Darwin Initiative Main: Annual Report

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

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

Submission Deadline: 30th April 2023

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

Darwin Initiative Project Information

Project reference	28-024
Project title	Diverse agroforestry protects natural capital around Betampona and Vohibe, Madagascar
Country/ies	Madagascar
Lead Partner	Madagascar Fauna and Flora Group
Project partner(s)	Association Lovasoa, Association Soavinala, Madagascar National Parks, Missouri Botanical Gardens- Madagascar, Kew Madagascar Conservation Centre, Prof Christof den Biggelaar, The Fruits, Vegetables, and Environmental Education (FVEE) Program of the Church of Jesus Christ in Madagascar (FJKM), Catholic Relief Services, MC Ingredients
Darwin Initiative grant value	£314,523
Start/end dates of project	1 Oct 2021 to 30 Sep 2024
Reporting period (e.g. Apr 2022 – Mar 2023) and number (e.g. Annual Report 1, 2, 3)	Apr 2022- Mar 2023, Annual Report 2
Project Leader name	Karen Freeman
Project website/blog/social media	Madagascar - MFG - Home Page (madagascarfaunaflora.org); MFG (@MadaFaunaFlora) / Twitter Madagascar Fauna & Flora Group | Facebook
Report author(s) and date	Karen Freeman, Christian Rambeloson, Alice Heliarisoa, Fortunat Rakotoarivony, Dan Turk, Christof den Biggelaar, 30 April 2023

1. Project summary

This project is designed to address the rapid loss of forest in Madagascar due to widely practised slash and burn agriculture, which has resulted in the loss of over 44% of Madagascar's forests over the past six decades (Vielledent et al. 2018).Through our own remote sensing research with partners from Saint Louis University's Geospatial Institute, significant loss of forest has been recorded in the immediate vicinity of Betampona Strict Nature Reserve (RNI) over the past two decades with almost all of it being converted into agricultural land (Ghulam 2014, Cota et al. 2021). Given that Madagascar is considered one of the top ten biodiversity hotspots of the world

(Myers et al. 2000), the reduction of remaining forest is deeply relevant in terms of biodiversity conversation, provision of ecosystem services for local communities, as well as far wider implications for global climate change mitigation.
This project seeks to work with local farmers in 5 target villages around the protected areas of Betampona Strict Natural Reserve, the Vohibe Forest (part of the Ankeniheny-Zahamena forest corridor) and the Ampasina Forest (all in eastern Madagascar), to promote agroforestry as a more sustainable farming approach. It also concurrently promotes community management of remaining forest fragments in the target areas. Madagascar is currently listed by Poorest Countries in the World 2023 (worldpopulationreview.com) as the fourth poorest country in the world with many people living on less than a dollar a day. This project will not only strive to provide the basic tools, start-up trees and crop seeds necessary for the project but will also build capacity in fruit-tree propagation and care, establishment of farmer cooperative and business planning. Over the course of the project, we hope to establish "model" villages that will quickly become renowned for their increased standard of living and better management of remaining forest fragments (some of which contain critically endangered plant species not known from the protected areas), producing a long-term cascade effect. Many fruit trees will take 5-7 years to mature and start producing fruit for sale. In the meantime, we will work with our partners to increase household income through the production of yams, vegetables and maize and through promotion of farmer cooperatives and setting up direct links with exporters for already-grown commodities such as spices. In this way we should be able to reduce poverty for the 100 target families and families of local staff we hire for the project duration in the short term, and in the longer term, the wider community as the techniques become more widely practised.
In return for the project's support in developing agroforestry on their own land, participants will contribute to collective community monitoring and management of specified target forest remnants, in partnership with the project partners. Management plans will be developed by the community groups with support from project partners for target forest fragments detailing the agreed sustainable-use criteria and a 5-year restoration plan. Quarterly patrols will be carried out jointly by project partners at each site and members of the community associations to monitor slash and burn agriculture, illegal activities such as poaching and illegal logging, restoration efforts and vertebrate diversity.

Maps are included of the three target sites in Annex 4.1.

References
Cota, G., Sagan, V., Maimaitijiang, M., Freeman, K. 2021. Forest Conservation with Deep Learning: A Deeper Understanding of Human Geography around the Betampona Nature Reserve, Madagascar. Remote Sensing, 13, 3495. https://doi.org/10.3390/rs13173495

Ghulam, A. (2014). Monitoring tropical forest degradation in Betampona Nature Reserve, Madagascar using multisource remote sensing data fusion**. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing**. DOI: 10.1109/JSTARS.2014.2319314

Vieilledent, G.; Grinand, C.; Rakotomalala, F.A.; Ranaivosoa, R.; Rakotoarijaona, J.R.; Allnutt, T.F.; Achard, F. (2018). Combining global tree cover loss data with historical national forest cover maps to look at six decades of deforestation and forest fragmentation in Madagascar. Biol. Conserv. 222, 189–197.

2. Project stakeholders/ partners

This year has seen the ongoing formalisation of many of MFG's planned partnerships for this project with the signing of Memorandums of Understanding (MoUs) with:

- Kew's Madagascar Conservation Centre (KMCC) (Annex 4.2) to set out the responsibilities of each party for this collaboration. KMCC's main role is to provide training and follow up technical support for the establishment of lucrative yam production with the target agroforestry households at all of our intervention sites. Dr Mamy Tiana Rajaonah carried out both sets of missions in all target sites (initial training and follow up- see Activities Section 3.1).

- MoUs have been signed with the village associations (VOIs) of FIZALAMI (Ambanitohaka), FITSINJO (Analamangahazo) and TARATRA (Antaranarina) (Annex 4.3). These are extremely significant agreements as they formalise our commitment to support these associations in the development of agroforestry locally in return for greater oversight on their part for monitoring and management of the remnant forest fragments under their jurisdiction. These partnerships and this project came about as a direct result of requests from some of these VOIs for help in this latter respect. A further MoU is currently being finalised with VOI LOVASOA at Ampasina with similar terms.
- All original participating households specifying the agreement with either MFG or MBG (the latter for Ampitabe) to support each household in the development of agroforestry on their land through provision of start-up materials, plants and training in return for care of the distributed trees, a commitment to no longer slash and burn areas planted with trees and to contribute towards the VOIs commitments to manage remnant forest patches under their jurisdiction (Annex 4.4).
- The Development Organisation of the Diocese of Toamasina (ODDIT). ODDIT is the regional branch of the Catholic Church tasked with carrying out the work programmes agreed with Catholic Relief Services, which is the central development organization at of the Catholic Church, responsible for development activities, food security and natural disaster management (Annex 4.5). Our collaborations related to their specific programme SPICES, which seeks to reduce poverty reduction in rural Madagascar by increasing profits from spice production through linking producers directly with exporters, looking for in-situ product transformation opportunities and encouraging farmer cooperatives.

The strong partnerships developed in Year 1 of the project have continued to grow, particularly with the main partners Missouri Botanical Garden (MBG) at Vohibe and Association LOVASOA at Ampasina. The collaboration with the Fruits, Vegetables and Environmental Education (FVEE) Programme of the FJKM church has been reinforced in Year 2, with further intensive training being offered at their own site, Mahatsinjo and in all the project target areas (see Section 3.1). The planned partnership with Kew Madagascar Conservation Centre (KMCC) has come to fruition with in-situ training and follow up being offered to develop yam cultivation in all the target sites. Professor Christof den Biggelaar is providing agroforestry expertise, project guidance and training for project personnel and participants (Section 3.1).

Each of these organisations have submitted semestrial reports to MFG and have been consulted extensively for the development of this joint annual report. Open dialogue is maintained between MFG and each respective partner through the Project Leader, MFG Programme Manager and the Project Coordinator. Dates for joint training workshops are agreed together, as are training priorities. Suggestions for project improvements and changes given by project partners are given their due respect and discussed openly via email, by telephone or in person.

Challenges remain in gathering data from all partners in a comparable and complementary form. For Year 3 the Project Leader will develop data tables in a set format to be completed by partners for each semestrial report to facilitate data compilation and analysis. Each partner naturally has their particular interests and specialities, which is a very positive situation and creates much opportunity for constructive exchange of ideas and experience. We do, however, need to work in Year 3 to assure that all objectives for the project are met at all sites. MBG's site. Ampitabe, is a lot more remote compared to Ampasina and Betampona and we will need to make an extra effort to ensure that objectives such as cooperative creation are still met. Challenges for transporting produce to markets are more challenging for Ampitabe so special attention will need to paid to this aspect over the remaining course of the project.

The partnership with MC Ingredients has progressed with their technicians giving MFG and Ampasina Coordinators and Prof Christof den Biggelaar a guided tour of their export facility, chairing information meetings on the creation of cooperatives and participating in the offered training on the same subject (Section 3.1). ODDIT were also instrumental to this training along with a new partner, the Regional Directorate for Industrialisation and Trade and Consumption (DRICC). These partnerships will continue to be developed through Year 3 (Section 3.1).

The Project Leader and MFG Programme Manager met with David Ashley, Her Majesty's Ambassador to the Republic of Madagascar in May 2022 to inform him of the present project,

along with various other MFG projects (Annex 4.6). We invited Mr Ashley to visit the project if his schedule allowed. We will share this project report with Mr Ashley along with a short summary of progress to date.

3. Project progress

3.1 Progress in carrying out project Activities

It has been a very busy year with a lot of progress made on activities across the four agreed outputs:

Output 1. **A diversity of plant species attractive to local farmers are easily available for use in agroforestry trials.**

Year 2 saw the set up of agroforestry tree production on a significant scale, particularly at the MBG site of Ampitabe where the production from that one nursery alone was 9,111 agroforestry trees, consisting of a good range of species (coffee, clove cocoa, cinnamon, breadfruit, banana, orange, litchis (requiring air-layering technique) and soursop). This is a singularly remarkable achievement within one calendar year and bodes very well for the future of agroforestry production in the area. This production alone from a single site has made up 79.5% of our required target production for the project by July 2023. Production was on a more modest scale at Ampasina with the production of 2023 agroforestry trees (coffee and orange for the majority but more recently diversifying into mangoes, cloves and soursop too) but this is still a remarkable achievement given their lack of previous extensive experience. Agroforestry tree production has not yet started at the three Betampona sites but is scheduled to begin in May 2023. Across just Ampitabe and Ampasina the total production was 11,134 trees so 92.8% of the target production by July 2023. Given these rates of production and MFG's previous experience (in particular producing clove trees), we do not anticipate a problem meeting this objective although the trees may not yet all be ready for planting out by July 2023.

In addition to the trees produced in the project nurseries further 4,085 agroforestry trees were purchased between the three Betampona sites and Ampasina and 249 vanilla plants at Ampitabe. A further 2,043 diverse fruit trees were distributed by the FVEE team across the 5 sites, 4,458 annual crop seed packets and starter yam bulbils and tubers giving project participants an amazing diversity of plant choices to start their agroforestry plots.

N.B. It was a big oversight to not include any specific activities related to agroforestry tree production in the logframe.

Native tree production has been extremely successful across the 5 sites with a total of 33,870 native trees produced across all site nurseries by end of Year 2 (Photos in Annex 4.7, copies of nursery databases available on request). This has nearly tripled the project target production of 12,000 trees already by the end of Year 2. Seed collection permits have continued to be secured for both MBG and MFG (Annex 4.8) and nurseries well supplied and renovated.

Output 2. **Farmers living in the landscape surrounding the two protected areas are aware of the opportunities presented by agroforestry to meet their tree product and food production needs and some are skilled, effective and convinced practitioners (target 50% female participation).**

Most activities in this Output have been completed. All project animators and extension workers received further training in agroforestry and extension techniques during Year 2 with the Project Coordinator and then subsequently in an intensive 3-day training course at Ivoloina in October 2022 with Prof Christof den Biggelaar, MFG's agroforestry specialist advisor. This was also a rare opportunity to gather project staff from across the 5 sites together at the same time as demonstrated through attendance sheets (Annex 4.9) and photos (Annex 4.10). This was further reinforced by field visits and "cascade training" carried out subsequently around Betampona and Ampasina with mentoring and further tuition from Prof den Biggelaar.

The awareness-raising objectives of the project for at least 100 households on the utility of agroforestry to protect biodiversity and improve human wellbeing were met and reported in Year 1.

