

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

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Darwin Initiative Project Information

Project reference	29-030
Project title	Using invasive alien trees to support conservation and improve livelihoods
Country/ies	Madagascar
Lead Partner	Missouri Botanical Garden, Madagascar Research and Conservation Program
Project partner(s)	-Regional Directorate of Environment, and Sustainable Development (DREDD) -Regional Directorate of Industrialization, Trade and Consumer Affairs (DRICC) -Federation LOVASOA (LOVASOA)
Darwin Initiative grant value	£197 406
Start/end dates of project	01 July 2022 - 31 March 2025
Reporting period (e.g. Apr 2022 – Mar 2023) and number (e.g. Annual Report 1, 2, 3)	1 April 2022 to 31 March 2023 Annual Report number 1
Project Leader name	Adolphe Lehavana
Project website/blog/social media	http://mobot.mg/conservation/pointe-a-larree/
Report author(s) and date	Adolphe Lehavana and Ianosca Descombes, 30 April 2023

1. Project summary

The Pointe à Larrée PA on Madagascar’s central-eastern coast is an old dune complex including very rare littoral forest and swamp forest, marshes and lakes supporting rich fauna and flora including scores of threatened and locally endemic species. Most local people living in this landscape have precarious lives depending on the exploitation of natural resources, maritime fishing and subsistence farming, frequently impacted by environmental events (floods, droughts, catastrophic winds, fires). At such times they resort to plundering the remaining forest for timber

or charcoal for sale. This landscape hosts several consequential Invasive Alien Species (IAS), perhaps the most significant is the marsh-loving pyrophile tree *Melaleuca quinquenervia* because it outcompetes native plant species and desiccates marshy ecosystems. Indeed, several locally endemic species are at high risk of extinction. This project aims to control the invasion of the species and transform its wood into green charcoal as a new source of income for local communities. At the end of the project, we intend to eliminate the populations of the species over an area of 10 ha that the plant has infested within the protected area and to increase by 25% the income of 100 charcoal producers grouped in a formal cooperative. Within the peninsula, more than 1000 ha are currently invaded by the species, providing ample raw material for this activity while reducing their threat to the protected area.

2. Project stakeholders/ partners

At the start of the project, four partner entities have been involved to implement the project. The terms of collaboration were formalized through a “Memorandum of Understanding” signed by all the partners dated 11 August 2022 (Evidence, Activity 1.2). Partners signatories of the MoU are:

- Missouri Botanical Garden as Lead partner
- Regional Direction of Environment and Sustainable Development
- Regional Direction of Industrialization, Trade and Consumption
- Federation Lovasoa which is a grouping of all the COBAs, forest managers who have management transfer contracts with the forest administration.

In addition to these formal partners, during the official regional launch of the project, it was agreed that regional authorities, led by Governor, will perform monitoring sessions to evaluate success of the project and to address issues. This program will be held at the end of each fiscal year.

3. Project progress

3.1 Progress in carrying out project Activities

1.1 Regional and local launch of the project

In October 2022, the official regional launch workshop was held in Fénériver-Est with the participation of regional, local authorities and various concerned technical departments. A total of 32 persons were present, representing 18 Institutions and including 27 men and five women (Evidence Activity 1.1).

During workshop, several points were discussed for a sustainable impact of the project, including the quality of the products to ensure customer loyalty and systematic control of the areas of exploitation to avoid the use of native species.

Following the regional launch, the local launch of the project was conducted in five target villages (Antsiraka, Ankintsinambo, Andrangazaha, Ambodimanga and Manjato). A total of 159 participants, including 77 men and 82 women were present during the meetings. During meetings, suggestions and concerns were collected. These comments included mainly the transportation and selling facilities of the project.

1.2 Developing Memorandum of Understanding (MoU) with technical service partners:

At the start of the project, a Memorandum of Understanding was signed by four partners (Regional Direction of Environment and Sustainable Development (RDESD), Regional Direction of Industrialisation, Trade and Consumption (RDITC), Federation Lovasoa (FL) and Missouri Botanical Garden) (MBG) (Evidence Activity 1.2). This MoU describes the engagement of each party in the following areas:

- Participation in the planning and in regional / local launch of the project, in particular to target groups
- Consultation and communication, advocacy concerning the project to local / regional authorities and traditional authorities

- Formulation of communication strategy taking into account environmental, socio-economic issues and good social practices in order to maintain the trust of the communities
- Local awareness, project implementation and collection of data
- Participation in monitoring for a continuous improvement.

1.3 Conducting research to develop annual exploitation plans, map priority zones

A research plan was developed by a participative team including technicians from RDESD, MBG and local stakeholders (Lovasoa) to quantify potential volume of exploitable and non-exploitable stems of Melaleuca (Evidence Activity 1.3). A total of 27 plots were inventoried within a total area of 61Ha and the extrapolation of the data suggests that 89,823 exploitable stems and (more than 5cm of diameter) and 7,762,927 of non-exploitable stems (less than 5cm of diameter) are available in this zone. Out of 61Ha covered by population of Melaleuca, 9.10 hectares were inside of PA and 51.9 Ha located in the peripheral zones (Evidence Activity 1.3 Table 1).

1.4 Directing monthly members of the “green charcoal cooperative” for producing charcoal:

No progress

1.5 Daily patrols within Protected Area

Tree types of patrols were conducted:

-Patrol by Rangers. 12 Rangers perform daily patrols especially in the PA. A total of 908 patrols were carried out during Year1. These revealed that a total of 13 stems of native trees were cut but no offenders was identified.

-Community patrol. This type of patrol was carried out by grassroots communities especially in buffer zone, outside the AP – this activity is very successful in increasing the engagement of the wider community in the conservation of the PA. In total, 261 patrols were carried out with the participation of 205 members including 126 men and 79 women (1040 man-days). During Year1, 252 cut stems were observed in this peripheral zone and five perpetrators were apprehended.

-A joint patrol. This was carried out in collaboration with the forestry administration. During the patrol 13 cut stems of native trees were observed including two within AP and 11 in buffer zone. However, it was unclear whether the woods were stolen for charcoal mining or for house construction because the perpetrators have not been apprehended.

1.6 Verbalisation of infractions:

The dina (internal community rules) has recently been approved by the court and is now being applied. Five apprehended offenders paid their fines with a total sum of € 35 and also planted 850 seedlings of native trees.

1.7 Mobilisation of local community for tree planting and removing Melaleuca

After extirpating population of Melaleuca, a planting session was organized during which 10,000 cuttings of *Faguetia falcata*, a threatened native tree species, were used to launch the restorative process to a parcel of 1.5 Ha. A total of 20 people including 10 men and 10 women participated in this event. This activity will be continued in Year 2 when the season best for out-planting begins in May. During this period, we will enrich the parcel initially planted with *F. falcata* using other native species.

1.8 Quarterly transects for participatory monitoring of native tree cutting

Three quarterly participatory monitoring sessions were conducted by four groups of local people and with MBG oversight. 36 transects were laid out with the participation of 88 people including 56 women and 32 men. This monitoring aims to assess threat trends both in the PA and in the buffer zone. 23 cut trees and shrubs were observed including two stems from PA and 21 stems from buffer zone.

1.9 Mobilisation of female members for removing Melaleuca

During Year 1, 5.7 hectares invaded by Melaleuca were cleared within the PA with the participation of 40 women and 42 men (Evidence Activity 1.9). It was planned that this activity would involve exclusively women but it was too fatiguing for them to remove larger big trees of the species, and therefore we decided to involve some men.

1.10 Three-monthly monitoring for compliance with Melaleuca exploitation contracts.

This activity will be started at the beginning of year2.

2.1 Study trip by PM and President of GCC to Indonesia to identify best practice for the production of charcoal from Melaleuca

This activity aims to acquire experience elsewhere in order to bring or to improve at Pointe à Larrée charcoal production technology. We will plan to carry out these exchanges in year 2 either in Africa or in Asia.

2.2 Purchase tools for conversion of Melaleuca into charcoal

Following a Change Request, that was accorded, we have made a small change in the strategy for charcoal production from Melaleuca. Since the cost of fuel in Madagascar has increased by 44%, we have cancelled the purchase of wood cutting machines and the team are now using axes and machetes. To improve the efficiency of charcoal production, other equipment will also be provided to the charcoal producers according to the list provided by an expert in charcoal production including metal flues. All these materials and equipment will be purchased in Year 2 to allow charcoal producers to start efficient conversion of Melaleuca wood to charcoal.

During the training on improved carbonization techniques, trials were carried out in three villages. A total of 57 bags of green charcoal were produced, equivalent approximately to 898 kg (Evidence Activity 2.2).

The next steps will be:

- to test the quality of the charcoal at households in order to optimize it before selling to regional markets
- to provide the materials to enable the charcoal producers to advance on efficient production
- **to conceive and produce special packaging to label our Melaleuca charcoal as a “green product”.**

2.3 Training workshops for members of GCC in best practice for the conversion of Melaleuca into charcoal

To improve carbonization techniques, we recruited a consultant (Mr Modine, acquiring 25 years experiences on charcoal production at FANALAMANAG which is one of biggest firm of charcoal production in Madagascar), to conduct training sessions for charcoal burners. The training lasted for 20 days including classroom training, practice sessions and follow-up. A total of fifty-six (56) charcoal producers, including 51 men and five women were trained on improved techniques using the MATI technique (*Meule Améliorée à Tirage Inverse*) (Evidence Activity 2.3).

