other successful community fishery projects to share advice on best-practice and common mistakes
2.4 Value chain analysis and fishery business plan agreed alongside local fishers

Project Summary	SMART Indicators	Means of Verification	Important Assumptions
2.5 Conduct feasibility study for restocking native species through cage farming 2.6 Update and implement education and awareness programme, including dissemination of information on strict common standards for fishing control 2.7 Operate voluntary net exchange programme 2.8 Community fishery trust fund established and recommendations from the Business Plan implemented with associated training provided 2.9 Design and implement fish catch monitoring programme 2.10 Community fishery monitoring and patrols to strengthen compliance with regulatory mesh and fishing season and no-take zones 2.11 Annual review of fisher perceptions, scheme, management approval ratings, recommendations for the coming year (independent consultant) 3.1 Consolidate all historical imagery and mapping of the lake and wider catchment to assess change over time 3.2 Conduct detailed annual habitat/vegetation assessments to generate baseline and monitor change over time 3.3 Conduct assessment of the habitat requirements of, and baselines for, Threatened species at the site 3.4 Develop, and agree with stakeholders, a habitat restoration plan, aligned to CBNRM Association Management plans (see Activity 1.2), and applied research 3.5 Identify and formalise a local community monitoring team and train on monitoring protocols 3.6 Undertake aquatic plant restoration alongside VOIs and local fisher groups 3.7 Establish community nursery for lakeside habitat restoration (including in local schools - see Activity 4.4) 3.8 Undertake lakeside habitat restoration alongside VOIs, including trials for harvestable crops in reforested patches 4.1 Conduct a schools competition to develop a single unified project logo and slogan promoting 'healthy nature for healthy people' 4.2 Develop a curriculum-linked environmental education programme for local schools, including field elements at the lake 4.3 Conduct teacher training events, with selected teachers nominated as teacher coaches to increase wider adoption of the materials 4.4 Develop and maintain school environmental ambassador schemes, including school plant nurseries and engaging local school children in restoration schemes 4.5 Establish Community Information Points for project and VOI updates, environmental awareness campaigns, publication of project social safeguarding policy etc 4.6 Develop and deliver awareness campaigns on importance of wetland ecosystem services, mitigation of threats, and identification and value of Threatened species 4.7 Mainstream project messaging into all activities 5.1 Ramsar Management Effectiveness Tracking Tool workshop to gather baseline data on current stakeholder knowledge of ecological character, threats, and existing management capacity within the catchment 5.2 Climate Change Vulnerability Assessment (CCVA) to consolidate baseline information on current status of key species, habitats and livelihoods and associated potential impacts of climate change based on regional modelling 5.3 Multi-Stakeholder Open Standards Conservation Planning process for the catchment to develop a Conceptual Model, providing a greater understanding of current threats and contributing factors 5.4 Research programme developed and agreed with local government to interrogate the extent, severity and drivers of identified threats in the catchment 5.5 Climate change resilient threat mitigation strategies developed for the Lake Tseny catchment and approved by regional government 5.6 Funding proposal developed for conservation action in the wider catchment 5.7 Lake Tseny designated as a Ramsar Site through the Government of Madagascar 5.8 National Ramsar Committee and all Ramsar Site Managers in Madagascar trained in Climate Change Vulnerability Assessment (CCVA) 5.9 Wetland training programme for all managers of important wetlands to fill knowledge gaps identified in the National Wetland Strategy			

Checklist for submission

	Check
Different reporting templates have different questions, and it is important you use the correct one. Have you checked you have used the **correct template** (checking fund, type of report (i.e. Annual or Final), and year) and **deleted the blue guidance text** before submission?	☑
Is the report less than 10MB? If so, please email to Darwin-Projects@ltsi.co.uk putting the project number in the Subject line.	☑
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.	No
Have you included means of verification? You should not submit every project document, but the main outputs and a selection of the others would strengthen the report.	☑
Do you have hard copies of material you need to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number. However, we would expect that most material will now be electronic.	n/a
Have you involved your partners in preparation of the report and named the main contributors	☑
Have you completed the Project Expenditure table fully?	☑
Do not include claim forms or other communications with this report.	