During Year 2, 85 of the original 105 households that signed up for the project made a firm commitment to adopt agroforestry techniques on their land through the signing of MoUs (Annex 4.3). 15 replacement households have agreed to join the project around Betampona to replace those that have dropped out, so we envisage being able to achieve 100 households actively practicing agroforestry by end of Year 4. Large efforts have been made to appeal to both male and female participants for the project with a member of each sex ideally signing up for each household MoU (not an obligation). Across the 5 sites we have a 48.9% proportion of female participation, which we feel a significant achievement give that the status quo is often for an almost all male participation in projects of this type in the local areas we operate. All original 85 households have already planted agroforestry trees on their land.

The FVEE team carried out follow up intensive training at their own site at Mahatsinjo for selected highly motivated project participants (6 from each site) to reinforce techniques for fruit tree propagation and care in December 2022 (Photos Annex 4.11 and FVEE report available on request). This was further reinforced by the FVEE team coming to carry out evaluations of uptake of the recommended agroforestry techniques and to assess how trees distributed in Year 1 were progressing. Visits were carried out in Jan/Feb/Mar 2023 to as many participants' plots as feasible and also to every project orchard (Annex 4.11).

The planned collaboration with KMCC went according to plan despite some timing challenges due to Dr Rajaonah's busy schedule. 177 people were given introductory training (of which 44.6% were female) in July 2022 for Ampitabe and October 2022 for Betampona and Ampasina on yam cultivation and multiplication techniques (example attendance sheet available in Annex 4.12, report available on request). All project participants were given start-up yam tubers and/or bulbils. Follow up field visits were then completed at all sites in Feb/March 2023 with as many participants' field plantations being visited as possible for evaluation of adoption rates, adherence to recommended techniques and assessment of challenges. This initiative has been extremely successful with 100% adoption in all original 85 participating households (MFG and MBG reports available on request).

As well as the 100% uptake of yam cultivation, 82% of participants have also planted annual market-garden crops (100% at Betampona and Ampasina but only currently 28% at Ampitabe). Efforts will be made in Year 3 to encourage more households at Ampitabe to diversify and include more annual crops). To date 4,458 packets of annual crop seeds have been distributed across the 5 sites.

Large advances have also been made towards setting up a cooperative around Betampona for clove production to supply directly to exporters, MC Ingredients. An MoU was developed and signed with the Development Organisation of the Diocese of Toamasina (ODDIT), the regional acting branch carrying out programmes for Catholic Relief Services including the SPICES initiative to connect producers directly with exporters for spice crops and also to encourage producers to do more product transformation processes themselves to increase profit margins and household income. Two initial village consultations were held in February at Sahambala and Ambodiriana near Betampona, followed by two workshops in March 2023 at Ambodirafia and Sahambala on the advantages of cooperatives and how to create them. These latter were completed also in conjunction with the Regional Directorate for Industrialisation and Trade and Consumption (DRICC). Follow up is planned in Year 3 with these same partners to develop cooperatives at both Betampona and Ampasina.

Next steps will be:

- An information campaign in Sahambala, Ambodiriana and Ampasina. To be done by the three organisations (MFG, ODDIT and MCI).
- Creation of cooperatives. To be done by MFG, ODDIT and DRICC.
- Training workshop for cooperatives. To be carried out by MFG and MCI on expected standards of the products.
- Support cooperatives to develop a marketing business plan with guidance from MFG, ODDIT and DRICC.

A further potential cooperative for the production of chili around Betampona is also under discussion with MC Ingredients. In the event that a formal cooperative is created, MC Ingredients will provide start up seed and training for chili production.

As yet no discussions have been initiated to set up similar cooperatives for Ampitabe so we need to prioritise this early in Year 3. Ampitabe is a lot more isolated than Betampona and Ampasina, so it makes setting up such cooperatives more challenging (due to distance from regional offices such as DRICC and from the main base of most exporters, which is Toamasina) but also highlights why such cooperatives are so vital in such an isolated area. Buyers are far more likely to come to Ampitabe to buy produce if there are reliable, established cooperatives rather than dealing with individual farmers.

Output 3. Community in host landscapes agree to conserve certain unprotected forest fragments.
Most activities relating to this output were achieved and reported on in Year 1 of the project. This year, through our collaboration with Madagascar National Parks, we have been able to access the specific management agreements agreed between the village associations (VOIs) around Betampona and the regional branch of the Ministry of the Environment and Sustainable Development (DREDD Atsinanana), which outline the terms for management of the various forest fragments under each VOI's jurisdiction. These will be reviewed in detail in Year 3 to assess if further modifications are required to be negotiated with the VOIs and DREDD Atsinanana to ensure more sustainable management of the forest parcels.
In addition to the agreements with DREDD, all Betampona VOIs have now also signed MoUs with MFG to reinforce their commitment to manage and monitor these forest fragments in return for agroforestry development support (see Section 3.2, Annex 4.3). Regular patrols have been established by VOIs in each forest fragment but the frequency of the patrols needs to be increased (see Section 3.2, Annex 4.13).

Output 4. Community engages in participatory baseline and quarterly surveys of destructive forest harvesting and natural capital (including biodiversity) in target forest fragments surrounding the main protected areas.

Baseline surveys were carried out in a collaborative effort between project staff and VOI members at each site to map all current forest fragment perimeters by GPS (Annex 4.13), ecological monitoring transects were collaboratively established and baseline data taken with participation of VOI members (Annex 4.14). Work needs to be done to support VOIs to carryout quarterly patrols (presently being done every 6-months). Further support is needed in Year 3 for MBG and Association SOAVINALA members in fauna ecological monitoring and species identification (see Section 8).

3.2 Progress towards project Outputs

Output 1. A diversity of plant species attractive to local farmers are easily available for use in agroforestry trials.

This output is on target as project nurseries had produced a total of 11,134 agroforestry trees by end of Year 2 across just Ampitabe and Ampasina (production to start at Betampona sites in May 2023). In addition to this a further 4,085 trees have been bought and distributed by project staff plus another 2,043 trees distributed to project participants by the FVEE team across the 5 sites during Year 2. Additionally, 4,458 packets of annual crop seeds have been distributed to participants across the 5 sites along with starter yam bulbils and tubers.

Project Indicator 1.1 has been completed with all 9 project nursery staff having received intensive training from the FVEE team in Year 1 in fruit tree production, grafting and post planting care (FVEE report from Year 1 available on request). Nursery workers at Ampasina have so far produced 16 litchi trees using an air-layering technique, proving their competence.

Project Indicator 1.2: Good progress made against this indicator with 11,134 agroforestry trees having been produced between Ampitabe and Ampasina nurseries (92.8% of target production). Agroforestry tree production is scheduled to begin at Betampona in May 2023. We should meet the target production but perhaps all plants won't be ready for planting out by July 2023. We need

to prioritise the production of at least 2 new cultivars this year to meet the specific terms of the indicator.

Project Indicator 1.3: To date 5,086 agroforestry trees produced in the project nurseries at Ampitabe and Ampasina have been distributed to project participants. We expect to meet this target by Nov 2023.

Output 2. Farmers living in the landscape surrounding the two protected areas are aware of the opportunities presented by agroforestry to meet their tree product and food production needs and some are skilled, effective and convinced practitioners (target 50% female participation).

This output has already been achieved by end of Year 2: 85 of the original 105 households that signed up to the project are actively practicing agroforestry and have signed MoUs to this effect (Annex 4.4), and their efforts have been verified by project extension workers, animators and trainers (Annex 4.15, Annex 4.16 and reports from KMCC, FVEE and Prof den Biggelaar available on request). The remaining households are the most motivated and diligent, so we do not anticipate a large dropout rate unless for unforeseeable circumstances such as illness or moving from the area. 15 households have been replaced at Betampona so we anticipate there could be up to 100 households practicing agroforestry in a competent manner by project end. The female participation rate is 48.91 at present, so very close to the aimed for 50%.
Project Indicators 2.1 and 2.2 have all already been met as confirmed by attendance sheets for training sessions and the subsequent initial sign up of 105 households to the project across the 5 sites (exceeding the target of 100 households due to the enthusiasm of many potential participants to be included).
Project Indicator 2.3 is well on target as 85 of the original signed households are presently actively practicing agroforestry and adhering to recommended methods. With the newly signed participants at Betampona we anticipate that this amount could rise to 100 households practising agroforestry. We will work hard over the final two years of the project to continue supporting these households to maintain and improve their agroforestry plots.
Project Indicator 2.4 has already been achieved with 100% of the 85 original participating households having planted agroforestry trees and are currently cultivating yams and 82% have also planted annual market-garden crops (100% at Betampona and Ampasina but only currently 28% at Ampitabe). Efforts will be made in Year 3 to encourage more households at Ampitabe to diversify and include more annual crops.
Efforts are well underway to achieve Project Indicator 2.4 at Betampona (See Section 3.1).

Output 3. Community in host landscapes agree to conserve certain unprotected forest fragments.
This output has also been achieved as all target village communities have agreed to conserve and monitor the forest fragments under their management. We have already signed MoUs with the three Betampona village associations (VOIs) and the MoU with Association LOVASOA at Ampasina is near completion with just the financial support for the association's project nursery needing to be detailed. The signing of an MoU has not yet been broached with Association SOAVINALA at Ampitabe due to a misunderstanding between the Project Leader and the Site Coordinator (with the Site Coordinator understanding that MoUs only needed to be signed with participating households rather than also with the VOI themselves for forest management and ecological monitoring). This misunderstanding did not come to light until this report was being prepared but the association has been very supportive of the project since the start (as evidenced by their letter of support at the application stage), and we do not anticipate any objections to signing an MoU. All VOIs have already shown their commitment to protect their forest fragments through the participative establishment of monitoring transects and the beginning of regular monitoring (though not yet being completed at the required quarterly interval).
Project Indicator 3.1 was completed by project start (process driven by Madagascar National Parks) as evidenced by the signing of agreements between the VOIs and the regional Director of the Environment and Sustainable Development (DREDD Atsinanana) for the protection of specified forest parcels in their locality (copies in Malagasy available on request) and further reinforced by MFG at Betampona through the signing of MoUs as described above (Annex 4.3). This latter also goes a long way towards completing Project Indicator 3.2 with just the remaining

review of the present management agreements with DREDD to be completed to see if any modifications are required to make forest use more sustainable.
Project Indicator 3.3 is also well on target every village association carrying out regular patrols in the forest fragments under their management. Work remains to be done to encourage and support the village associations to carry out these patrols on a quarterly basis (presently being carried out each semester).

Output 4. Community engages in participatory baseline and quarterly surveys of destructive forest harvesting and natural capital (including biodiversity) in target forest fragments.

Output 4 and Project Indicator 4.1 are partially achieved with community monitoring transects established now by every village association, baseline information having been collected at all sites and monitoring of infractions and vertebrate fauna underway. Further efforts are required in Year 3 to achieve quarterly monitoring of forest harvesting and fauna ecological monitoring.

3.3 Progress towards the project Outcome

Outcome: A critical mass of farmers living in landscapes surrounding the two protected areas are committed to nurturing natural capital through sustainable use of remaining forest and agroforestry.

The project is online to meet its target of a minimum of 75 households actively practising agroforestry around Betampona and Vohibe and with all village associations committed to managing and monitoring the forest fragments under their jurisdiction. It is very hard to assess at this point whether that number of agroforestry households will constitute the critical mass needed to create a cascade effect through the rest of the communities living around the two target protected areas.

Indicator O.1: Baseline GPS maps have been made of the present perimeter of all forest fragments targeted through this project and a good understanding of pre-project (2010-2019) rates of destruction are available for Betampona through MFG's long-term association with Saint Louis University's Geospatial Institute to remote-sense forest cover changes around Betampona since 2010. It is too early to say whether we are on track to meet this target.

Indicator O.2: It is too early to judge whether any of the target forest fragments will be converted to agriculture by end of Year 3 or not but commitment from the VOIs so far seems encouraging with the signing of MoUs in all three target sites at Betampona (Annex 4.3) and an MoU under development with Association LOVASOA at Ampasina. The baseline GPS maps have been collected for each forest fragment (Annex 4.14) so we will be able to quantitatively measure any conversion from forest to agricultural land in Year 3 through the quarterly patrols and annual assessment of forest extent.

Indicator O.3: All participants at Ampitabe have submitted plans for their land with species preferences for planting (Annex 4.18). Participants at Ampasina and Betampona have submitted lists of species they would like to plant but as yet we are behind schedule for developing individual plans per household. This will be prioritised in early Year 3.