The training technique consisted of improving traditional techniques by providing a technical package to increase performance. Trials carried out at three training sites gave variable yields depending on the humidity of the woods (Table 1). A study conducted by CIRAD in Madagascar using traditional techniques stated that traditional technique provided very low yields of 8 to 12% (Fare and Rivain, 2023), while the application of the MATI technical package improved yield up to 28.4% provided that the wood had low humidity.

Table 1 : Basic mass yield of charcoal technique production related to wood humidity

Techniques	Wood humidity (%)	Basic mass yield (%)
Traditional techniques	/	8 à 12%

Improved technique using MATI at Antsiraka	18	28.4
Improved technique using MATI at Manjato	Over 26	10.0
Improved technique using MATI at Andrangazaha	Over 26	7.1

The same package of techniques were used at three training sites and the differences in results seems to be closely related to the level of wood humidity. At Antsiraka, conditions were ideal to maximize yield: with a humidity rate of 18%, the basic mass yield reached 28.4%. At other sites, the woods only cut a few days previously, when placed into the oven, gave very mediocre yields. Currently, the charcoal producers are convinced of the technical package and they are enthusiastic about producing as much as possible. So, to improve charcoal yield production, we would recommend to charcoal producers to fell down trees at least one month before placing wood to oven while respecting prescribed technical package.

2.4 Coaching the charcoal producers and GCC in best practice

No progress

3.1 Conducting diagnostic to identify SWOT of the GCC

Samy Antsika is a farmers 'cooperative created under the initiative of local communities environmental enthusiast in order to improve the income of members and partly support conservation of AP Pointe à Larrée. This is a for-profit structure which is opposite of Federation Lovasoa, a non-profit Association, both are active at Pointe à Larrée. It was formalised in 2012 with provisional registration certificate N° 02-2012 VPEI/SG/DGE/DRE- AJRFO/COOP/ND. During diagnostic, some weakness were identified. Since its creation, the members of the board of direction have never been renewed during ten years. The lack of a start-up fund was associated with a lack of capacity which discouraged its members to pursue activities. Despite these weaknesses, members were enthusiastic to pursue diverse activities, but lack of guidance led to the partial or total failure of most of these endeavours: including commercialisation of litchis, paddy, and production of seedling of cloves. In addition, administrative papers did not allow them to trade because they did not have the necessary documentation including tax number or business number. Such papers are obligatory for any organisation involved in trading operations. The members of SAMY ANTSIKA cooperative remain motivated despite the lack of technical and financial support and the leaders of the cooperative kept their hope to pursue activities. Ten years after promoting clove plantation, now most of their plantations are productive. In addition, the cooperative has a warehouse and some equipment. So, as next step, it is crucial to provide guidance for members, to review some documents such as status and internal rules, to renew the members of board of direction as well as to reinforce the capacity of members for management.

3.2 Developing marketing strategy and business plan of GCC

No progress and this activity was postponed to Year 2 following to the agreed Change Request.

3.3 Coaching graduates

No progress and postponed to Year2

3.4 Workshop for validation of business plan, manual of procedure and internal rule of the cooperative

No progress and this activity was postponed to Year 2 following to the agreed Change Request

3.5 Training of cooperative leaders on six topics

Two training topics out of the six planned were delivered:

- Training on cooperative structure and functioning

Faced with the failure of management and some non-compliance with certain laws, as described above, the structure of the cooperative, SAMY ANTSIKA, had to be revised. 32 members including 29 men and three women participated in this training session (Evidence Activity 3.5). The participants included both old and new members. The following themes were treated in the training session:

- Review of the status and internal rules of the cooperative.
- Clarifying laws governing Cooperative structure as defined by Law n°99-004 issued on 21 April 1999
- Defining the main and secondary activities of the Cooperative
- Improving structure of the Cooperative by renewing different positions on the Board of Direction and clarifying their respective tasks as well as for General Assembly. Afterwards, the members of Board of Direction were elected, being composed by seven members.
- Financial operations of the cooperative including the calculations related to benefit sharing;
- Different obligations that the cooperative has to respect to comply with laws in force, including financial duties, administrative papers such as acquisition of tax number (so called NIF) et business number (STAT).

At the end of training session, following results were obtained:

- Updated status and internal rules
- New members of the Board of Direction
- Definitive list of the cooperative members (Evidence Output 2.2)
- Tax number and statistical number obtained from competent officials

- Entrepreneurial culture

This session introduced entrepreneurial principles and culture. The choice of theme was based on the belief that the entrepreneurial spirit can be developed in everyone and is especially applicable to the different operations handled by the Cooperative. Twenty-eight (28) members participated in this training session including 24 men and four women (Evidence Activity 3.5).

3.6 Purchase charcoal by GCC

No progress

3.7 Rents two sale's point (Sainte Marie and Soanierana Ivongo)

No progress

3.8 Recruitment of sale managers and skipper

No progress

3.9 Construction of a warehouse and extension of the existing warehouse

Among the two warehouses planned to be built, one has been completely achieved. It consisted of repairing and extending the existing store. An additional room was built with a capacity of 30m³ (Evidence Activity 3.9). So, in total, 3 rooms are now available to receive charcoal products.

3.10 Purchases a motorboat and equipment

A motorboat has been acquired with a baggage load of 1.25t, 1.82 meter of wide, 7.27 meters of length (Evidence Activity 3.10). Due to increase price, we will use an existing engine to propel

this boat. This boat will allow cooperative to transport green charcoal of Melaleuca to surrounding towns.

3.11 Validation of charcoal products by RDES

RDES issued two permits for the exploitation of Melaleuca by MBG (within the PA) and COBA (in the peripheral zones). These permits are valid for a period of one year, i.e. they will expire and need to be renewed on 25 January 2024 (Evidence Activity 3.11) .

3.12 Delivery of agreement for transportation charcoal product

No progress.

3.13 Implementation of marketing strategy

No progress

3.17 Conducting half-yearly participatory monitoring of the project progress for GCC

No progress

3.16 Conducting monthly technical monitoring and three-monthly monitoring

No progress

3.18 Developing collaboration with businesses for shipment and sale

No progress

4.1 Creation of a website for the project

The website account of the site was created and active (<http://mobot.mg/conservation/pointe-a-larree/>). The Responsible is still following a training to maintain it.

4.2 Bimonthly updating of Project' progress on social media

After regional launch of the project, a publication was made on facebook (Evidence Activity 4.1). More posts are planned for year2.

4.3 Monthly broadcast on local radio

Broadcast will be implemented if green charcoal are ready to be delivered to the market. As the first production of has just been released, we plan to start this activity in year2.

4.4 Organising annually a festival of biodiversity

To raise awareness about our work in and around the Pointe à Larrée PA, a festival of biodiversity was organized in December 2022, under the leadership of the COBA federation "LOVASOA". The theme for the year was "Women contribute to the conservation of Pointe à Larrée forest". The main reason for choosing the theme was based on the importance of involving women in conservation actions.

Overall, the festival was successful with the participation of 1300 people including adults, young and children in this event (Evidence Activity 4.4). During the festival, several activities were implemented including video projection, questions & answers session (a sort of quiz about biodiversity and conservation), traditional dance, poetry, stand exhibition, a football tournament and speeches made by the authorities. The green charcoal product was not yet available at the time of the festival, but the attendees were sensitized on the objectives of the project during the speeches.

4.5 Attendance to regional and national events

No progress

3.2 Progress towards project Outputs

During Year 1, much was achieved towards Output 1, but most activities related to Output 2 were delayed. This was due, on the one hand, to the difficulty of convincing charcoal producers to use Melaleuca's wood as a new raw material (time-consuming to strip bark) and, on the other hand, to the difficulty of finding an expert charcoal trainer, capable of sharing improved techniques. Moreover, the implementation of the two other outputs (3 and 4) is strongly depends on the success of Output 2. Despite all this, towards the end of the Year 1, we located an expert in improved techniques for charcoal production and when he provided the training in these techniques to local charcoal producer they were excited to see the results and consequently enthusiastic to invest in the project. Originally, in this project we proposed to work with 30 charcoal producers, but we are now pleased to report that 57 have committed to engage in this activity (Evidence Output 3.2). Although no charcoal has yet been produced by the participants, these charcoal producers are convinced with the proposed approach to transform Melaleuca into charcoal because the trial yield was twice as much as their usual yield. As these two main blockages are lifted, it is expected that the pace of advancement will accelerate in the second year of the project enabling us to catch up with the delay.

Output1. *Melaleuca* eliminated from high priority restoration zones within the PA thereby enhancing natural regeneration

Overall, we can estimate that we are at 70% of the objectives targeted for output1. Three indicators were targeted, a part of them intended to be achieved in year1 as described below.

1.1 By YR1 study published identifying high priority zones for restoration through the elimination of Melaleuca

Map is now available showing heavily invaded areas within the PA and adjacent peripheral zone (of 1 to 2km from the PA, Evidence Activity 1.3 Figure 1). This shows the priority areas where population of Melaleuca will be removed with an area of 9.1 Ha and 51.9 Ha, in the PA and in the peripheral zone respectively. Melaleuca is mainly a anemochory species, and the maximum distance for seed dispersal is around 170 m, so if the areas currently delimited as priorities for elimination are cleared, there will be less risk of the seeds species spreading to AP from peripheral areas. Recently, some community members have informed us that there is another subpopulation of Melaleuca close to another part of the forest, so the delimitation of priority areas for the eradication of this species must be continued in Year 2.

1.2 By YR 1 adult stems of Melaleuca (stem dbh >5cm) eliminated over 10 hectare; by YR2 over 20 hectare and by YR3 over 30 hectare.

During Year1, 5.7 Ha invaded within the PA has been cleared of Melaleuca - including all categories of stem diameter (saplings and trees) (Evidence Activity 1.2 Figure 5). Since the species can regrow with new shoots (coppicing), where clearance operations must be repeated. We estimate that the objective for Year 1 is half achieved, and a catch-up program will be organized.

1.3 By YR1, 50, by YR2 100 and by YR3 150 women involved in removal of Melaleuca

A total of 40 women were involved in the removal of the species. But as the big trees are difficult to uproot, we had to ask the help of the men, a total of 42 men: making a total of 82 people participating in this work (Evidence output 1.3). As this work is quite difficult compared to other women's activities in the region (e.g. basketry, fishing, breeding), we propose to offer a kind of bonus for those who actively participate in this activity in order to better mobilize women.

Output 2. Melaleuca charcoal produced preferentially by local people and accesses lucrative markets with livelihood benefits for locals

Until now, trial products constitute only the production of the Year 1. Achievements of the year have focused on capacity building and integration of charcoal producers into a newly structured cooperative. According to the trial results, green charcoal production is profitable and could be a stable source of income for charcoal producers.

2.1. By YR1 protocol demonstrated in “real world” conditions that enables charcoal to be produced from Melaleuca with no more than 15% loss of efficiency compared to charcoal produced from native trees (some loss of efficiency must be expected and this will be compensated by greater sale’s price)

After obtaining samples of Melaleuca charcoal from the trial, informal surveys were carried out among the charcoal producers, i.e. a total of six people surveyed at three target villages. The objective is to assess the profitability of Melaleuca’s green charcoal. Overall, their answers were similar. Compared to using trees of native species as the raw material, operations on Melaleuca require 23% more work because of the labour involved in the removal of bark. This is the only difference between the two types of raw materials. Currently, almost 85% of the wood used for charcoal in the area comes from wood deeply buried in marshes and the cost of removal exceeds 26% the input of labour compared to the use of Melaleuca. Thus, conversion of Melaleuca to charcoal requires less labour than the conversion of submerged wood. We conclude that viability of a value chain based on charcoal made from Melaleuca depends on the quality of the charcoal, and this will be confirmed during second year of the project.

2.2 In YR1, YR2 and YR3 respectively, 30, 60 and 100 charcoal producers obtained 25% increase in household income from charcoal (currently zero Melaleuca charcoal as baseline)

Currently, 57 charcoal producers are ready to invest in Melaleuca green charcoal. Benefits earned from project can only be calculated when sales of this product begin (i.e. in Year 2).

Output 3. Melaleuca charcoal appreciated by urban populations and product sale strategy supported sustainably

Among the six targeted indicators, two were partially achieved:

- Obtention of operating license to exploit Melaleuca wood to charcoal. As we are in the process of starting operations, the other indicators of this output will be delivered later.
- Two training topics out of the six planned were delivered.

3.1 Permits obtained to provide a legal context for the project to exploit and sell charcoal from Melaleuca – including definition of mechanism to ensure that the charcoal being sold is really from Melaleuca

Two exploitation permits have been issued by the competent authority, and this is valid until January 2024 (Evidence Activity 3.11 Figure 19). One of them is for removal of Melaleuca inside of PA, managed by MBG and another one is in buffer zone, under management of local communities. Once the green charcoal is produced, two more permits will be required: a transportation permit to be issued by RDESD and sale permit issued by RDITC.

3.2 Annually, 100% of charcoal produced by charcoal producers purchased by Cooperative and delivered to sale’s point directly accessible to consumers

No change

3.3. By Y1, two sale’s points installed and functional in Soanierana Ivongo and Sainte Marie

No change

3.4. Volume of charcoal sold by Cooperative of Melaleuca charcoal producers increases annually from zero at T0 to 20 tons by Y1, 40 tons by Y2 and 60 tons by Y3.

No change

3.5. Y2, a business plan and a manual procedure elaborated showing the overall strategy of the cooperative for the sustainability investment including the extension of investment areas

No change

3.6. From Y 1 to Y3, at least 10 Leaders of the cooperative trained on at least six themes relating to the management and governance of the cooperative

Following a review of the Cooperative's structure, the number of Leaders in the Board of Directors is now limited to seven. They have all benefited from the training in two themes: a) management of structure and functioning of the cooperative; b) entrepreneurial culture. In addition, 29 other members also participated in these training sessions (Evidence Activity 3.5 Figure 13).

Output 4. Promising model of a new relationship with IAS demonstrated to land managers (including PA managers) and public awareness on IAS (threats and opportunities) increased

This output has been partially reached in Year 1, specifically part of the target for indicator 4 has been achieved regarding local awareness.

4.1. In YR1, YR2, and YR3 interested parties informed of the project and its progress by means of one dedicated website and bi-monthly social media posts.

Through focus group meetings, regional authorities, various technical services and NGO representatives received an information related to the project. The event was posted on facebook which is the most accessible social media platform for rural Malagasy people. During the local launch, grassroots community members were informed through village meetings. In terms of communication, to be honest, we are still far from the objectives and we will make more effort over next two years.

4.2. In YR3 at least 10 land managers (including Protected Area Managers) visit Pointe-à-Larrée to evaluate project.

No change

4.3. In YR3 one article describing and objectively evaluating the project will be published in a peer reviewed journal

No change

4.4. From Y2 to Y3, annually 20,000 people informed or sensitized of project results through four annual participations in local, regional, national celebration events, 24 annual radio broadcasts

So far, it is estimated that around 1500 people were informed of the project, 7% of the objective. These are people who participated in local events such as festival biodiversity (1300 people), village meetings (159 people), regional launch (32 people) (Evidence Activity 1.1 and Activity 4.4).

3.3 Progress towards the project Outcome

Outcome: A self-sustaining approach to the use of IAS is launched that demonstrably reduces the threat of Melaleuca at Pointe à Larrée PA while providing fuel-wood and income for local people.

In terms of conservation action, there is remarkable progress of the project towards achieving the objectives. Actions to eliminate Melaleuca in AP and post-control planting are well underway with full involvement of local stakeholders, daily patrol by Rangers with grassroots communities is routine. However, we are still far from the objective for sale and increasing charcoal producers' income. Despite this, technical acquisition on charcoal production and their motivation are essential for the progress of the project. We also believe that the strategy proposed and validated in change request will enhance adaptive management and propel us faster towards achieving the outcome for coming year.

O.1 By YR 1 Melaleuca eliminated over 10 hectare of the PA; by YR2 over 20 hectare; and by YR3 over 30 hectare.

When conceiving this project, it was estimated around 50Ha of area invaded by Melaleuca in AP. Inventory and mapping data showed that only 9.1Ha of the PA was actually invaded, but with much greater areas invaded in the buffer zone. Recently, an additional part of PA was found to be invaded, so we now estimate a total area of occupancy of Melaleuca of 11Ha within the PA. During Year 1, 5.7 Ha within the PA were entirely cleaned of all stem class sizes (Evidence Activity 1.9 Figure 8). And thus we estimate that we have achieved half of the target result.. Despite the difficulty of the task in areas sometimes impacted by heavy flooding, local stakeholders are motivated to continue the work of Melaleuca eradication and the activity is on track towards achieving this indicator.

O.2 By YR3 the growth of native trees in restoration zones is at least 10% greater than in control areas where large Melaleuca stems have not been eliminated.

The activity of eliminating Melaleuca started in February 2023, and this work was followed by out-planting native woody plants, thus it is very early to assess the effects of the actions. In our opinion, we must wait at least six months before assessing the effects of eliminating Melaleuca on the growth rate of native species.

O.3 By YR3, with easy access to Melaleuca charcoal for local people, the number of infractions within the PA for exploiting native trees for charcoal has fallen by 50% compared to T0

The last case of charcoal production using tree cut from the PA was in April 2022. It was the only incident charcoal burning within the PA noticed since 2020 and consisted of cutting down seven trees. For the sake of effective measurement of this indicator, we propose to include both illegal logging in the PA but also that within the buffer zone too. For this, annual number of trees cut for charcoal production in this area is estimated at 240 trees/year (Theresice, Ranger, Pers.com). For Year 1, no logging for charcoal burning in AP, while in the buffer zone, there were 11 charcoal stoves were located, i.e. ca. 77 trees were cut illegally for charcoal burning. Thus, during year1, illegal tree felling for charcoal decreased by 67% compared to baseline 240 trees/year.

O.4 Income from charcoal exploitation increased by 25% for 30 charcoal makers in Y1, 60 charcoal makers in Y2 and 100 in Y3 compared to zero as baseline

No change for Year1 because no sale. We expect that this will be an adequate indicator.

O5. Consumption of Melaleuca charcoal by residents in two major conurbations close to PA (Soanierana Ivongo and Sainte Marie) increased from 0% in T0, to 10% in Y1, to 20% in Y2 and 30% in Y3 compared to charcoal of native species

No change was reported for Year 1 because there have been no sales of green charcoal. We expect that this is adequate indicator.