These indicators seem adequate for measuring the intended outcome and we should be on schedule to meet all the indicators and hence the outcome by project end. The indicator that will be most problematic to measure and meet is O.1: By end YR3 rates of destructive timber exploitation within target 1,940 ha forest fragments have reduced by 70% from baseline. As the baseline is taken from a 9-year period from 2010 to 2019 they will be average rates and may vary considerably from forest fragment to forest fragment. We will likely only be able to calculate average rates of forest loss per year across all the forest fragments included in the remote-sensing area and hance it will be difficult to judge changes in any specific fragment with a large degree of accuracy. A dedicated Masters' project at Saint Louis University (SLU) dedicated to this analysis would help resolve the issue by allowing finer-scale calculations per forest fragment but we did not budget for such costs. We will approach SLU to see if there is any possibility of them funding such a project within Years 3 and 4.

3.4 Monitoring of assumptions

Assumption 1- A sufficient number of farmers are included in the project to constitute a "critical mass" with respect to influencing non-participants. To increase our impact in any given area we have chosen to target specific sites to set up "model villages" with a high proportion of households participating in the programme. Villager associations in all our proposed sites have been consulted already and have given written commitment to participate in the proposed programme.

Comments: It is still too early to tell if this assumption is true. We have so far had 20 households drop out of the project across the sites (15 at Betampona and 5 at Ampitabe) due to various reasons (such as illness, moving from the area, participating in food for work schemes or paid employment rather than farming their own land). At Betampona it was very easy to find replacement participants with villagers having heard about the project and wanting to be involved. This option of replacing participants has not yet been investigated for Ampitabe. At village meetings interest has been high in the project and project staff have been approached by people asking to join in. It remains to be seen whether the hoped for cascade effect will become a reality.

Assumption 2: Land use remains in the farmers' hands and they are not disenfranchised by outsiders (such as artisanal miners, commercial mining companies, powerful people wishing to obtain land, new immigrants to area). MFG will work with local Mayors to investigate possibilities for formalising individual land rights.

Comments: So far this assumption has borne true and we have not yet had any significant land rights issues raised through the project at any of the sites.

Assumption 3: Nurseries not seriously impacted by cyclones. MFG and MBG each have over two decades' experience in tree nursery design and cyclone proofing measures in the Eastern cyclone belt of Madagascar so will implement this knowledge in the design of any new nurseries and improvements on existing nurseries. Easily replaceable local materials will be used for construction to allow easy repair and replacement of damaged materials.

Comments: Despite severe impacts from the 5 severe cyclones/tropical storms in Year 1, this year the assumption has held true, and no severe damage has been done to project nurseries. The one nursery that was relocated at Ambanitohaka has been fine this year and has not suffered any flooding. We will need to continue to be vigilant in this respect though as with global warming we can expect cyclones and storms to become ever more frequent and intense.

Assumption 4: Nursery workers are able to carry out successful grafting/marcottage. The training and planned follow-up by FVEE staff will ensure success in this respect.

Comments: This assumption has proven to be correct. Nursery staff and some participants have already proven to be successful at grafting (see FVEE photos in Annex 4.11). FVEE carried out follow up intensive training this year (Section 3.1) and will continue to do so in Year 3 to continue building capacity in this respect.

Assumption 5: Permits can be secured for seed collection in forest fragments. MFG has a 14-year record of gaining permits to collect seed in forest fragments around Betampona from the regional branch of the Ministry of the Environment and Sustainable Development and we do not foresee any issues in this respect. Likewise, MBG has similar agreements for the Vohibe Forest.

Comments: This has proved to be the case with both MFG and MBG continuing to secure permits (Annex 4.8)

Assumption 6: The COVID-19 pandemic and any resulting work and travel restrictions will not interrupt the project's progress overly. Although local or national restrictions could certainly interfere with plans for specialised training from Dr den Biggelaar and FVEE, our project managers at each site have sufficient personal experience in agronomy and grafting techniques to carry out basic training themselves if needs be. By targeting in-country expertise, we are not reliant on international borders being open to ensure the completion of this project. Dr den Biggelaar has worked remotely providing advice and coaching to MFG's proposed project coordinator for Betampona for many years in addition to his in-person site visits. MFG has a formal COVID-19 sanitary protocol that all staff are obliged to respect to reduce the risks of inadvertent spread of the disease.

Comments: This assumption proved to be correct. Prof den Biggelaar's visit to carry out his agroforestry training for project staff and participants, that was originally scheduled for early in Year 2, had to be postponed initially due to COVID-related travel cost and insurance-related issues. His rescheduled trip was then further delayed due to him becoming quite ill after contracting COVID-19 just a few weeks before he was due to fly to Madagascar. As a result, his trip was delayed again by several weeks to enable him to properly recover. Nonetheless the project went ahead as planned and participants carried on developing their parcels in the meantime under the guidance of in-country project staff. Although some improvements could have been made regarding tree spacing and maximising land use had Prof den Biggelaar's training been carried out earlier as originally planned, on the whole he was satisfied with the results and felt that good progress had been made. Some changes/improvements will now be made following his recommendations, but the project was managed successfully by in-country staff.

Assumption 7: Farmers are sufficiently trusting and open-minded to trial new approaches. Our past reforestation and extension activities in these areas have proven that at least some individuals are open to trialling new methods and varieties. By having already first consulted with the farmers about their planting preferences we are confident that the chosen species for inclusion in the project are of interest to farmers in these specific target areas.

Comments: Farmers seem to have been very enthusiastic thus far to trial new varieties (KMCC and FEVV reports available on request) in part most likely due to the extensive experience and careful selections made by FVEE for species suitable for the area, which no doubt have added to farmer confidence to trial new crops. Similarly, the yam training offered by Dr Mamy Tiana Rajaonah of KMCC has been met with similar support and enthusiasm, again probably in part due to his obvious knowledge and expertise, which must reassure farmers during the offered training, but also due to suitable species being selected to answer local needs and preferences.

Assumption 8: Farmers have areas of land under their management that are suitable for agroforestry. Preliminary studies by MFG and MBG have already established this to be the case in both target areas.

Comments: It is true that farmers have suitable land available for agroforestry, however, in many sites the soil seems to be very poor and lacking in nutrients due to erosion. At end of Year 2 we invested in soil meters to measure the levels of nitrogen (N), phosphorous (P) and potassium (K) and collected a number of soil samples from around Betampona and Ampasina. The samples will be analysed in Year 3 to provide a baseline for monitoring going forwards. Recommendations from both FVEE and Prof Christof den Biggelaar (reports available on request) have been to continue to compost, mulch and use natural fertilisers (such as animal dung) to improve soil on participants parcels and in our established project orchards.

Assumption 9: The COVID-19 pandemic and any resulting work and travel restrictions will not adversely affect the project. If necessary, we can adapt the training approach to avoid the need for large workshops and instead focus on one to one and small group training respecting all locally-imposed restrictions on travel and group size. By targeting the hire of local staff for the most part we avoid the need for much long-distance travel. MFG has

a formal COVID-19 sanitary protocol that all staff are obliged to respect to reduce the risks of inadvertent spread of the disease.

Comments: This assumption has proven true in Year 2 and there have been no serious work disruptions due to COVID-19 this year. No travel or work restrictions have been imposed by the Malagasy government.

Assumption 10: On reflection, the community will decide that the forest fragments that remain in their landscape are valuable and worth conserving and that it is possible for them to do so. The target areas have been chosen because active interest has already been shown there to protect the target forest fragments through the creation of local village associations (VOI). MFG and MBG will work with these existing structures to facilitate their goals to protect remaining forest fragments.

Comments: This assumption has held true as reflected by the three MoU's already signed with village associations in Betampona making a commitment to manage and monitor forest patches under their jurisdiction (Annex 4.3). An MoU with Association LOVASOA is also close to being finalised for Ampasina along similar terms. An MoU has not yet been sought with VOI SOAVINALA at Ampitabe but will be in early Year 3, for now their commitment to protect the forest fragments has been proven by their willingness to carry out the baseline survey and ecological monitoring (Annex 4.15).

Assumption 11: Community is cohesive and inclusive without powerful factions who act contrary to majority consensus. MFG works closely with the local Mayors, the regional branch of the Ministry of the Environment and Sustainable Development and Madagascar National Parks, who will support MFG and local communities to take legal action against any persons breaking locally-agreed resource-management rules or national laws protecting the environment.

Comments: So far this assumption has held true. It is presidential election year in Madagascar this year so political tensions may increase, people in office presently may change and we will need to keep abreast of any changes and implications that may have to ensure that the project continues to run smoothly.

Assumption 12: Participants will be able to learn to identify different vertebrate species and learn their vernacular names. Our experience working in these areas has demonstrated that the majority of local people are familiar with locally-occurring species and know their local vernacular names. Plasticised photo ID sheets of commonly-occurring species will be made available to survey participants.

Comments:
This assumption has mostly held true, but more support is needed at Ampitabe to help MBG staff and VOI members identify fauna species, particularly frogs and reptiles, which are less well known, harder to spot and identify with accuracy.

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

Our stated impact as per the application is: **Natural capital in the landscape surrounding the Betampona and Vohibe protected areas restored thereby reducing pressure on the natural goods within these reserves.**

Our project is directly contributing to higher-level biodiversity conservation as we are facilitating the development of agroforestry plots around Betampona and Vohibe on land that was formally used for slash and burn agriculture (Annex 4.4). Not only will this directly benefit local biodiversity though the increase in tree cover and potential habitat for forest edge species as the planted trees mature and increase forest connectivity (good for gene flow) but it is also increasing carbon storage as the trees grow and will eventually help increase ecosystem services. As more areas become planted with agroforestry (with precedence given to those with land closest to the reserve and remnant forest fragments) a buffer is being created from both cyclone damage at the forest edge and uncontrolled fires: fewer areas around the protected areas and forest fragments are

being burned due to farmers' investment in planting agroforestry trees, thereby further reducing risks to the protected areas.

By encouraging and facilitating diverse agroforestry with a mixture of long-term fruit and spice trees (cash crops), fuel wood and annual crops we are actively encouraging sustainable economic development and will also be improving food security in the target areas. Uptake is already above our project target of 75 households by end Year 2 (Annex 4.4). Training already carried out in the setting up and advantages of farmer cooperatives (Section 3.1, Annex 4.19) will further contribute to higher level impact on human development and wellbeing (poverty reduction) if we can translate that training into the active set-up of operating cooperatives during Year 3.

4. Project support to the Conventions, Treaties or Agreements

Our project will contribute towards:

- Convention on Biological Diversity (CBD)
- International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)
- Global Goals for Sustainable Development (SDGs)

This project clearly responds to one of three main CBD goals i.e., the conservation of biological diversity. Specifically, it will contribute to Madagascar's National Biodiversity Strategy and Action Plan (2016) as follows:

Strategic Goal B: "Reduce the direct pressures on biodiversity and promote sustainable use of natural resources."
Objective 5: "By 2025, the rate of degradation, fragmentation and loss of habitats or ecosystems is reduced."
Objective 7: "In 2025, all zones allocated to agriculture, aquaculture and forestry are managed according to sustainable production plans, ensuring an integrated approach to biodiversity conservation."

Strategic Goal C: "Improve the biodiversity status by safeguarding ecosystems, species and genetic diversity."
Objective 11: "In 2025, 10% of terrestrial ecosystems . . . especially areas of particular importance for biodiversity and ecosystem services, are conserved adequately in ecologically representative systems and in protected areas and are managed effectively by different strategic approaches."
Objective 12: "By 2025, the extinction of endangered species is reduced and their conservation status improved."

Strategic Goal D: Enhance the benefits from biodiversity and the services provided by ecosystems.

The project addresses Target 6 of the CBD-linked Global Strategy for Plant Conservation (2011-2020), which concerns the sustainable management of production lands; and Article 6.2 of the ITPGRFA:
Article 6.2.a. "Pursuing . . . the development and maintenance of diverse farming systems that enhance the sustainable use of agricultural biological diversity and other natural resources;"
Article 6.2.e. "Promoting, as appropriate, the expanded use of local and locally adapted crops, varieties and underutilized species;"
Article 6.2.f. "Supporting, as appropriate, the wider use of a diversity of varieties and species in on-farm management, conservation and sustainable use of crops."

We have already surpassed our target of signing up 75 farming households across our target areas to agree to trial sustainable agroforestry methods by securing commitment from 85 households across all our target villages (see scans of signed MoUs in Annex 4.4). All of these 85 households have already established agroforestry plots with the inclusion of fruit trees and yams and 82% with annual market gardening crops too. 103 households participated in the initial

training offered by FVEE for fruit tree propagation and care techniques in Year 1 of the project and 143 people received follow-up training during Year 2 (44.8% women) as demonstrated by Annex 4.20). In addition, 114 participants (44.7% female) attended cascade workshops led by Prof Christof den Biggelaar on agroforestry techniques across Betampona and Ampasina (Annex 4.20). A further 15 households are interested to start agroforestry to replace participants that have decided to no longer actively participate in the project.

5. Project support to poverty reduction

This project will **directly** lead to poverty reduction for the communities living around the two protected areas of Betampona and Vohibe through the following means:

- Providing an alternative livelihood strategy to at least 75 farming households through the provision of start-up materials, training, plants and technical support. At present 85 of our original participants have signed MoUs to commit to adopting this strategy for at least 1 ha of their land, which would otherwise have been most likely used for slash and burn (tavy) agriculture (Annex 4.4).
- Increased household income through the creation of farming cooperatives to directly supply buyers (Annex 4.19).
- Improving food security for participating households within the lifetime of the project (85 already growing yams and hoping to increase that to 100 once replacement participants are fully set up). 4458 packets of annual crops seeds have also been distributed since the project start across the 5 sites (MBG and MFG annual reports available on request).
- MFG's safeguarding policy, which all project partners have also been obliged to adopt for the purposes of this project, will help ensure that all project members are treated fairly and with respect (copy of MFG safeguarding policy submitted with application).
- By striving for a 50:50 ratio of men to women in all target interventions, MFG and partners are seeking to reduce gender inequality. 48.91% of project participants are women. This is a very notable achievement as this is not generally the status quo for farming training interventions in rural Madagascar when often it is almost exclusively men that respond to offers of training and to get involved in new farming initiatives.

This project will **indirectly** lead to poverty reduction through the following means:

- Increased ecosystem services through the protection of 1940 ha of forest fragments around the two target protected areas that would otherwise likely have disappeared within a decade (based on remote sensing data analysis for Betampona: Ghulam 2014, Cota et al. 2022).
- Improved community governance of remaining forest fragments under their management (Annex 4.3).
- Increased awareness of local fauna in the forest fragments through the set up and regular execution of transects for ecological monitoring (Annex 4.15).

6. Gender equality and social inclusion

Huge efforts have been made to try to include equal representation of men and women across our interventions. 48.9% of project participants are women, which is a significant achievement, given that the status quo in interventions such as these is that participants are often almost exclusively male. This is due to a large active effort on the part of all site coordinators, extension agents and animators to encourage a male and female participant from each household to participate where feasible (Annex 4.4). We also made a conscious decision to hire both a male and a female animator at each site to try to make sure that different perspectives were represented in all training efforts and that people could speak to a trainer of their own sex if they preferred. Across our multiple training interventions across the 5 sites in Year 2 the overall average participation of women was 35.3% (Annex 4.20), which is a good deal lower than we

were aiming for. However, if we remove the two public village consultation meetings and training on the cooperatives, in which we had little control of participation, out of the calculation the rate of female participation across the remaining training sessions is 42.8%, which is much closer to our target objective of equality (Annex 4.20).

As well as actively encouraging both sexes to participate in the project and trainings, we also made a large effort with the ODDIT/MC Ingredients training to include people from the younger age bracket (teenagers) to try to encourage more adoption of agroforestry in this younger age bracket. We will continue to seek ways to encourage participation of younger age groups (teenagers and young adults) moving forwards.

Please quantify the proportion of women on the Project Board[1].	4 women of 8 people on the MFG Executive Committee that are responsible for MFG's projects = 50% women
Please quantify the proportion of project partners that are led by women, or which have a senior leadership team consisting of at least 50% women[2].	MFG, MNP Atsinanana, Association LOVASOA, KMCC all run by women = 4 women leaders of 9 in project partners = 44.4% women leaders

7. Monitoring and evaluation

M&E work is shared between all main project partners and information is shared with all relevant partners by email after particular interventions. There have been no changes to the M&E plan over this period.

On-site evaluations have been carried out of planting efforts both in project orchards and in participants' plots by FVEE (fruit tree follow-up), KMCC (yams) and Prof den Biggelaar (general agroforestry techniques). FVEE developed a questionnaire for their evaluations of planting efforts on-site to determine progress in growing fruit trees and people's technical needs (Annex 4.21).

Examples of indicators of achievement for the building of capacity in agroforestry are the following from FVEE:

- In response to questions in the surveys participants reported that the vast majority of the trees participants had already received had been planted and were growing well except for loquats, almost all of which had died (this was subsequently confirmed in the field).
- At Analamangahazo the surveys also revealed that half of the participants who filled out the forms (6/12) had tried grafting and 2 had tried marcotting.
- At Antaranarina 25 people filled out the survey including the animateur, the animatrice, and the nursery manager. Of the 25, 3 and 5 reported having tried grafting and marcotting, respectively, on their own.
- At Anbanitohaka, 18 people filled out the survey including the animateur, animatrice, and 2 nursery managers. Of these 18, 3 reported having tried grafting and 3 reported having tried marcotting.
- Ampitabe: A survey/evaluation was conducted of participants to determine progress in growing fruit trees and people's technical needs. Participants reported that the majority of the trees for participants had already been received, been planted and were growing well. Of the 25 households who completed surveys, 16 reported to have tried grafting (mostly citrus onto voangiala rootstock) and 14 had done marcotting, mostly of litchi. Three reported successful grafts.

Prof den Biggelaar carried out qualitative evaluations of participants' agroforestry efforts, as did Dr Rajaonah for yam plantations. Project Site Coordinators, extension agents and animators have also carried out ongoing assessments of participant efforts in the field (Annex 4.17).

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

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

FVEE also asked participants to complete pre and post workshop questionnaires for the intensive fruit tree production and care training at their site, at Mahatsinjo (Annex 4.22). Efforts need to be made more widely to carry out pre and post workshop quizzes for as many training sessions as feasible to make sure that key messages are being assimilated. MFG is consulting with the IUCN's Behaviour Change Coordinator, Dr Laura Parry, who will be visiting in May 2023 to gain guidance on how to improve socio-economic impact evaluations, qualitative evaluation techniques and how to respect confidentiality issues in surveys which include sensitive data. We will seek advice as to how to better demonstrate that the Outputs and Activities of the project actually contribute to the project Outcome.

8. Lessons learnt

Through the past year we have become aware that facilitating good ecological monitoring by local communities is more challenging than we had anticipated. Having a highly competent local MFG team that has been working for over two decades at Betampona carrying out diverse research programmes, we perhaps underestimated the experience and knowledge necessary to carry out good ecological monitoring of vertebrate fauna. Certain groups of animals such as amphibians and reptiles can be particularly challenging to identify for those without extensive experience. It took us a lot longer than anticipated to establish transects at all sites and to get regular monitoring started. We also underestimated the work involved and the time it would take to set up transects in all the forest fragments being managed by village associations and should perhaps have been better off selecting fewer fragments for more intensive monitoring. At Betampona our experienced extension agents work alongside the community members to complete the transects building capacity as they go, which works very well but the same level of expertise in fauna monitoring is not available on-site at Ampasina or Ampitabe. In Year 3 we will aim to provide more training in-situ at these two sites to support the village associations to better carry out their ecological monitoring commitments. Sadly, one of the Betampona extension agents, Arsene Razanadahy, suffered a large stroke at the beginning of Year 3 and it is not yet clear whether he will be able to return to work and if so, when. This will delay the planned trips to build capacity at the other sites in fauna monitoring.

One other lesson we have learned is that there is a great deal of reticence to collect household income data directly, both on the part of project staff and project participants. There have been a number of socio-economic studies carried out around Betampona and researchers have reported on several occasions that people were unwilling to share personal information on household income. In very low-income countries such as Madagascar it is perhaps very insensitive to pose direct questions about household income. The DI grant is understandably geared towards poverty alleviation and direct information on household income would be the most useful and direct measure of project progress, however, we have agreed with project staff that we need to be mindful of the participants' sensitivities and couch questions indirectly instead such as pertaining to household agricultural production and employment without directly asking about income per se. We are seeking further advice in this respect from the IUCN's Behaviour Change Coordinator, Dr Laura Perry, who will be visiting the project in person and speaking to project staff and participants in May 2023 in order to be able to advise us on ways to improve our evaluations of socio-economic project impacts whilst also respecting participant confidentiality.

In order to be reasonable to partners we set the submission deadline for reports as 25 days after the end of each quarter for both finances and technical reports in the MoUs in order to allow staff time to return from the field when necessary to collate the quarter's results and expenditures. However, allowing this timeline for partners makes it extremely difficult for the Project Leader to then collate the data from all partners in time for the semestrial and annual DI report deadlines just 5 days later. In hindsight, partner submission deadlines should have been tighter to allow more time for data collation and analysis. The Project Leader will negotiate with the main partners to informally request report submission a week earlier if feasible in October and April when the DI reports are due. Despite following the logframe style of presentation for both MFG and MBG, data is often presented in quite different ways, which makes it much slower to collate. Once reports are finished and submitted, partner staff members often then go back into the field where often there is no internet access which further delays collation when clarifications or extra details

are needed. For Year 3 the Project Leader will share more specific data tables to be filled out for basic project deliverable data.

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

Reviewers' comments in last year's annual report and our responses:

- **It would be interesting to know more about the 'exciting' new varieties of fruit trees that are of 'particular economic value in Madagascar and could really help boost the local economy once they come into general production' (mentioned at AR1 Section 3.1):** New varieties shared thus far through the project include a selection of different types of yam, mainly varieties of the species *Dioscorea alata* known locally as Ovibe, Ovy lalaina, Ovy sondrotra and Ovy kambara though there are also small quantities of *Dioscorea esculenta* (local vernacular name of Mavondro) being grown around Ampitabe, which we will seek to propagate for wider dispersal among project participants. Dr Rajaonah of KMCC believes that the most interesting economically will be Ovibe due to its large size and good preservation qualities. Uptake has been 100% for cultivation of yams due to the interest in improving household food security and the high price that could be gained for any surplus production. FVEE have provided many new varieties of fruit tree to the area but ones that we feel have particular economic potential for development are a new variety of mandarin (*Citrus reticulata)* 'Beambiaty', Meyer lemon (*Citrus* × *meyeri*), mangosteen (*Garcinia mangostana*) and macadamia (*Macadamia integrifolia*) and new avocado (*Persea americana*) varieties ('Lula' and 'Catalina'). In addition to new varieties already introduced there is also high interest in new mango varieties (due to good current market) and also for the production of an endemic wild pepper (*Piper borbonense),* we have a new potential contact at the Phoenix Conservancy for potential supply of plants and training, which we will investigate further in Year 3 as this spice fetches a very high price in local markets and current production in Madagascar is very unsustainable (with host trees often being cut to harvest the liana).
- **Update project timeline and ensure that the numbering of activities in the logframe matches the numbering in the timeline – they are currently not the same:** To be sent separately as Annex 5.
- **Consider providing details of this project on the MFG website:** an overview of project progress thus far with the new DI project will be posted on MFG's website: Darwin Initiative - Madagascar - MFG (madagascarfaunaflora.org)
- **Please provide hyperlinks to individual evidence annexes (or provide as separate (signposted) documents) to assist Reviewer navigation:** Done.
- **Please comment on the DEC feedback at award stage. You address the caveat issues, but it would be good to see comment on the other feedback provided:** To be sent separately as Annex 6.

Reviewer feedback from last year's annual was shared with all project partners. The general feeling was that the review was very fair and adequate given that we were only 6 months into the project at that point and had suffered a lot of delays due to multiple cyclones and a devastating fire in one of our main intended intervention sites. We hope that the reviewers will appreciate the progress made during this last 12-month period and that we are now more firmly on target to meet the project objectives.

10. Risk Management

No new risks have arisen this past year. This present year will be a presidential election year in Madagascar and as such we will need to remain vigilant for signs of any resulting political instability and potential impacts on the project and/or project staff as a consequence. We will try to keep abreast of all major new developments and contact LTS in the event of any likely severe project disruptions.

11. Other comments on progress not covered elsewhere

A recurring issue throughout the project, which we knew would be the case, is the low fertility of soils available to farmers on which to establish their agroforestry plots. Both Dan Turk of FVEE and Prof Christof den Biggelaar, both highly experienced agroforestry specialists, have emphasised the need to provide as much compost, organic fertiliser and mulch around planted

agroforestry trees in order to maximise their growth and productivity. In follow up emails post evaluation trip, Dan quoted Prof Goro Uehara (an esteemed soil scientist at the University of Hawaii) in pointing out that "A poor farmer can get rich growing crops on rich soils and a rich farmer can make poor soils productive. But a poor farmer growing crops on poor soils has little chance to extricate himself from poverty's grip." Soils locally seem to be particularly deficient in phosphorous and Prof den Biggelaar observed that in some countries people use human urine to add to compost to increase phosphate levels. This idea was met with much scepticism from all the DI teams, who felt there would be strong feeling against promoting such a practice in rural Madagascar. This emphasises that cultural context is always critical when trying to promote new practises. Further work is required to either try to overcome local aversions to the use of urine in compost or to find alternative natural and sustainable sources. Prof den Biggelaar is also promoting the inclusion of leguminous nitrogen-fixing plants as part of the agroforestry systems (some of which will also produce crops such as peas and bean) to improve soils and the planting of nitrogen-fixing plants as hedges/soil stabilisers around field edges so that nitrogen-rich clippings can be used to mulch soils. More serious thought needs to be put into how to replenish soil nutrients that will be lost over time due to soil erosion and removal of crop harvests.