3.4 Monitoring of assumptions

Outcome

Assumption 1 : Focused and on-going exploitation of *Melaleuca* for charcoal followed by hand removal of young plants (unsuitable for charcoal production) will significantly reduce the abundance of this species with consequent rewetting of marsh habitats and increased growth of native swamp trees hitherto suppressed by dense stands of this species.

Comments: This assumption is true if time is invested to uproot all stems. According to our observation on the ground, in areas where the work is done thoroughly, number of new recruits becomes rarer and more widely spaced. On the other hand, if the roots are not properly removed, the decline in abundance of the species will be compromised (Evidence Outcome Figure 22).

Assumption 2: While it is more time consuming to make charcoal from *Melaleuca* (because it is necessary to remove a thick layer of spongy bark) compared to native trees, this obstacle can be largely mitigated by providing access to bark-removing equipment and facilitating access to more lucrative markets for “green charcoal”

Comments: Now, we decided not to provide a machine for bark-removing because of increase of price of fuel, but bark can be removed quite effectively using axe and machete. In any case the comparison that must be made is between time investment in processing *Melaleuca* and investment in garnering submerged trees from the marshes – which is currently a major source of wood for charcoal production. This latter activity is very time consuming. So, this assumption can be retained for the moment but the real test will be whether this product is viewed favorably as a source of fuel.

Output1. *Melaleuca* eliminated from high priority restoration zones within the PA thereby enhancing natural regeneration

Assumption 1: It is possible to eliminate this species from defined areas of the PA by a combination of exploitation for charcoal followed by repeated cycles of compensated hand removal of young plants. Repeated removal of seedlings will be necessary because this species germinates freely from a soil seed bank.

Comments: This is true. After second removal, there are only a few regrowths, and we believe that after a third intervention, the plant will disappear completely .

Assumption 2: Single women are considered a vulnerable group, unemployed and if their security is assured in the forest, they can actively participate in the implementation of the project

Comments: This is true. Security within the forest can be assured even in the forest by asking them to work in groups (Evidence Outcome Figure 22 (d))

Output 2. *Melaleuca* charcoal produced preferentially by local people and accesses lucrative markets with livelihood benefits for locals

Assumption 1: Appropriate sustainable technologies can be identified elsewhere in the World and introduced to Madagascar to effectively process *Melaleuca* trees despite its very thick spongy bark.

Comments: Expertise exists in Madagascar, effective for green charcoal of *Melaleuca*. However, to have an optimization of the quality and better yield of production, it is always necessary to seek new experiences from other countries.

Assumption 2: *Melaleuca* charcoal performs well in traditional and improved charcoal stoves and lucrative commercial markets can be identified and accessed for “green” charcoal by motivated business team.

Comments: For production, the hypothesis was verified true. Improvements in techniques for charcoal production have significantly improved the yield of green charcoal. We will only know whether lucrative markets exist when we begin to sell the product in Year 2.

Assumption 3: If *Melaleuca* charcoal is lucrative as we plan it to be, *Melaleuca* within the PA may become rare and uneconomical to exploit. While this is a good result for local biodiversity but we assume that value chain associated with this activity can continue to operate by exploiting the large populations of this plant existing outside of the PA. In these zones, if seedlings are not removed, then the exploited populations will quickly regenerate.

Comments: This assumption is true. In addition, if the plant is not uprooted, the regrowth comes back very quickly and this allows the charcoal burners to continue their activity. But this is not really the objective of the project, we rather want to eliminate the plant where it grows. With an estimated 5000Ha of area invaded by the species in Madagascar, the Cooperative will have enough raw materials for the foreseeable future.

Output 3. *Melaleuca* charcoal appreciated by urban populations and product sale strategy supported sustainably

Assumption 1: While charcoal produced from certain native trees will likely be preferred by local people over *Melaleuca* charcoal (because they are familiar with using the former and also because it has a greater energy production per unit volume), legal access to wood of native trees is now non-existent and therefore *Melaleuca* charcoal will become an acceptable alternative.

Comments: Assumption is retained, although *Melaleuca*'s green charcoal is not yet available at the market.

Assumption 2: Poor governance and management of the cooperative could induce tension between members and compromise the sustainability of the project but such tensions can be effectively reduced by providing training cascades, and effectively applying the manual of procedure (with periodic supervision from the services concerned and the sanction measures in the case of non-compliance with internal rules)

Comments: This assumption is true. According to the diagnostic results (SWOT), for almost 10 years, the cooperative was only moderately active because of a lack of technical support and administrative capacity. Now, through our interventions, the situation is much improved: when we launched this the cooperative had twenty members, but now this number has risen to 70 active members.

Assumption 3: The Pointe à Larrée area is a zone frequently impacted by cyclones could interrupt the supply of stocks to places of sale, a supply plan will thus be reinforced during the dry seasons to avoid product shortages during bad times.

Comments: This assumption will be better verified once sales operations begin in Year 2.

Output 4. Promising model of a new relationship with IAS demonstrated to land managers (including PA managers) and public awareness on IAS (threats and opportunities) increased

Assumption 1: High rates of illiteracy and conservatism (e.g. use of charcoal from native species) may slow down behavioral change and diminish popular appreciation of "green" charcoal but the importance of these factors will be diminished through a robust program of popular communication using simple key messages carefully crafted for each target group.

Comments: This assumption will be better verified once sales operations begin in Year 2.

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

Overall, the project has contributed to improving the management of the protected area by increasing popular participation in governance and management. More specifically to the Darwin Initiative project, the following impact was expected: "The ecosystems of the Pointe-à-Larrée PA are restored to a more natural condition while local people obtain needed fuel-wood and access improved livelihoods from "green" charcoal".

In terms of biodiversity conservation, there has been a clear reduction of threats on natural resources related to charcoal production. Compared to the baseline of 240 trees felled/year, in Year 1, there was a decrease of 67%, ie 77 trees were felled. During the patrols, the community rangers police not only the charcoal burning on the forest but also other threats such as slash and burn cultivation, timber exploitation, wildfire, and hunting of wild animals. During the year1, 10,000 cuttings of *Faguetia falcata*, which is an endangered tree species, were out-planted to launch ecosystem recovery post-control of Melaleuca.

Regarding poverty reduction, it is still too early to detect the anticipated the impact of the project because we are still in the production phase of green charcoal of Melaleuca. The impacts are expected from the second year of the project onwards .

4. Project support to the Conventions. Treaties or Agreements

Madagascar's National Biodiversity Strategy and Action Plan (NBSAP) takes into account several international conventions to which this project contributes to their implementation:

1) Convention on Biological Diversity (CBD) (ratification in Madagascar: decree n°95-695 of 03 November 1995). Article 8 (h) "to prevent the introduction, control or eradicate those alien species which threaten ecosystems, habitats or species". For this convention, objective 9 of Madagascar's NBSAP has defined four main actions and this project contributed to:

-Action 2): Develop and implement a National Strategy and programs to combat the invasive species, emphasizing prevention and control while involving the local community in these processes. During Year 1, a plan for Melaleuca eradication was developed and largely implemented with local communities. There are 82 people involved in control actions.

-Action 4) Encourage research for the valorization of invasive species and set up dissemination/extension programs. The transformation of the species' wood has begun, a priori for the benefit of local communities (as a new source of income) and more broadly for the populations of the region thanks to green charcoal. This product is new to the region and the success of the operations will be disseminated across the Island and elsewhere as well.

2) Ramsar Convention on Wetlands (ratified in Madagascar 24/03/98, Resolution VII.14, 7th Meeting in 1999) deals specifically with promoting adequate measures on the prevention, eradication and control of invasive species in favor of wetland conservation.

Melaleuca is recognized for its ability to dry water sources through high evapotranspiration and altered hydrology. During Year 1, 5.7 Ha of invaded plots within the PA were freed from invasion and restoration was launched in the area by planting an endemic tree species. This seems a modest surface, but this is a unique intervention for Madagascar and a starting-point for future more substantive actions. We will add additional native species to the restoration zone in Year 2.. This work will restore wetlands and their ecological functions thereby contributing to Goal 1: "Addressing the Drivers of Wetland Loss And Degradation" and Target 2: "Water use respects wetland ecosystem needs for them to fulfill their functions and provide services at the appropriate scale inter alia at the basin level or along a coastal zone" and Target 4: including priority invasive alien species are controlled or eradicated. It is expected that ecological restoration will improve the habitats of Pointe à Larrée's endemic bird and fish species..

3) Madagascar has also ratified the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Climate Agreement according (Law No. 2014-022 of 10/12/14 ratifying the Doha Amendment to the Kyoto Protocol and Law No. 2016- 019 of 10/08/16). This project contributes to the reduction of the risk of fire spreading into the forest because *Melaleuca* is highly pyrophile. In addition, tree planting and a reduction in the cutting of native trees will contribute to the National Plan for Adaptation to Climate Change (ACC) of Madagascar, Strategic Priority 2: Implement a large-scale restoration program for the most threatened ecosystems.

1) Although commercialization is not yet operational, the achievement of Year 1 tend towards the approach of SDGs (ratification in 1995) is mainly expressed in Chapter 4 of the NBSAP (Protecting and managing the natural resource base of economic and social development). The implementation of this convention is multifaceted, encompassing several sectoral programs in the Poverty Reduction Strategy Document. So, valorizing *Melaleuca* for “green” charcoal mainly contributes to promoting lucrative activities without compromising the integrity of ecosystems, equitable sharing of benefits arising from utilization of natural resources, and promoting equal rights between women and men.

5. Project support to poverty reduction

With GNI per capita 490USA, Madagascar is one of the poorest countries in the world (<https://www.worlddata.info/developing-countries.php>). However, the country is listed among the biodiversity hotspots (CEPF, 2014). For several decades, the country has suffered greatly from the effects of severe climatic events such as cyclones, floods and drought, which have become increasingly severe in recent years. The impact of these events is to accentuate poverty, especially at rural areas, causing impoverished people to resort to the plunder of natural resources.

At Pointe à Larrée, these effects are exacerbated by biological invasions, including the spread of the pyrophilic species *Melaleuca quinquernervia*. An effective solution to solve this problem is to be pragmatic, based on a real motivation of the impacted communities to find solutions.. With this project, the targets are local communities around the Pointe à Larrée PA. To tackle this problem, they must be fully involved and motivated to participate. In the region, charcoal production has long been practiced and, faced with the scarcity of raw materials, the proposal to use *Melaleuca* was welcomed. For this purpose, the number of beneficiary families is quite modest at 100 families with a sustained result of a 25% increase in income, yet the environmental effects are expected to be significant, allowing thousands of trees to be saved each year. To benefit more people, this project also promotes other activities allowing families to have basic needs such as food, essential products, schooling of children through compensation received from daily employment. To do this, we paid directly to the participants a fair sum of US\$2.5 per person, while the national minimum wage is less than US\$2. With an average compensation of US\$50/month/person, this will cover family expenses. If within a family there are more members participating, this figure increases two or three times depending on the number of people participating.

The real development activities to promote with this project turns around individual investment in the conversion of *Melaleuca* into charcoal. The cooperative was created in order to facilitate and make profitable the individual investments of the members. According to the trial that we conducted with the charcoal producers, an usual charcoal oven produces around 20 bags for a period of one week, or 80 bags/month. With the current lower price at local market of US\$2 a bag (reference price for a bag of charcoal made from native tree species), a family could earn on average US\$160/month.

To release this potential for *Melaleuca* charcoal , during Year 1, opportunities have been provided to the cooperative allowing them to overcome obstacles, among others:

- Training on the management of the structure
- Formalization of the structure to allow them to sell the products according to the regulations
- Equipment necessary to facilitate sales operations (warehouse for storing produce and a boat for transport).

In the second year, we also propose to reinforce capacity and capability of the cooperative by providing following items:

- Mini kubota (small tractor) for transporting produce by land
- Start-up fund so that cooperative members can start their business activity.
- Strengthen technical skills through different training topics.

We believe that these elements are vital for a sustainable development approach based on investments individually and collectively. It is clear that after several months of sensitization, the target beneficiaries are ready to invest in the project and we expect that the number of beneficiaries will increase gradually throughout the project.

6. Gender equality and social inclusion

We have taken gender into account in the design and implementation of all activities. With reference to the table below, the proportion of women and men involved varies, depending on the activity. Overall, the participation of women was 34.84% and that of men was 65.80%. We realize that the participation of women is still low and further efforts remain to promote gender equality. It is important to point out here that single women are among the vulnerable group in the area, so they have been prioritized for activities that suit them. Also, irrespective of productivity, women have received the same compensation as men, i.e. a daily payment of \$US2.5/day/person

Table2 : Proportion of women and men involved in activity implementation

Activity	Number of participants	Women	Men
Regional launch workshop	32	5	28
Local launch meetings	159	82	77
Community control	205	79	126
Quarterly transect monitoring	88	32	56
Tree planting	20	10	10
Removing Melaleuca	82	40	42
Cooperative membership	70	9	61
Training green charcoal production technique	56	5	51
Training on structure and functioning of the cooperative	32	3	29
Entrepreneurial culture	28	4	28
Total	772	269 (34,84%)	508 (65,80%)

Please quantify the proportion of women on the Project Board ¹ .	18% (4/22) women and 82% (18/22) men. For this project, COS is the steering
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¹ A Project Board has overall authority for the project, is accountable for its success or failure, and supports the senior project manager to successfully deliver the project.

	committee of the Pointe à Larrée PA, composed of 22 members
Please quantify the proportion of project partners that are led by women. or which have a senior leadership team consisting of at least 50% women ² .	25% women (1 out 4)

7. Monitoring and evaluation

During Year1, bi-monthly meetings were scheduled to monitor the progress of activities and especially to seek synergies and resolve blockages. Three meetings were held with the participation of the four partners (29 November 2022, 06 January 2023 and 03 March 202). This provision was agreed and approved in the Memorandum of Understanding in order to adjust the project by fine-tuning measures to alleviate blockages noted by the partners. So far, two main blockages were treated:

- Initially, low participation of community members in the project: local sensitization had to be repeated in all concerned villages. As a result, there has been an increase in number of members joining the Melaleuca charcoal project.
- Delay in the start of green charcoal production: this is due to the delay in conducting training and the difficulty of finding an expert in best practice for charcoal production. The problem was discussed within the team and following this, ultimately a national expert was found and engaged. Indeed, towards the end of the year1, the training was carried out allowing us to start the production of Melaleuca charcoal at the beginning of the year2.

In addition, several activities were monitored: a) quarterly monitoring of illegal logging; b) monitoring of infractions in PA and in buffer zone; c) monitoring of removal of Melaleuca.

8. Lessons learnt

As mentioned, the uniqueness of this project is that it is innovative. The target communities also know the difficulty around producing charcoal from Melaleuca (time consuming) and no one would dare to pursue such a venture without support: impoverished people cannot take risks!. This caused a delay in starting the project because engagement in this endeavour was initially low. Therefore, we strongly recommend for such an innovative project, project managers should allocate appropriate time for sensitization which was not adequately foreseen for this project.

We are happy to see the strength of this project, working with different government's technical partners and they are motivated. Their voices are respected as State Representatives, and community members generally have trust on them. In addition, they all have strong technical capacities towards their respective responsibilities and to guide the project regarding the laws in force. Although our partners are multidisciplinary (four different fields), there is always a space for exchanges oriented towards the common objective. The strength of the project also lies in the fact that all actions or decisions taken within the context of the clauses of MoU or to regulations. In terms of collaboration, so far we have never had a case where there is a misunderstanding between partners. For this reason, although quite early, we would recommend those seeking to implement similar projects should:

- prioritize good internal communication within the team as well as with other project stakeholders to achieve mutual understanding

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.

- explicitly state the tasks and responsibilities of each partner in a written framework and allocate adequate resources for implementation
- have patience and a strategy of persuasion to introduce new ideas to rural people.

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

Not applicable for this project

10. Risk Management

So far no emerging risk has been recorded. All risk parameters described with previous risk register are kept.

11. Other comments on progress not covered elsewhere

For this project, several partners collaborate for its implementation. Also, if the competence does not exist within the team, we must recruit consultants. In the interests of good social conduct, ethics and respect Darwin Initiative's principles, from time to time, these principles are explained to partners as well as to consultants so that everyone complies with them. In anticipation, at end of the Year 1, we submitted to each Chief Fokontany (the lowest level of government) at village level, a copy book where anyone can record grievances, the contents of which are in the table below. Data will be collected every three months and measures will be taken to resolve any issues.

Table3 : Proposed information to be collected on grievance mechanism

Date	Grievance	Organisation/individual	Measures taken	Current Status (solved, on-going/not solved)

12. Sustainability and legacy

This project contributes to human development by two ways:

- At the level of administrators and managers, our partnership between the four public and private institutions provides a model of an effective consortium. It offers everyone a model of how to synergize the knowledge and experiences of different disciplines to achieve an objective. For example, two public, environmental and commercial institutions have combined their expertise to support the sustained impact: *“the ecosystems of the Pointe-à-Larrée PA are restored to a more natural condition while local people obtain needed fuel-wood and access improved livelihoods from “green” charcoal”*. The same case for public-private cooperation between government institutions, MBG and LOVASOA.
- At beneficiaries level: experiences on personnel investment grouped in a cooperative model are rare in the region. The farmers appreciate not only that the green charcoal product is new, but also that the structure with which they operate is innovative. This project allows all members to discover a new model of personal investment while enhancing a collective structure. The project also demonstrates to farmers the strong link between biodiversity conservation and income generation without compromising social cohesion.

We want that achievements of this project to be, on the one hand, extended to a larger scale, at regional and then national level, and, on the other hand, to be sustainable, even beyond the end of the project: the cooperative must be set up to be able to continue operations . To do so, it is vital that the members master and live the good practices of individual investment within a collective structure.. To do this, we have already provided training on entrepreneurial culture, and other training topics will be provided to members so that they acquire a solid base. From the first

year until the end of the project, all the technical partners with the consultants have duties to accompany this structure so they will be confident themselves at the end of the project and beyond the project, that the operations will continue sustainably.

13. Darwin Initiative identity

The project was started with a regional launch with the assistance of all lead of administrative personalities (Governor, Prefect, Deputy, Head of District, Mayors, technical services concerned) then published on facebook. Then, a local launch was carried out in all the intervention villages. In all stages, the speakers did not cease to make known to the public Darwin Initiative as donor and UK's Government.