Some issues have been noted in planted fruit trees and yam plants in post-planting evaluations with invertebrate infestations. Many yams were infested with a leaf beetle, *Crioceris* sp. With infestations appearing after heavy rains. Increased post-planting care is required in these instances to manually remove infestations or Dr Rajaonah suggesting applying an organic pesticide made from a mixture of chili and neem leaves and left to stew for 2 days in water. Yams plants were all in good health except for one plant of Ovibe (*Dioscorea alata*) in Andonda (near Antsoriantsambo, Antaranarina), which was contaminated by the so-called "anthracnose" disease caused by a fungus. The plant had turned black on the leaves and the vine. Dr Mamy Tiana Rajaonah recommended to remove the yam plant and to burn it far from the field to avoid the spread of the disease and not to cultivate yams in this field for at least a year. In several instances agroforestry trees were planted too close to each other so further attention needs to be made to recommended spacing in future technical follow-up visits.

20 participating households dropped out over Year 2 for a number of reasons including ill health, couples splitting up, people moving from the area, and people not having time to dedicate to the required care of their planted crops (in one instance a food for work scheme near Sahambala, Betampona had meant that many people had abandoned their own crops, thereby raising concerns about food security once the scheme has ended). The remaining participants seem highly motivated so we are hopeful that the numbers will now stabilise and even increase as interest has been high in the scheme and some people very keen to take the places of participants that have abandoned the project. We will need to carefully consider how to handle reporting of progress for these new participants as they will obviously be behind the original participants in their progress come the project end. We will continue to disaggregate analysis of results where relevant for original and new participants as we have done in this report.

One of the biggest ongoing concerns for farmers in the scheme, particularly at Ampitabe, which is more remote than Betampona or Ampasina, is how to access markets to sell their produce while it is still in good condition. For this reason, we have made a particular emphasis on production and distribution of spice trees as spices can be dried to preserve their shelf life and are often also smaller and lighter to transport that fresh fruit and vegetables. More attention needs to be given to this aspect of market accessibility and how we can support participants to ensure that their hard-earned agroforestry production is not wasted. We have made good progress at Betampona to start the process to create farmer cooperatives (Section 3.1) and much more attention will be paid to this aspect in Year 3.

12. Sustainability and legacy

Multiple posts have been made on MFG's social media platforms (MFG (@MadaFaunaFlora) / Twitter and Madagascar Fauna & Flora Group | Facebook) to promote the project, all mentioning funding from DI/Biodiversity Challenge Funds. The project is featured prominently in MFG's upcoming annual report and a summary of the new project and progress to date will be added to the MFG website's Darwin Initiative page (Darwin Initiative - Madagascar - MFG (madagascarfaunaflora.org). The project was explained to His Majesty's Ambassador to the Republic of Madagascar (see Section 13).

In our application under the “Exit Strategy” section we noted “By training at least two nursery workers and multiple farming households (ranging from 40 individuals (men and women) at Ampasina to up to 60 individuals at Ampitabe (the Betampona households will be split between three locations)), we reduce the risks of losing expertise inferred from the intensive training programme from the area should any individuals move away during or after the duration of the project. At each of the 3 main target areas there is a long-term presence by MFG, MBG or LOVASOA, which will ensure that ongoing support and development of the initiative can continue beyond the end of the project duration. By setting up the nurseries in a self-sustaining fashion and also providing training in business management, we envisage that the network of small, local, grass-roots nursery businesses will expand to provide the growing demand for agroforestry trees in the target areas and beyond.” These intended sustainable benefits post-project remain valid. The successful creation of farmer cooperatives by the end of the project will add significantly to the project’s legacy (both social and economic). Business management training has not yet been carried out specifically for nursery staff so we need to assure this activity in Year 3.

13. Darwin Initiative identity

The project is known locally and by our staff as the “Darwin Initiative” project and although part of a wider strategy for MFG and our main project partners (such as MBG, FVEE, Kew etc.) it maintains its own independent identify, mission, staff and resources. The DI logo is used regularly on reports, attendance sheets, powerpoint presentations etc. Through Year 2 we have made a number of posts on MFG’s social media platforms (Facebook and Twitter) on the project have made an effort to tag DI and Biodiversity Challenge Funds where appropriate. We also put the logo on project questionnaires and any informational sheets distributed. In our social media posts, funding from the UK Government has been recognised in reference. As this is the second Darwin Initiative project that MFG has led in the Betampona area in recent years and as the project team is always identified as the “Darwin Initiative project team” as well as the MFG team, the Darwin Initiative scheme is becoming better known. With a significant number of Madagascar-based projects in this and the subsequent round, the Darwin Initiative scheme is becoming better known nationally. We will work continued to update Mr David Ashley, His Majesty’s Ambassador to the Republic of Madagascar, of project progress to further promote the Darwin Initiative programme in Madagascar.

We have Facebook (the most popular social media in Madagascar) and Twitter social media accounts, which we find very effective for engaging with our members, followers and the wider public. This project lends itself well to posts in these media and a particular effort was made in Year 2 to cover a diverse range of activities from the project at various sites.

14. Safeguarding

Has your Safeguarding Policy been updated in the past 12 months?	No
Have any concerns been investigated in the past 12 months	No
Does your project have a Safeguarding focal point?	Yes, Veronique Ravolonarivo
Has the focal point attended any formal training in the last 12 months?	No
What proportion (and number) of project staff have received formal training on Safeguarding?	Past: 53.3% [16 people] Planned: 100% [30 people on DI 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. No challenges or lessons learnt over the past 12 months.
Does the project have any developments or activities planned around Safeguarding in the coming 12 months? If so please specify. To date only MFG managers and all DI project staff at Betampona have been formally trained on the Safeguarding policy and asked to share the policy and explain it to their teams. In Year 3 we will carry out trainings for the whole Ampasina Darwin Initiative team as well as all MFG staff (non DI-related too). The policy has been shared with MBG and KMCC and we have requested that they inform all their staff working on the Darwin Initiative (DI) project about the policy and their need to adhere to it. Project participants at Betampona and Ampasina have been informed of the policy through formal workshops (Annex 4.20) Although not specifically for the DI award but we have been invited to the second round for a large grant from Critical Ecosystems Partnership Fund and, if we are successful, we will be carrying out project launch meetings in all the same target areas as for the DI project, where we will be reinforming members of the local community of MFG's safeguarding policy. We will make it clear that the policy applies for all our field projects. We will also produce posters to remind people of our safeguarding policy and provide contact details.

15. Project expenditure

Table 1: Project expenditure during the reporting period (1 April 2022 – 31 March 2023): DRAFT FIGURES

Project spend (indicative) since last Annual Report (Draft figures)	2022/23 Grant (£)	2022/23 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)	[redacted]			
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items (see below)				
Monitoring & Evaluation (M&E)				
Others (see below)				
TOTAL	**£134,929.0**	**111,302.7**		

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

*Note this had been a native carryover amount due to carryover from 2021/2022 unspent funds so adjusted to zero and took balance from Staff Costs available budget

Note, no budget line was allocated specifically for M&E at the time of application, so costs were spread over other budget lines (eg laptop in Capital items).

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

DRAFT	Matched funding secured to date (**1 Apr 2022 to 31 March 2023**)	Total matched funding expected by end of project
Matched funding leveraged by the partners to deliver the project.	[redacted]	
Total additional finance mobilised by new activities building on evidence, best practices and project (£)		

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

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

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

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

Project summary	SMART Indicators	Progress and Achievements April 2022 - March 2023	Actions required/planned for next period
Impact **Natural capital in the landscape surrounding the Betampona and Vohibe protected areas restored thereby reducing pressure on the natural goods within these reserves.**		85 of the original 105 households that signed up for the project are now successfully practising agroforestry around Betampona and Vohibe. Not only will this increase tree cover as already-planted trees mature with associated benefits for forest-edge species, increase forest buffer to cyclone damage and increase forest connectivity, but the land now dedicated to agroforestry is already no long being burnt for cultivation, thereby reducing risks of damage to the protected areas through uncontrolled fires. Even if only on a small scale, wood production for the household for firewood and construction timber will directly reduce pressure on the protected areas and remaining forest fragments outside the protected areas.	[redacted]
Outcome **A critical mass of farmers living in landscapes surrounding the two protected areas are committed to nurturing natural capital through sustainable use of remaining forest and agroforestry.**	O.1 By end YR3 rates of destructive timber exploitation within target 1,940 ha forest fragments have reduced by 70% from baseline. O.2. During YR3, when project is well established, no part of the	O.1 Baseline GPS maps have been made of the present perimeter of all forest fragments targeted through this project and a good understanding of pre-project rates of destruction are available for Betampona through MFG's long-term association with Saint Louis University's Geospatial Institute to remote-sense forest cover changes around Betampona since 2010. It is too early to say whether we are on track to meet this target. O.2 Too early to judge.	Quarterly and annual surveys through Year 3 will allow us to gain a better understanding of destructive exploitation rates changes. Quarterly and annual surveys through Year 3 will allow us to quantitatively measure any forest conversion to agriculture.

	target 1,940 ha forest fragments converted to agriculture. O.3. By end of YR2 at least 75% of participating farming households at each site have developed and submitted plans to Project Coordinator to indicate how they intend to expand agroforestry on their land. O.4 By end of YR3 at least 75% of participating farmers at each site have installed a trial plot on their land.	O.3 All participants at Ampitabe have submitted plans for their land. Participants at Ampasina and Betampona have submitted lists of species they would like to plant (Annex 4.18) but as yet we are behind schedule for developing individual plans per household. O.4 This output has already been met by end of year 2. 80.9% of the original households that signed up for the project (85 from 105) have already developed trial plots on their land.	Development of household-specific plans will be prioritised for early in Year 3 at Betampona and Ampasina. Working to increase this to 100 households with 15 replacement households at Betampona during Year 3. Will investigate whether there are potential replacements for Ampitabe (no dropout households at Ampasina as yet).
Output 1. A diversity of plant species attractive to local farmers are easily available for use in agroforestry trials.	1.1. Capacity built through the provision of one training workshop per target site for all personnel in local existing nurseries or ones newly established for the project in nursery management, grafting/marcottage, care protocols for newly introduced species and business planning by June 2022. 1.2 At least 12,000 good quality young plants (including at least two new fruit cultivars) with height > 25cm (ideal planting height) of pre-selected species available in total between all the project nurseries by July 2023. 1.3 At least 12,000 trees produced by nurseries distributed to local landowners for planting in	1.1 Completed with all 9 project nursery staff having received intensive training from the FVEE team in Year 1 in fruit tree production, grafting and post planting care (see photos in Annex 4.11, training summary in Annex 4.20). Nursery workers at Ampasina have so far produced 16 litchi trees using an air-layering technique, proving their competence. 1.2 Good progress made against this indicator with 11,134 agroforestry trees having been produced between Ampitabe and Ampasina nurseries (92.8% of target production). Agroforestry tree production is scheduled to begin at Betampona in May 2023. We should meet the target production but perhaps all plants won't be ready for planting out by July 2023. We need to prioritise the production of at least 2 new cultivars this year to meet the specific terms of the indicator. 1.3 To date 5,086 agroforestry trees produced in the project nurseries at Ampitabe and Ampasina have been distributed to project participants. We expect to meet this target by Nov 2023.	