Darwin Initiative logo stickers were affixed to all materials acquired through this project (Evidence Darwin Initiative identity, Figure 23). At the local level, all attendance records and payment slips contain the Darwin project logo (e.g Evidence Activity 1.1 Figure 3). All publications related to the project always mention Darwin Initiative 'e.g (Evidence Activity 4.1). Once again, it must be recognized that the number of people targeted is still limited and much remains to be done in terms of visibility of the project. To do this, a communication catch-up program will be prioritized in Year 2, then an inauguration of the infrastructures and materials provided by Darwin Initiative will be scheduled within a few months with the government authorities.

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: Vola Raharijaona, email [REDACTED]
Has the focal point attended any formal training in the last 12 months?	Yes As part of a collaboration with RBG Kew (funded by BLF) two formal training sessions were held with their Safeguarding Officer (Ella Remes): one in October 2022 and one in January 2023. In addition monthly meetings to exchange safeguarding issues were also organised.
What proportion (and number) of project staff have received formal training on Safeguarding?	Past: 100% [3] Planned: 100% [3]
Has there been any lessons learnt or challenges on Safeguarding in the past 12 months? Please ensure no sensitive data is included within responses. As reported below, MBG-Madagascar is developing a tailor-made Safeguarding policy and, as part of this process, there have been a number of meetings for staff consultation. These meetings have revealed several areas of conflict between typical "Western" safeguarding provisions and Malagasy cultural norms. For example, in rural Madagascar frequently young people aged 16 live as adults but, under typical safeguarding provisions, such people would be considered as children and consequently should not be hired as day labourers. MBG's Malagasy staff consider that such restrictions on employment would have a negative impact on the lives of these vulnerable people.	
Does the project have any developments or activities planned around Safeguarding in the coming 12 months? If so please specify. Yes, Much of MBG's work in Madagascar requires interactions with rural Malagasy, and, because of the power imbalance implicit in this relationship most of our safeguarding concerns are related to this interaction. To date safeguarding considerations and complaints procedures for the staff of MBG's Madagascar program have been provided by the Staff Manual, but this Manual was	

developed for the institutional context of a US organisation functioning in the US. As such, for the Madagascar context, the MBG's safeguarding framework is not adequately adapted. However, MBG-Madagascar is pleased to report that a consultant has just been hired to develop a tailor-made safe guarding policy and implementation framework specially for this part of the organisation.

15. Project expenditure

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

Project spend (indicative) since last Annual Report	2022/23 Grant (£)	2022/23 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items (see below)				
Monitoring & Evaluation (M&E)				
Others (see below)				
TOTAL	57 931	61 626	+6	

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

	Matched funding secured to date	Total matched funding expected by end of project
Matched funding leveraged by the partners to deliver the project.		
Total additional finance mobilised by new activities		

building on evidence. best practices and project (£)		
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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
<p>Impact</p> <p>The ecosystems of the Pointe-à-Larrée PA are restored to a more natural condition while local people obtain needed fuel-wood and access improved livelihoods from “green” charcoal.</p>		<p>Steps towards natural regeneration of forest and production of green of Melaleuca</p>	
<p>Outcome A self-sustaining approach to the use of IAS is launched that demonstrably reduces the threat of Melaleuca at Pointe à Larrée PA while providing fuel-wood and income for local people.</p>	<p>O.1 By YR 1 <i>Melaleuca</i> eliminated over 10 hectare of the PA; by YR2 over 20 hectare; and by YR3 over 30 hectare.</p>	<p>Half way of achieving targeted outcome of year1</p>	<p>To reinforce research to develop annual exploitation plans, map priority zones and removal of Melaleuca within PA</p>
	<p>O.2 By YR3 the growth of native trees in restoration zones is at least 10% greater than in control areas where large <i>Melaleuca</i> stems have not been eliminated.</p>	<p>No change</p>	
	<p>O.3 By YR3, with easy access to Melaleuca charcoal for local people, the number of infractions within the PA for exploiting native trees for charcoal has fallen by 50% compared to T0</p>	<p>Towards to achievement (67% of decrease compared to baseline)</p>	<p>To continue daily patrols by Rangers and community members</p>
	<p>O.4 Income from charcoal exploitation increased by 25% for 30 charcoal makers in Y1, 60 charcoal makers in Y2 and 100 in Y3 compared to zero as baseline</p>	<p>No change</p>	<p>To prioritise charcoal production and sale at the beginning of Year2</p>
	<p>O5. Consumption of Melaleuca charcoal by residents in two major conurbations close to PA (Soanierana Ivongo and Sainte Marie) increased from 0% in T0, to</p>	<p>No change</p>	<p>Accelerate availability of green charcoal for consumers</p>

	10% in Y1, to 20% in Y2 and 30% in Y3 compared to charcoal of native species		
Output 1. <i>Melaleuca</i> eliminated from high priority restoration zones within the PA thereby enhancing natural regeneration	1.1 By YR1 study published identifying high priority zones for restoration through the elimination of <i>Melaleuca</i>	Achievement towards half way of completion (section 3, Activity1.3)	
	1.2 By YR 1 adult stems of <i>Melaleuca</i> (stem dbh >5cm) eliminated over 10 hectare; by YR2 over 20 hectare and by YR3 over 30 hectare.	Achievement towards half way of objective of year1 (section 3, Activity1.3)	
	1.3 By YR1, 50, by YR2 100 and by YR3 150 women involved in removal of <i>Melaleuca</i>	Almost achieved objective of year1 (section 3, Activity 1.9)	
Activity 1.1 1.1. Launch of project with full range of local stakeholders including: Regional launch, village meetings around PaL; radio broadcasts; courtesy visits with representatives of local government and decentralised technical services. Listen to feedback and address concerns.		Completed	
Activity 1.2. Work with local government and decentralised technical services to provide a legal framework for this initiative		Completed	
Activity 1.3 Work with Regional Direction of Environment and Sustainable Development (RDES) to conduct research to develop annual prospections and developing exploitation plans and contract and specification clauses, map priority zones with PA for the elimination of <i>Melaleuca</i> (= restoration zones)		Result on track	To be continued in year2
Activity 1.4. Research Manager (RM) and RDES direct monthly members of the “green charcoal cooperative” (GCC) to the restoration zones and ensures exploitation protocols are respected.		Result delayed	To be cached up in year2
Activity 1.5 Rangers ensure daily patrols to make sure none of the charcoal burners cut native species.		Result on track	To be continued in year2
Activity 1.6 RDES supports Rangers in law enforcement and control in the case of infractions		Result on track	To be continued in year2
Activity 1.7 Federation Lovasoa (FL) organises, mobilises and plans intervention of community members for each Association COBA, removing seedlings and sapling of <i>Melaleuca</i> , tree planting.		Result on track	To be continued in year2
Activity 1.8 Head Forest Policing (HFP) from Missouri Botanical Garden and FL direct three monthly participatory monitoring patrols to assess the cutting rates of native species within the PA		Result on track	To be continued in year2

Activity 1.9 RM directs female members of the GCC in work to remove young plants of <i>Melaleuca</i> from restoration zones and pays them fair compensation for their work.		Result on track	To be continued in year2
Activity 1.10 Assistant Project Manager (APM), RDESD conduct three-monthly monitoring for compliance with the clauses in the specifications of <i>Melaleuca</i> exploitation contracts.		Result delayed	To be cached up in year2
Output 2. <i>Melaleuca</i> charcoal produced preferentially by local people and accesses lucrative markets with livelihood benefits for locals	2.1. By YR1 protocol demonstrated in “real world” conditions that enables charcoal to be produced from <i>Melaleuca</i> with no more than 15% loss of efficiency compared to charcoal produced from native trees (some loss of efficiency must be expected and this will be compensated by greater sale’s price)	Completed (section 3.2, output2 Indicator 2.1)	
	2.2 In YR1, YR2 and YR3 respectively, 30, 60 and 100 charcoal producers obtained 25% increase in household income from charcoal (currently zero <i>Melaleuca</i> charcoal as baseline)	No achievement towards output	
Activity 2.1. Study trip by PM and President of GCC to Indonesia to identify best practice for the production of charcoal from <i>Melaleuca</i>		Result delayed	To be cached up in year2
Activity 2.2. Purchase tools to enable efficient conversion of <i>Melaleuca</i> into charcoal		Activity changed according to Change request	Activity postponed in year2
2.3. PM conducts training workshops for members of GCC in best practice for the conversion of <i>Melaleuca</i> into charcoal.		Result on track	To be completed in year2
2.4. PM and Development Manager (DM) coaches the charcoal producers and GCC in best practice for two first months		Result delayed	To be cached up in year2
Output 3. <i>Melaleuca</i> charcoal appreciated by urban populations and product sale strategy supported sustainably	3.1 Permits obtained to provide a legal context for the project to exploit and sell charcoal from <i>Melaleuca</i> – including definition of mechanism to ensure that the charcoal being sold is really from <i>Melaleuca</i> .	Towards achieving output3 (section 3.2, output3, Indicator 3.1)	
	3.2 Annually, 100% of charcoal produced by charcoal producers purchased by Cooperative and delivered to sale’s point directly accessible to consumers	No change	
	3.3. By Y1, two sale’s points installed and functional in Soanierana Ivongo and Sainte Marie	No change	

	3.4. Volume of charcoal sold by Cooperative of Melaleuca charcoal producers increases annually from zero at T0 to 20 tons by Y1, 40 tons by Y2 and 60 tons by Y3.	No change	
	3.5. Y2, a business plan and a manual procedure elaborated showing the overall strategy of the cooperative for the sustainability investment including the extension of investment areas	No change	
	3.6. From Y 1 to Y3, at least 10 Leaders of the cooperative trained on at least six themes relating to the management and governance of the cooperative	Towards achieving output3 (section 3.2, output3, Indicator 3.6)	
3.1 Regional Direction of Industry, Trade and Consumption (RDITC) conducts diagnostic to identify strength, weakness, threat and opportunity		Completed	
3.2. A small team of recent graduates in business (two graduates) and in accounting (two graduates) develop marketing strategy and business plan of the cooperative with assistance of RDITC		Result delayed	Activity postponed to year2 according Change Request
3.3 RDITC and a Consultant businessman coach graduates on developing marketing strategy and business plan		Result delayed	Activity postponed to year2 according Change Request
3.4 Workshop organised for all stakeholders to validate business plan, manual of procedure and internal rule of the cooperative		Result delayed	To be completed in year2
3.5 RDITC and Consultants conduct training the Leaders of the Cooperative on at least six topics.		Result on track	To be continued in year2
3.6 GCC organises stocks of charcoal on site for transport, purchase charcoal from producers as start-up funds		Result delayed	To be started in year2
3.7 GCC rents two sale's point (in Soanierana Ivongo and in Sainte Marie).		Result delayed	To be started in year2
3.8 GCC hires two sale managers in Sainte Marie and in Soaniarana Ivongo and one skipper		Result delayed	To be started in year2
3.9 GCC builds one warehouse at Pointe à Larrée for facilitating the marine route transportation from Pointe à Larrée to sale's points and extend existing warehouse close to national road.		Result on track	To be completed in year2

3.10 GCC purchases a motorboat and equipment for provision of supply from Pointe à Larrée to sale's points		Completed	
3.11 Monthly, RDESD validates that charcoal for sale originates entirely from <i>Melaleuca</i> and conducts control of stock in the warehouse		Result delayed	To be started in year2
3.12 RDITC delivers agreement of sale		Result delayed	To be started in year2
3.13 GCC and DM implement marketing strategy for sale		Result delayed	To be started in year2
3.14 DM conduct surveys for assessing the needs of consumers (risk mitigation activity).		Result delayed	To be started in year2
3.15 DM coaches GCC for implantation of business plan		Result delayed	To be started in year2
3.16 RDITC, following each training session, conducts monthly technical monitoring for the two first months, afterwards three-monthly monitoring to continue coaching		Result delayed	To be started in year2
3.17 All partners and local authorities conduct half-yearly participatory monitoring of the project progress		Result delayed	To be started in year2
3.18 PM develops collaboration with businesses for shipment and sale		Result delayed	To be started in year2
Output 4. Promising model of a new relationship with IAS demonstrated to land managers (including PA managers) and public awareness on IAS (threats and opportunities) increased	4.1. In YR1, YR2, and YR3 interested parties informed of the project and its progress by means of one dedicated website and bi-monthly social media posts.	No change	
	4.2. In YR3 at least 10 land managers (including Protected Area Managers) visit Pointe-à-Larrée to evaluate project.	No change	
	4.3. In YR3 one article describing and objectively evaluating the project will be published in a peer reviewed journal	No change	
	4.4. From Y2 to Y3, annually 20,000 people informed or sensitized of project results through four annual participations in local, regional, national celebration events, 24 annual radio broadcasts	No change	
4.1. Consultant webmaster creates website for this project that will act both as a focal point for communicating progress with interested parties (including results of studies) and also as a method of attracting buyers		Result delayed	To be started in year2

4.2. PM provides bimonthly updates of Project' progress on social media	Result delayed	To be started in year2
4.3 PM and DM organises monthly broadcasts on local radio to explain about the threats and opportunities of IAS and also to provide more detail about this project	Result delayed	To be started in year2
4.4 FL organises annually a festival of biodiversity including exhibition of charcoal of Melaleuca and some documents for sensitization	Result on track	To be continued o year2
4.5. PM, APM and partners attend regional and national events (e.g. World Environment Day, World Women's Day, economic fairs) to communicate about the project	Result delayed	To be started in year2
4.6. Workshop for interested parties at the end of the project to share information on methods, inputs, outputs, overall results, and issues arising.	Result on track	Planned in year3
4.7. Representatives of ten of the institutions attending the workshop invited to make a site visit so that they can properly evaluated the project and consider whether this approach can be applied in some form at the sites where they work.	Result on track	Planned in year3
4.8. Peer-reviewed article published describing the project approach, describing its results and evaluating conditions for wider application.	Result on track	Planned in year3

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

Project Summary	SMART Indicators	Means of Verification	Important Assumptions
Impact: The ecosystems of the Pointe-à-Larrée PA are restored to a more natural condition while local people obtain needed fuel-wood and access improved livelihoods from “green” charcoal.			
<p>Outcome: A self-sustaining approach to the use of IAS is launched that demonstrably reduces the threat of <i>Melaleuca</i> at Pointe à Larrée PA while providing fuel-wood and income for local people.</p>	<p>O.1 By YR 1 <i>Melaleuca</i> eliminated over 10 hectare of the PA; by YR2 over 20 hectare; and by YR3 over 30 hectare.</p> <p>O.2 By YR3 the growth of native trees in restoration zones is at least 10% greater than in control areas where large <i>Melaleuca</i> stems have not been eliminated.</p> <p>O.3 By YR3, with easy access to <i>Melaleuca</i> charcoal for local people, the number of infractions within the PA for exploiting native trees for charcoal has fallen by 50% compared to T0</p> <p>O.4 Income from charcoal exploitation increased by 25% for 30 charcoal makers in Y1, 60 charcoal makers in Y2 and 100 in Y3 compared to zero as baseline</p> <p>O5. Consumption of <i>Melaleuca</i> charcoal by residents in two major conurbations close to PA (Soanierana Ivongo and Sainte Marie) increased from 0% in T0, to 10% in Y1, to 20% in Y2 and 30% in Y3 compared to charcoal of native species</p>	<p>O.1 Annual maps showing zones where <i>Melaleuca</i> eliminated (using GPS Unit)</p> <p>O.2 Measurements of changes in stem basal area of native trees annually in zones where <i>Melaleuca</i> controlled and control zones.</p> <p>O.3. Annual analysis of infractions within PA for production of charcoal from native trees recorded in ranger log books</p> <p>O.4 Survey using household notebooks recording the daily income from production and sale of <i>Melaleuca</i> charcoal from T0 to T3</p> <p>O.5. Annual surveys of sales from a representative sample of charcoal sellers in Soanierana Ivongo and Saint Marie.</p>	<p>-Focused and on-going exploitation of <i>Melaleuca</i> for charcoal followed by hand removal of young plants (unsuitable for charcoal production) will significantly reduce the abundance of this species with consequent rewetting of marsh habitats and increased growth of native swamp trees hitherto suppressed by dense stands of this species.</p> <p>-While it is more time consuming to make charcoal from <i>Melaleuca</i> (because it is necessary to remove a thick layer of spongy bark) new bark compared to native trees this obstacle can be largely mitigated by providing access to bark-removing equipment and facilitating access to more lucrative markets for “green charcoal”</p>

<p>Output 1. <i>Melaleuca</i> eliminated from high priority restoration zones within the PA thereby enhancing natural regeneration</p>	<p>1.1 By YR1 study published identifying high priority zones for restoration through the elimination of <i>Melaleuca</i></p> <p>1.2 By YR 1 adult stems of <i>Melaleuca</i> (stem dbh >5cm) eliminated over 10 hectare; by YR2 over 20 hectare and by YR3 over 30 hectare.</p> <p>1.3 By YR1, 50, by YR2 100 and by YR3 150 women involved in removal of <i>Melaleuca</i></p>	<p>1.1 Article published on-line showing map of zones within PA where: a) large stems of <i>Melaleuca</i> are abundant, and b) that were historically marshes or swamps.</p> <p>1.2 Analysis of counts of number of individuals of <i>Melaleuca</i> per unit area in restoration zones and mapping of zones where the adult plant has been effectively eliminated.</p> <p>1.3 Quarterly compilation and analysis of attendance records</p>	<p>-It is possible to eliminate this species from defined areas of the PA by a combination of exploitation for charcoal followed by repeated cycles of compensated hand removal of young plants. Repeated removal of seedlings will be necessary because this species germinates freely from a soil seed bank.</p> <p>-Single women are considered a vulnerable group, unemployed and if their security is assured in the forest, they can actively participate in the implementation of the project.</p>
<p>Output 2. <i>Melaleuca</i> charcoal produced preferentially by local people and accesses lucrative markets with livelihood benefits for locals</p>	<p>2.1. By YR1 protocol demonstrated in “real world” conditions that enables charcoal to be produced from <i>Melaleuca</i> with no more than 15% loss of efficiency compared to charcoal produced from native trees (some loss of efficiency must be expected and this will be compensated by greater sale’s price)</p> <p>2.2 In YR1, YR2 and YR3 respectively, 30, 60 and 100 charcoal producers obtained 25% increase in household income from charcoal (currently zero <i>Melaleuca</i> charcoal as baseline)</p>	<p>2.1 Published online report of research to quantify effort (intensity of labour multiplied by time) invested to produce one unit of energy from <i>Melaleuca</i> charcoal compared to the equivalent from charcoal produced from native trees</p> <p>2.2. Annual analysis of household records of participating charcoal producers (i.e. within the Cooperative) showing volume of charcoal produced and income received by charcoal producers</p>	<p>-Appropriate sustainable technologies can be identified elsewhere in the World and introduced to Madagascar to effectively process <i>Melaleuca</i> trees despite its very thick spongy bark.</p> <p>-<i>Melaleuca</i> charcoal performs well in traditional and improved charcoal stoves and lucrative commercial markets can be identified and accessed for “green” charcoal by motivated business team.</p> <p>-If <i>Melaleuca</i> charcoal is lucrative as we plan it to be, <i>Melaleuca</i> within the PA may become rare and uneconomical to exploit. While this is a good result for local biodiversity but be assume that value chain associated with this activity can continue to operate by exploiting the large populations of this plant existing outside of the PA. In these zones, if seedlings are not removed, then the exploited populations will quickly regenerate.</p>