	agroforestry plots by Nov 2023 to reinforce trees distributed by FVEE.		
1.1.1 3-day Fruit Tree Cultivation training by FVEE team at each of the 4 target training locations (Antaranarina [to include Ambanitohaka participants], Analamangahazo and Ampasina at Betampona and Ampitabe by Vohibe) to introduce fruit-tree cultivation/care and nursery techniques, distribute initial fruit trees to participants, identify potential sites for fruit tree permanent orchards and nurseries and select two proactive participants for further intensive training at a later stage. To be carried out by June 2022.		First workshop completed and reported in Year 1. Follow up in Year 2 completed with 4-day workshop on 13-16 December 2022 for 30 selected participants (6 each from Analamangahazo, Antaranarina, Ambanitohaka, and Ampasina, 4 from Ampitabe, as well as Jean Christian Rambeloson (Project Coordinator) and Alice Timothée Heliarisoa (Ampasina Coordinator)) at the FJKM Fruit Center at Mahatsinjo. Intensive training in fruit tree care and production (Annex 4.11). Further in-situ training provided between 25 January and 6 March 2023 with 2 FJKM technicians visiting each project site to evaluate progress and provide further technical assistance. Further fruit trees distributed at each training (Annex 4.11). Diverse orchards established at every site to produce root stock and grafting material long term.	Further in-situ visits planned for Year 3 by FVEE technicians to all sites and further distribution of fruit trees.
1.1.2 Production of Fruit Tree Cultivation training workshop report for each site including pre and post workshop quiz results produced within 2 months of the training workshop end.		Completed and reported in Year 1. Reports also produced for the Mahatsinjo and in-situ trainings for each site.	Nothing further to do.
1.2.1 Identification and establishment of nursery staff by end December 2021.		Completed and reported in Year 1.	Need to replace a nursery worker who retired last year at Antaranarina in the next period.
1.2.2 Construction of new nurseries or renovations/improvements to existing nurseries and establishment of fruit tree orchard to provide scions for grafting long-term at each of the 5 target sites by end of YR1.		All nurseries renovated. Orchards visited by FVEE technicians at all sites and evaluated (good care and survival of trees planted in Year 1: Ampasina 100%, Ampitabe 89%, Betampona 100%). Further trees/varieties added during Year 2 including species to enable production of organic pesticide	Recommendation from FVEE to increase mulching, fertilisation and watering of trees through Year 3 along with manual removal of pests. Also, to add suitable rootstock for citrus tree production (using the variety “voangy ala”). Large interest currently to introduce new mango varieties due to

		(see reports including photos in Annex 4.11 and 4.20).	current strong market. Interest in kiwi and persimmons at Ampitabe (if cool enough). Mangosteens to be a priority for FVEE to distribute at Betampona in Year 3 as none were available this year during the Betampona trip).
1.2.3 Provision of nurseries with supplies, commercial seeds and materials needed to begin tree production (mixtures of fruit, spice, timber, fuelwood and N-fixing species) by end of YR1.		Completed and reported in Year 1. Ongoing renovations and stocking of all project nurseries continued through Year 2 (MFG, MBG and Ampasina reports available on request).	Ongoing provision of all nurseries required through Year 3 to allow project objectives to be met.
1.2.4 Securing seed collection permits for the target forest fragments from the Ministry of the Environment and Sustainable Development by end of YR1.		2-year collection permit issued by DREDD on 25 April 2022 for seed collection around Betampona and Ampasina and MBG seed collection permit for all their sites renewed in December 2022 (Annex 4.8).	No further action needed for Betampona until March 2024 when renewal will be sought. MBG will need to renew their permit every 6 months starting in May 2023.
1.2.5 Collection of seeds from forest fragments throughout YR2 (seasonally-dependent)		Seed collected as required to meet production target (copies of nursery databases available on request). Nurseries at carrying capacity at present at Betampona so no further seed being collected at present until present tree stock has been distributed.	Seed collection will resume for Year 3.
1.2.6 Production of at least 12,000 trees (in total between the 5 nurseries) and associated record-keeping by July 2023		Excellent progress made with a total of 33,870 native trees produced across all site nurseries by end of Year 2 (Photos in Annex 4.7, copies of nursery databases available on request). This has practically tripled the target production of 12,000 trees already by the end of Year 2.	Production will continue at the same rate as in Year 2 despite us having already nearly tripled our target of 12,000 trees.
1.2.7 Quarterly visits to each nursery Project Coordinators to follow progress, offer ongoing technical support and collect nursery records (e.g. numbers of plants, % germination rates, % survival rates etc.)		Completed as planned. Evidence in reports submitted by MBG and MFG (available on request).	Activity will continue every quarter.
Output 2. Farmers living in the landscape surrounding the two protected areas are aware of the opportunities presented by	2.1 By the end of July 2022, all extension workers and community animators will have been given	2.1 Achieved. Completed and reported in Year 1 but further training in agroforestry and extension techniques given by Prof Christof den Biggelaar at Parc Ivoloina for staff from all sites in Year 2 (24-26 October 2022) and in-situ at	

agroforestry to meet their tree product and food production needs and some are skilled, effective and convinced practitioners (target 50% female participation).	formal training through workshops to facilitate and inform their role.	Betampona and Ampasina in November 2022. Evidence given through signed attendance sheets (Annex 4.9) and photos (Annex 4.10).
	2.2 By the end of 2022, at least 100 farming households of diverse demographics across the target sites understand the principles of agroforestry and best practice for design, installation and management.	2.2 Achieved. Completed and reported in Year 1.
	2.3. At least 75 farming households across the target sites have installed and are correctly maintaining agroforestry plots by end April 2024.	2.3 On target. Across the sites we have a total of 100 households participating actively in agroforestry with 48.9% of participants being female (see examples of signed MoU in Annex 4.4 and photos in Annex 4.10 and 4.11). Of these, 15 households are new to the project (replacing participants who were unable to continue for various reasons) so are not yet up to the level of practise of the 85 original households. Just counting the original 85 households still practising, we are already well on the way to achieving this indicator by end of Year 2. We will continue to support these households to maintain and develop their agroforestry plots over the final two years of the project.
	2.4 By YR 2 at least 75 households have planted early successional crops within their trial plot and by YR3 these are enriched with a diverse selection of woody plants including trees that will contribute to the household's own fuelwood and timber needs by end April 2024.	2.4 Achieved. 100% of the 85 original participating households have planted agroforestry trees and are currently cultivating yams and 82% have also planted annual market-garden crops (100% at Betampona and Ampasina but only currently 28% at Ampitabe). Efforts will be made in Year 3 to encourage more households at Ampitabe to diversify and include more annual crops).
	2.5 By end Dec 2023 collaboration between participating farmers at each site enables them to access regional markets for at least one product produced from their plots with 10% improved income per unit area compared to baseline median annual income.	2.5 Discussions are well under way to create a cooperative for clove production around Betampona and Ampasina and supply to MC Ingredients. The first consultation meetings were held in Ambodiriana and Sahambala in February 2023 and two training sessions by MC Ingredients and ODDIT in Ambodirafia and Sahamabala in March 2023 on how to formally create a registered cooperative (Annex 4.20). Next steps will be: • Information campaign in Sahambala, Ambodiriana and Ampasina. To be done by the three organisations (MFG, ODDIT and MCI)

		• Creation of cooperatives. To be done by MFG, ODDIT and the Regional Directorate for Industrialisation and Trade and Consumption (DRICC) • Training workshop for cooperatives. To be carried out by MFG and MCI on expected standards of the products • Support cooperatives to develop a marketing business plan. MFG, ODDIT and (DRICC) A further potential cooperative for the production of chili around Betampona is also under discussion with MC Ingredients. In the event that a formal cooperative is created, MC Ingredients will provide start up seed and training. Need to investigate similar options for Ampitabe.	
Activity 2.1.1 Extension workers and animators identified for each site by MFG and MBG Project Coordinators by December 2021.		Completed and reported in Year 1.	
2.1.2 Extension workers and animators trained by MFG and MBG Project Coordinators and Dr den Biggelaar by end of YR2.		Training carried out and reported in Year 1 but additional training given by Project Coordinator and Prof Christof den Biggelaar in Oct/Nov 2022 (Section 3.1, Annex 4.10 and 4.20).	
2.1.3 Reports written of each training session including list of participants, trainer, duration and subjects covered within 2 months of the end of the training session		Report produced (available on request)	
2.2.1 Initial community meetings held in each of the 5 target villages by Project Coordinators, Extension Agents and local animators by end December 2021 to explain the benefits of agroforestry, project goals and methods, commitments required of participants to pro-actively protect the target forest fragments. Terms of project participation contract collaboratively developed.		Completed and reported in Year 1.	
2.2.2 Pre/post meeting oral quizzes at each participating village to gauge understanding of the need for participative and communal protection of the target forest fragments and understanding of the ecosystem services they provide (Project Coordinators, Extension Agents and local animators will assist and record the results).		Completed and reported in Year 1.	
2.2.3 Participating households identified and contracts signed by end of YR1.		Participating households were identified in Year 1 but MoUs were not signed until Year 2. MoUs have now been signed with all original households (85) that are still involved (100% of original households	Need to sign MoUs with replacement households at Betampona (15 households). Participants not replaced at Ampitabe.

	Ampasina, 70% Ampitabe and 72% Betampona) (Annex 4.4).	
2.2.4 Introductory training workshop held in each of the target villages for all participants to train participants to assess land availability, quality of existing agroforestry trees, techniques for rejuvenation and maintenance of trees, plot planting planning and the value of forming co-operatives and distribution of annual crop seeds by Project Coordinators, Extension Agents, local animators and Dr den Biggelaar by end of 2022.	Achieved. Cascade training carried out with Prof Christof den Biggelaar, Project Coordinator, extension agents and animators at 3 Betampona sites and Ampasina in November 2022 (Section 3.1 and Annex 4.20).	
2.2.5 Reports of each introductory training session produced including pre and post workshop quiz evaluation results to gauge efficacy of the training produced within 2 months of the training workshop end.	Report produced (available on request) however, quizzes were not completed in this instance.	
2.2.6 Collection of preliminary questionnaire (baseline) data for each participating household on specific species planting choices, land availability for agroforestry, existing agroforestry trees, and household income by Extension Agents and local animators by end of 2022.	Planting choices for each household have been collected and land availability for agroforestry. We are behind schedule with mapping existing agroforestry trees at Betampona and Ampasina and household income data at all sites but have sought expert advice from the IUCN's Behaviour Change Coordinator for improving evaluations (see Section 8).	We need to prioritise this activity for early in Year 3 (collection of (retrospective and current agricultural production data).
2.3.1 Quarterly follow-up visits of each participating household by Extension Agents and/or local animators from end of initial training workshop throughout the duration of the project (unless participants decide to withdraw from the programme)	Follow up being carried out (MBG and MFG reports available on request). Annex 4.17 shows the map developed for Betampona to show the types of crop being planted at each site.	Regular quarterly follow up to continue throughout Year 3.
2.3.2 Yam cultivation training workshops by Dr Mamy-Tiana Rajaonah, Kew to collective participants at each of the 4 target training locations (Antaranarina [to include Ambanitohaka participants], Analamangahazo and Ampasina at Betampona and Ampitabe by Vohibe) and distribution of 30kg of start-up yam bulbuls by end of 2022. Training session reports for each site submitted within 2 months of the end of the session.	Completed. 177 people (44.6% female) trained (Annex 4.20) across the 4 training locations (example attendance sheet available in Annex 4.12, report available on request). This has been extremely successful with 100% adoption in all original 85 participating households (MFG and MBG reports available on request). Follow up carried out	Further follow up by Dr Mamy Tiana Rajaonah, KMCC, scheduled in Year 3. Recommendations to improve plant quality through provision of frames to maximise leaf exposure to sunlight. Will investigate if we can further diversify the varieties available.

2.3.3 Value-chain, financial management, crop preservation and storage, and co-operative farming benefits training by CRS at all 4 target locations (Antaranarina [to include Ambanitohaka participants], Analamangahazo and Ampasina at Betampona and Ampitabe by Vohibe) and MC Ingredients at the 3 Betampona sites by end 2022. Training session reports for each site submitted within 2 months of the end of the session.		Completed for the Betampona sites. Workshops carried out in March 2023 (Section 3.1 and Annex 4.20).	Further workshops planned for Year 3 for Betampona and Ampasina with ODDIT, MC Ingredients and DRICC. Need to identify local equivalents for Ampitabe. Potential for MC Ingredients to also operate in Ampitabe if cooperatives can be established.
2.3.4 Completion of mid-term survey for all original participants attending the introductory workshop to gauge activities undertaken as a result of the programme, trees and crops planted, crops harvested, household income changes, reasons for programme abandonment (where relevant), feedback on programme and ways to improve it by Extension Agents and local animators by end April 2024.		Not yet scheduled.	
2.4.1 Completion of final survey at end of YR3 for all ongoing programme participants to gauge activities undertaken as a result of the programme, trees and crops planted, crops harvested, household income changes, reasons for programme abandonment (where relevant), feedback on programme and ways to improve it by Extension Agents and local animators.		Not yet scheduled.	
2.5.1 As part of final survey, ask specific questions about membership in farmer co-operatives and subsequent impacts on income from produce sales.		Not yet scheduled.	
Output 3. Community in host landscapes agree to conserve certain unprotected forest fragments.	3.1. By Dec 2021 community in host landscapes have reflected on the value of the 1,940 ha of unprotected forest fragments, the important ecosystem services they provide and have suggested ways to protect them (ie. What **they** can do to protect forests). 3.2 By Dec. 2021 host communities agree to stop further clearing of the agreed 1,940 ha target	Completed and reported in Year 1. Completed and reported in Year 1. Commitment reinforced by the signing of MoUs with all Betampona village associations (VOIs), Ampasina MoU in the process of finalisation (Section 3.1 and Annex 4.3).	

	conservation forest fragments for agriculture and develop rules for sustainable, non-destructive forest uses within these defined areas in return for support for agroforestry trials. Review and amendment (if needed) of any existing community association agreements for forest protection and establishment of new agreements where none exist. 3.3 From July 2022 the communities will organise their own quarterly patrols of the target forest fragments in their area, following up on infractions using locally agreed procedures or local and/or regional authorities as required.	Patrols now being carried out at all sites but so far only each semester. Will work in Year 3 to encourage VOIs to do this quarterly (Annex 4.13).	
3.1.1 Record proceedings of initial community meetings at the 4 target villages (Activity 2.2.1) by end Dec 2021.		Completed and reported in Year 1.	
3.1.2 Community meeting participants will complete oral quizzes to assess understanding of ecosystem services with results to be recorded by Project Coordinators, Extension Agents and local animators at the end of the initial community consultation (Activity 2.2.1).		Completed and reported in Year 1.	
3.2.1 During the initial community meetings review current village association (VOI) agreements for protection of remnant forest fragments outside of the official protected areas, facilitate discussion of acceptable use/activities in the fragments, and document VOI decisions and commitments.		Copies of contracts between each VOI and the regional Director of the Ministry of the Environment and Sustainable Development (DREDD Atsinanana) for management of forest remnants under their jurisdiction have been shared with MFG by Madagascar National Parks (MNP).	Plan meetings with MNP and VOIs during Year 3 to review current allowable forest-use practises and discuss if any modifications need to be made.

3.3.1 Quarterly follow up of community-based patrols of the forest fragments by Project Coordinator, Extension Agents and local animators from July 2022, including collection of patrol data and provision of support as needed to approach local/regional authorities.		Completed but as yet only being collected each semester (Annex 4.13).	Will schedule on a quarterly basis for Years 3 and 4.
Output 4. Community engages in participatory baseline and quarterly surveys of destructive forest harvesting and natural capital (including biodiversity) in target forest fragments surrounding the main protected areas.	4.1 Participative community monitoring within the target 1,940 ha forest fragments to assess natural capital, forest conversion and forest harvesting practices using measures such as i) number of destructively cut stems (i.e., not including sustainable coppicing/pollarding practices), ii) number of illegal animal traps, iii) biodiversity (in terms of key animal groups), iv) area converted to slash-and-burn farming.	Partially achieved. All target communities have engaged to participatively monitor forest fragments under their care and all are doing so for conversion of forest for slash and burn and monitoring of illegal activities. Ecological monitoring of vertebrate fauna has been more challenging especially for Ampitabe where the MBG staff are mainly botanically based in their work but initial efforts have been made. Monitoring transects have been established at all sites (Section 3.1, Annex 4.13 and 4.15).	Fauna team from Betampona to go to Ampitabe to train MBG staff and VOI members in fauna ecological monitoring techniques.
4.1.1 Training workshops at each site on biodiversity and forest use monitoring (Jul 2022)		Carried out at all sites in-situ in an informal fashion (ie not in a typical workshop set-up) to help VOIs establish monitoring transects and to show them the techniques for monitoring the transects.	
4.1.2 Project Coordinators, Extension Agents, local animators and a selection of nominated programme participants from each target village will set up permanent transects for surveys of forest use and biodiversity in each target fragment forest by July 2022.		Completed at all sites (Section 3.1).	
4.1.3.1 Extension agents, local animators and alternating programme participants (organised on a rota-basis by the Extension Agents and local animators) will complete baseline transect surveys by end July 2022 to assess forest use (destructive and non-destructive) and quarterly thereafter.		Baseline data collected at all sites (Annex 4.13 and 4.14).	Will carry out quarterly throughout Years 3 and 4.
4.1.3.2 Extension agents, local animators and alternating programme participants (organised on a rota-basis by the Extension Agents and local animators) will complete baseline transect surveys by		Baseline surveys completed at Betampona and in the Mitsinjo Forest just outside Vohibe (Annex 4.15).	Further support needed for Ampitabe for fauna identifications, will organise a

end July 2022 to assess vertebrate biodiversity and annual surveys thereafter for the duration of the project.		training session in early Year 3. Will re-do at end Year 3 to evaluate changes.
4.1.4 Project Coordinators, Extension Agents, local animators and a selection of nominated programme participants from each target village will map the present forest fragment perimeter by GPS (using the tracking function) and survey the whole fragment for clearings/signs of cultivation. The survey will be repeated annually thereafter for the duration of the project noting any news areas cleared for logging or cultivation.	Completed for all sites (Annex 4.14).	Will re-do at end Year 3 to evaluate changes.

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

Project Summary	Measurable Indicators	Means of Verification	Important Assumptions
Impact: Natural capital in the landscape surrounding the Betampona and Vohibe protected areas restored thereby reducing pressure on the natural goods within these reserves. (Max 30 words)			
Outcome: (Max 30 words) **A critical mass of farmers living in landscapes surrounding the two protected areas are committed to nurturing natural capital through sustainable use of remaining forest and agroforestry.**	O.1 By end YR3 rates of destructive timber exploitation within target 1,940 ha forest fragments have reduced by 70% from baseline. O.2. During YR3, when project is well established, no part of the target 1,940 ha forest fragments converted to agriculture. O.3. By end of YR2 at least 75% of participating farming households at each site have developed and submitted plans to Project Coordinator to indicate how they intend to expand agroforestry on their land. O.4 By end of YR3 at least 75% of participating farmers at each site have installed a trial plot on their land.	O.1 Counts of new destructively-cut stems (ie. not including agreed coppicing or invasive species) along replicated transects within target forests compared to baseline counts, which will be carried out once household participants have been selected by end of YR1. O.2. Geo-referencing and mapping of all fragment boundaries and new areas of shifting cultivation. O.3 Sketch maps produced by participating farmers illustrating their future land-use plans with an Annexed list of preferred species for planting. O.4 Surveys completed of plots of participating households by end of YR3.	- A sufficient number of farmers are included in the project to constitute a "critical mass" with respect to influencing non-participants. To increase our impact in any given area we have chosen to target specific sites to set up "model villages" with a high proportion of households participating in the programme. Villager associations in all our proposed sites have been consulted already and have given written commitment to participate in the proposed programme. - Land use remains in the farmers' hands and they are not disenfranchised by outsiders (such as artisanal miners, commercial mining companies, powerful people wishing to obtain land, new immigrants to area). MFG will work with local Mayors to investigate possibilities for formalising individual land rights.
Outputs: **1**. A diversity of plant species attractive to local farmers are easily available for use in agroforestry trials.	1.1. Capacity built through the provision of one training workshop per target site for all personnel in local existing nurseries or ones newly established for the project in nursery management, grafting/marcottage, care protocols	1.1. Records of training workshops held, participants attending and subjects covered.	- Nurseries not seriously impacted by cyclones. MFG and MBG each have over two decades' experience in tree nursery design and cyclone proofing measures in the Eastern cyclone belt of Madagascar so will implement this knowledge in the

	for newly introduced species and business planning by June 2022. 1.2 At least 12,000 good quality young plants (including at least two new fruit cultivars) with height > 25cm (ideal planting height) of pre-selected species available in total between all the project nurseries by July 2023. 1.3 At least 12,000 trees produced by nurseries distributed to local landowners for planting in agroforestry plots by Nov 2023 to reinforce trees distributed by FVEE.	1.2 Annual nursery inventories at each site, seed germination %, successful grafted seedlings %, successful air-layers %, survival to 25cm height %. 1.3 annual inventories of trees distributed, and number of landowners supplied.	design of any new nurseries and improvements on existing nurseries. Easily replaceable local materials will be used for construction to allow easy repair and replacement of damaged materials. - Nursery workers are able to carry out successful grafting/marcottage. The training and planned follow-up by FVEE staff will ensure success in this respect. - Permits can be secured for seed collection in forest fragments. MFG has a 14-year record of gaining permits to collect seed in forest fragments around Betampona from the regional branch of the Ministry of the Environment and Sustainable Development and we do not foresee any issues in this respect. Likewise MBG has similar agreements for the Vohibe Forest. - The COVID-19 pandemic and any resulting work and travel restrictions will not interrupt the project's progress overly. Although local or national restrictions could certainly interfere with plans for specialised training from Dr den Biggelaar and FVEE, our project managers at each site have sufficient personal experience in agronomy and grafting techniques to carry out basic training themselves if needs be. By targeting in-country expertise, we are not reliant on international borders being open to ensure the completion of

			this project. Dr den Biggelaar has worked remotely providing advice and coaching to MFG's proposed project coordinator for Betampona for many years in addition to his in-person site visits. MFG has a formal COVID-19 sanitary protocol that all staff are obliged to respect to reduce the risks of inadvertent spread of the disease.
2. Farmers living in the landscape surrounding the two protected areas are aware of the opportunities presented by agroforestry to meet their tree product and food production needs and some are skilled, effective and convinced practitioners (target 50% female participation).	2.1 By the end of July 2022, all extension workers and community animators will have been given formal training through workshops to facilitate and inform their role. 2.2 By the end of 2022, at least 100 farming households of diverse demographics across the target sites understand the principles of agroforestry and best practice for design, installation and management. 2.3. At least 75 farming households across the target sites have installed and are correctly maintaining agroforestry plots by end April 2024. 2.4 By YR 2 at least 75 households have planted early successional crops within their trial plot and by YR3 these are enriched with a diverse selection of woody plants including trees that will contribute to	2.1 Records of training workshops held, participants attending and subjects covered (sex-disaggregated data to be collected). 2.2. Oral and/or hands-on test of understanding at the end of each training event (most farmers will be illiterate). Evaluation of both sexes' reactions and uptake to be recorded separately. 2.3. Site visits and interviews with participants at each site including those that installed and maintained projects until end of April 2024, as well as trained participants that did not set up or continue with their plots (sex-disaggregated data to be collected). 2.4. Survey of planted and nurtured trees and crops that will contribute towards food and/or household income needs in each active agroforestry plot by end of YR3 (sex-disaggregated data to be collected).	- Farmers are sufficiently trusting and open-minded to trial new approaches. Our past reforestation and extension activities in these areas have proven that at least some individuals are open to trialling new methods and varieties. By having already first consulted with the farmers about their planting preferences we are confident that the chosen species for inclusion in the project are of interest to farmers in these specific target areas. - Farmers have areas of land under their management that are suitable for agroforestry. Preliminary studies by MFG and MBG have already established this to be the case in both target areas. -The COVID-19 pandemic and any resulting work and travel restrictions will not adversely affect the project. If necessary, we can adapt the training approach to avoid the need for large workshops and instead focus on one to one and small group training respecting all locally-imposed restrictions on travel and

	the household's own fuelwood and timber needs by end April 2024. 2.5 By end Dec 2023 collaboration between participating farmers at each site enables them to access regional markets for at least one product produced from their plots with 10% improved income per unit area compared to baseline median annual income.	2.5 Surveys to describe value chains for first harvests including quantification of proxy values of all produce (using average market prices in the area over the year), whether sold or consumed at home (sex-disaggregated data to be collected).	group size. By targeting the hire of local staff for the most part we avoid the need for much long-distance travel. MFG has a formal COVID-19 sanitary protocol that all staff are obliged to respect to reduce the risks of inadvertent spread of the disease.
3. Community in host landscapes agree to conserve certain unprotected forest fragments.	3.1. By Dec 2021 community in host landscapes have reflected on the value of the 1,940 ha of unprotected forest fragments, the important ecosystem services they provide and have suggested ways to protect them (ie. What **they** can do to protect forests). 3.2 By Dec. 2021 host communities agree to stop further clearing of the agreed 1,940 ha target conservation forest fragments for agriculture and develop rules for sustainable, non-destructive forest uses within these defined areas in return for support for agroforestry trials. Review and amendment (if needed) of any existing community association agreements for forest protection and	3.1. Register of those present at village meetings to discuss value of unprotected forest + video made by the community articulating consensus conclusions concerning the importance of the remaining forest fragments, post meeting oral quizzes to assess understanding of ecosystems services provided (sex-disaggregated records to be collected) and minutes of brain-storming sessions. 3.2. Signed minutes of community meeting to document commitment and agreement on permitted non-destructive uses (eg. mushroom, medicine and firewood collection). Copies of community agreed forest use policies.	- On reflection, the community will decide that the forest fragments that remain in their landscape are valuable and worth conserving and that it is possible for them to do so. The target areas have been chosen because active interest has already been shown there to protect the target forest fragments through the creation of local village associations (VOI). MFG and MBG will work with these existing structures to facilitate their goals to protect remaining forest fragments. - Community is cohesive and inclusive without powerful factions who act contrary to majority consensus. MFG works closely with the local Mayors, the regional branch of the Ministry of the Environment and Sustainable Development and Madagascar National Parks, who will support MFG and local communities to take legal action against any persons breaking locally-agreed resource-

	establishment of new agreements where none exist. 3.3 From July 2022 the communities will organise their own quarterly patrols of the target forest fragments in their area, following up on infractions using locally agreed procedures or local and/or regional authorities as required.	3.3 Written records of each patrol kept with date, duration, participants and findings and written record of follow up from the village association in the case of infractions.	management rules or national laws protecting the environment.
4. Community engages in participatory baseline and quarterly surveys of destructive forest harvesting and natural capital (including biodiversity) in target forest fragments surrounding the main protected areas.	4.1 Participative community monitoring within the target 1,940 ha forest fragments to assess natural capital, forest conversion and forest harvesting practices using measures such as i) number of destructively cut stems (i.e., not including sustainable coppicing/pollarding practices), ii) number of illegal animal traps, iii) biodiversity (in terms of key animal groups), iv) area converted to slash-and-burn farming.	4.1.1 Surveys of each entire target forest fragment for evidence of conversion of areas to farmland at the beginning of the project (by end July 2022) and annually for the duration of the project. 4.1.2 Quarterly participative transects (starting by July 2022) in each target forest fragment to assess forest harvesting levels (destructively-cut trees, evidence of animal traps), and vertebrate species diversity carried out by trained observers and project participants and thereafter for the duration of the project.	- Participants will be able to learn to identify different vertebrate species and learn their vernacular names. Our experience working in these areas has demonstrated that the majority of local people are familiar with locally-occurring species and know their local vernacular names. Plasticised photo ID sheets of commonly-occurring species will be made available to survey participants.
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) 1.1.1 3-day Fruit Tree Cultivation training by FVEE team at each of the 4 target training locations (Antaranarina [to include Ambanitohaka participants], Analamangahazo and Ampasina at Betampona and Ampitabe by Vohibe) to introduce fruit-tree cultivation/care and nursery techniques, distribute initial fruit trees to participants, identify potential sites for fruit tree permanent orchards and nurseries and select two proactive participants for further intensive training at a later stage. To be carried out by June 2022. 1.1.2 Production of Fruit Tree Cultivation training workshop report for each site including pre and post workshop quiz results produced within 2 months of the training workshop end. 1.2.1 Identification and establishment of nursery staff by end December 2021. 1.2.2 Construction of new nurseries or renovations/improvements to existing nurseries and establishment of fruit tree orchard to provide scions for grafting long-term at each of the 5 target sites by end of YR1. 1.2.3 Provision of nurseries with supplies, commercial seeds and materials needed to begin tree production (mixtures of fruit, spice, timber,			

fuelwood and N-fixing species) by end of YR1.

1.2.4 Securing seed collection permits for the target forest fragments from the Ministry of the Environment and Sustainable Development by end of YR1.

1.2.5 Collection of seeds from forest fragments throughout YR2 (seasonally-dependent)

1.2.6 Production of at least 12,000 trees (in total between the 5 nurseries) and associated record-keeping by July 2023

1.2.7 Quarterly visits to each nursery Project Coordinators to follow progress, offer ongoing technical support and collect nursery records (e.g. numbers of plants, % germination rates, % survival rates etc.)

1.3.1 Distribution of at least 12,000 produced trees to project participants by November 2023 with records kept of specific trees supplied to each participant.

2.1.1 Extension workers and animators identified for each site by MFG and MBG Project Coordinators by December 2021.2.1.2 Extension workers and animators trained by MFG and MBG Project Coordinators and Dr den Biggelaar by end of YR2.

2.1.3 Reports written of each training session including list of participants, trainer, duration and subjects covered within 2 months of the end of the training session

2.2.1 Initial community meetings held in each of the 5 target villages by Project Coordinators, Extension Agents and local animators by end December 2021 to explain the benefits of agroforestry, project goals and methods, commitments required of participants to pro-actively protect the target forest fragments. Terms of project participation contract collaboratively developed.

2.2.2 Pre/post meeting oral quizzes at each participating village to gauge understanding of the need for participative and communal protection of the target forest fragments and understanding of the ecosystem services they provide (Project Coordinators, Extension Agents and local animators will assist and record the results).

2.2.3 Participating households identified and contracts signed by end of YR1.

2.2.4 Introductory training workshop held in each of the target villages for all participants to train participants to assess land availability, quality of existing agroforestry trees, techniques for rejuvenation and maintenance of trees, plot planting planning and the value of forming co-operatives and distribution of annual crop seeds by Project Coordinators, Extension Agents, local animators and Dr den Biggelaar by end of 2022.

2.2.5 Reports of each introductory training session produced including pre and post workshop quiz evaluation results to gauge efficacy of the training produced within 2 months of the training workshop end.

2.2.6Collection of preliminary questionnaire (baseline) data for each participating household on specific species planting choices, land availability for agroforestry, existing agroforestry trees, and household income by Extension Agents and local animators by end of 2022.

2.3.1 Quarterly follow-up visits of each participating household by Extension Agents and/or local animators from end of initial training workshop throughout the duration of the project (unless participants decide to withdraw from the programme)

2.3.2 Yam cultivation training workshops by Dr Mamy-Tiana Rajaonah, Kew to collective participants at each of the 4 target training locations (Antaranarina [to include Ambanitohaka participants], Analamangahazo and Ampasina at Betampona and Ampitabe by Vohibe) and distribution of 30kg of start-up yam bulbuls by end of 2022. Training session reports for each site submitted within 2 months of the end of the session.

2.3.3 Value-chain, financial management, crop preservation and storage, and co-operative farming benefits training by CRS at all 4 target locations (Antaranarina [to include Ambanitohaka participants], Analamangahazo and Ampasina at Betampona and Ampitabe by Vohibe) and MC Ingredients at the 3 Betampona sites by end 2022. Training session reports for each site submitted within 2 months of the end of the session.

2.3.4 Completion of mid-term survey for all original participants attending the introductory workshop to gauge activities undertaken as a result of the programme, trees and crops planted, crops harvested, household income changes, reasons for programme abandonment (where relevant), feedback on programme and ways to improve it by Extension Agents and local animators by end April 2024.

2.4.1 Completion of final survey at end of YR3 for all ongoing programme participants to gauge activities undertaken as a result of the programme, trees and crops planted, crops harvested, household income changes, reasons for programme abandonment (where relevant), feedback on programme and ways to improve it by Extension Agents and local animators.

2.5.1 As part of final survey, ask specific questions about membership in farmer co-operatives and subsequent impacts on income from produce sales.

3.1.1 Record proceedings of initial community meetings at the 4 target villages (Activity 2.2.1) by end Dec 2021.

3.1.2 Community meeting participants will complete oral quizzes to assess understanding of ecosystem services with results to be recorded by Project Coordinators, Extension Agents and local animators at the end of the initial community consultation (Activity 2.2.1).

3.2.1 During the initial community meetings review current village association (VOI) agreements for protection of remnant forest fragments outside of the official protected areas, facilitate discussion of acceptable use/activities in the fragments, and document VOI decisions and commitments.

3.3.1 Quarterly follow up of community-based patrols of the forest fragments by Project Coordinator, Extension Agents and local animators from July 2022, including collection of patrol data and provision of support as needed to approach local/regional authorities.

4.1.1 Training workshops at each site on biodiversity and forest use monitoring (Jul 2022)

4.1.2 Project Coordinators, Extension Agents, local animators and a selection of nominated programme participants from each target village will set up permanent transects for surveys of forest use and biodiversity in each target fragment forest by July 2022.

4.1.3.1 Extension agents, local animators and alternating programme participants (organised on a rota-basis by the Extension Agents and local animators) will complete baseline transect surveys by end July 2022 to assess forest use (destructive and non-destructive) and quarterly thereafter.

4.1.3.2 Extension agents, local animators and alternating programme participants (organised on a rota-basis by the Extension Agents and local animators) will complete baseline transect surveys by end July 2022 to assess vertebrate biodiversity and annual surveys thereafter for the duration of the project.

4.1.4 Project Coordinators, Extension Agents, local animators and a selection of nominated programme participants from each target village will map the present forest fragment perimeter by GPS (using the tracking function) and survey the whole fragment for clearings/signs of cultivation. The survey will be repeated annually thereafter for the duration of the project noting any news areas cleared for logging or cultivation.

Annex 3: Standard Indicators

Table 1 Project Standard Indicators

DI Indicator number	Name of indicator using original wording	Name of Indicator after adjusting wording to align with DI Standard Indicators	Units	Disaggregation	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
DI-A01	1.1 Capacity built through the provision of one training workshop per target site for all personnel in local existing nurseries or ones newly established for the project in nursery management, grafting/marcottage, care protocols for newly introduced species and business planning by June 2022.	1.1 Capacity built through the provision of one training workshop per target site for all personnel in local existing nurseries or ones newly established for the project in nursery management, grafting/marcottage and care protocols for newly introduced species by June 2022.	People	Gender	9 (9M)			9 (9 M)	9 (9 M)
DI-A01	2.1 By the end of July 2022, all extension workers and community animators will have been given formal training through workshops to facilitate and inform their role.	2.1 By the end of July 2022, all extension workers and community animators will have been given formal training through workshops to facilitate and inform their role.	People	Gender	0	14 (9 M, 5 F)		14 (9 M, 5 F)	14 (9 M, 5 F)
DI-A03	3.3 From July 2022 the communities will organise their own quarterly patrols of the target forest fragments in their area, following up on infractions using locally agreed procedures or local and/or	3.3 From July 2022 the village associations will organise their own quarterly patrols of the target forest fragments in their area, following up on infractions using locally agreed procedures or local and/or	Number of organisations	Type of organisation					5 Village associations (already doing patrols but not yet quarterly)

DI Indicator number	Name of indicator using original wording	Name of Indicator after adjusting wording to align with DI Standard Indicators	Units	Disaggregation	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
	regional authorities as required.	regional authorities as required.							
DI-A04	2.3. At least 75 farming households across the target sites have installed and are correctly maintaining agroforestry plots by end April 2024.	2.3. Signed participants from at least 75 farming households across the target sites have installed and are correctly maintaining agroforestry plots by end April 2024.	People	Gender	?	162 (79 M, 83 F)		162 (79 M, 83 F)	184 (94 M, 90 F)
DI-A11	2.5 By end Dec 2023 collaboration between participating farmers at each site enables them to access regional markets for at least one product produced from their plots with 10% improved income per unit area compared to baseline median annual income.	2.5 By end Dec 2023 cooperatives set up between participating farmers at target sites enables them to access regional markets for at least one product produced from their plots with 10% improved income per unit area compared to baseline median annual income.	Number	Gender of owners	0	0		0	2

Note: Could also come up with appropriate indicators for DI-B10, DI-D01, DI-D02 and DI-D11 if preferred but may need to remove some of the above to avoid double-counting in that case.

Table 2 Publications

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

Checklist for submission

	Check
Different reporting templates have different questions, and it is important you use the correct one. Have you checked you have used the **correct template** (checking fund, type of report (i.e. Annual or Final), and year) and **deleted the blue guidance text** before submission?	x
Is the report less than 10MB? If so, please email to BCF-Reports@niras.com putting the project number in the Subject line.	x
Is your report more than 10MB? If so, please discuss with BCF-Reports@niras.com about the best way to deliver the report, putting the project number in the Subject line.	Annex >10MB
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.	x
Do you have hard copies of material you need to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number. However, we would expect that most material will now be electronic.	No
If you are submitting photos for publicity purposes, do these meet the outlined requirements (see section 16)?	No
Have you involved your partners in preparation of the report and named the main contributors	Yes
Have you completed the Project Expenditure table fully?	Yes
Do not include claim forms or other communications with this report.	