<p>Output 3. Melaleuca charcoal appreciated by urban populations and product sale strategy supported sustainably</p>	<p>3.1 Permits obtained to provide a legal context for the project to exploit and sell charcoal from <i>Melaleuca</i> – including definition of mechanism to ensure that the charcoal being sold is really from <i>Melaleuca</i>.</p> <p>3.2 Annually, 100% of charcoal produced by charcoal producers purchased by Cooperative and delivered to sale's point directly accessible to consumers</p> <p>3.3. By Y1, two sale's points installed and functional in Soanierana Ivongo and Sainte Marie</p> <p>3.4. Volume of charcoal sold by Cooperative of Melaleuca charcoal producers increases annually from zero at T0 to 20 tons by Y1, 40 tons by Y2 and 60 tons by Y3.</p> <p>3.5. Y2, a business plan and a manual procedure elaborated showing the overall strategy of the cooperative for the sustainability investment including the extension of investment areas</p> <p>3.6. From Y 1 to Y3, at least 10 Leaders of the cooperative trained on at least six themes relating to the management and governance of the cooperative</p>	<p>3.1. Documents providing legal framework and the validation mechanism for this project.</p> <p>3.2 Audits of transmission of annual purchase and sale of the cooperative</p> <p>3.3. Annual sales accounts of <i>Melaleuca</i> charcoal from the two sales points</p> <p>3.4. Audit of accounts of the cooperative</p> <p>3.5. Annual reports and minutes of workshop for validation of the documents</p> <p>3.6. Minutes of the training, and evaluation of knowledge and skills acquired by the trainees immediately after the training and 6 months later</p>	<p>While charcoal produced from certain native trees will likely be preferred by local people over Melaleuca charcoal (because they are familiar with using the former and also because has a greater energy production per unit volume), legal access to wood of native trees is now non-existent and therefore <i>Melaleuca</i> charcoal will become an acceptable alternative.</p> <p>- Poor governance and management of the cooperative could induce tension between members and compromise the sustainability of the project but such tensions can be effectively reduced by providing training cascades, and effectively applying the manual of procedure (with periodic supervision from the services concerned and the sanction measures in the case of non-compliance with internal rules)</p> <p>-The Pointe à Larrée area is a zone frequently impacted by cyclones could interrupt the supply of stocks to places of sale, a supply plan will thus be reinforced during the dry seasons to avoid product shortages during bad times.</p>
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<p>Output 4. Promising model of a new relationship with IAS demonstrated to land managers (including PA managers) and public awareness on IAS (threats and opportunities) increased</p>	<p>4.1. In YR1, YR2, and YR3 interested parties informed of the project and its progress by means of one dedicated website and bi-monthly social media posts.</p> <p>4.2. In YR3 at least 10 land managers (including Protected Area Managers) visit Pointe-à-Larrée to evaluate project.</p> <p>4.3. In YR3 one article describing and objectively evaluating the project will be published in a peer reviewed journal</p> <p>4.4. From Y2 to Y3, annually 20,000 people informed or sensitized of project results through four annual participations in local, regional, national celebration events, 24 annual radio broadcasts</p>	<p>4.1. Availability of webpage and count of number of social media posts.</p> <p>4.2. Written evaluation of invited land managers to project including evaluation of the potential to complete a similar endeavour in their zone of intervention.</p> <p>4.3. Publication of peer-reviewed article</p> <p>4.4 Estimation of the number of people sensitized for each event organised or attended, and monthly estimation of people listening to the local radio according to the coverage area</p>	<p>-High rates of illiteracy and conservatism (e.g use of charcoal from native species) may slow down behavioral change and diminish popular appreciation of “green” charcoal but the importance of these factors will be diminished through a robust program of popular communication using simple key messages carefully crafted for each target group.</p>
<p>1.1. Launch of project with full range of local stakeholders including: Regional launch, village meetings around PaL; radio broadcasts; courtesy visits with representatives of local government and decentralised technical services. Listen to feedback and address concerns.</p> <p>1.2. Work with local government and decentralised technical services to provide a legal framework for this initiative</p> <p>1.3 Work with Regional Direction of Environment and Sustainable Development (RDESD) to conduct research to develop annual prospections and developing exploitation plans and contract and specification clauses, map priority zones with PA for the elimination of Melaleuca (= restoration zones)</p> <p>1.4. Research Manager (RM) and RDESD direct monthly members of the “green charcoal cooperative” (GCC) to the restoration zones and ensures exploitation protocols are respected.</p> <p>1.5 Rangers ensure daily patrols to make sure none of the charcoal burners cut native species.</p> <p>1.6 RDESD supports Rangers in law enforcement and control in the case of infractions</p> <p>1.7 Federation Lovasoa (FL) organises, mobilises and plans intervention of community members for each Association COBA, removing seedlings and sapling of Melaleuca, tree planting.</p>			

- 1.8 Head Forest Policing (HFP) from Missouri Botanical Garden and FL direct three monthly participatory monitoring patrols to assess the cutting rates of native species within the PA
- 1.9 RM directs female members of the GCC in work to remove young plants of *Melaleuca* from restoration zones and pays them fair compensation for their work.
- 1.10 Assistant Project Manager (APM), RDESD conduct three-monthly monitoring for compliance with the clauses in the specifications of *Melaleuca* exploitation contracts.
- 2.1. Study trip by PM and President of GCC to Indonesia to identify best practice for the production of charcoal from *Melaleuca*
- 2.2. Purchase tools to enable efficient conversion of *Melaleuca* into charcoal
- 2.3. PM conducts training workshops for members of GCC in best practice for the conversion of *Melaleuca* into charcoal.
- 2.4. PM and Development Manager (DM) coaches the charcoal producers and GCC in best practice for two first months
- 3.1 Regional Direction of Industry, Trade and Consumption (RDITC) conducts diagnostic to identify strength, weakness, threat and opportunity
- 3.2. A small team of recent graduates in business (two graduates) and in accounting (two graduates) develop marketing strategy and business plan of the cooperative with assistance of RDITC
- 3.3 RDITC and a Consultant businessman coach graduates on developing marketing strategy and business plan
- 3.4 Workshop organised for all stakeholders to validate business plan, manual of procedure and internal rule of the cooperative
- 3.5 RDITC and Consultants conduct training the Leaders of the Cooperative on at least six topics.
- 3.6 GCC organises stocks of charcoal on site for transport, purchase charcoal from producers as start-up funds
- 3.7 GCC rents two sale's point (in Soanierana Ivongo and in Sainte Marie).
- 3.8 GCC hires two sale managers in Sainte Marie and in Soanierana Ivongo and one skipper
- 3.9 GCC builds one warehouse at Pointe à Larrée for facilitating the marine route transportation from Pointe à Larrée to sale's points and extend existing warehouse close to national road.
- 3.10 GCC purchases a motorboat and equipment for provision of supply from Pointe à Larrée to sale's points
- 3.11 Monthly, RDESD validates that charcoal for sale originates entirely from *Melaleuca* and conducts control of stock in the warehouse
- 3.12 RDITC delivers agreement of sale
- 3.13 GCC and DM implement marketing strategy for sale
- 3.14 DM conduct surveys for assessing the needs of consumers (risk mitigation activity).

- 3.15 DM coaches GCC for implantation of business plan
- 3.16 RDITC, following each training session, conducts monthly technical monitoring for the two first months, afterwards three-monthly monitoring to continue coaching
- 3.17 All partners and local authorities conduct half-yearly participatory monitoring of the project progress
- 3.18 PM develops collaboration with businesses for shipment and sale
- 4.1. Consultant webmaster creates website for this project that will act both as a focal point for communicating progress with interested parties (including results of studies) and also as a method of attracting buyers
- 4.2. PM provides bimonthly updates of Project' progress on social media
- 4.3 PM and DM organises monthly broadcasts on local radio to explain about the threats and opportunities of IAS and also to provide more detail about this project
- 4.4 FL organises annually a festival of biodiversity including exhibition of charcoal of Melaleuca and some documents for sensitization
- 4.5. PM, APM and partners attend regional and national events (e.g. World Environment Day, World Women's Day, economic fairs) to communicate about the project
- 4.6. Workshop for interested parties at the end of the project to share information on methods, inputs, outputs, overall results, and issues arising.
- 4.7. Representatives of ten of the institutions attending the workshop invited to make a site visit so that they can properly evaluated the project and consider whether this approach can be applied in some form at the sites where they work.
- 4.8. Peer-reviewed article published describing the project approach, describing its results and evaluating conditions for wider application.

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	Number of people from key national and local stakeholders completing structured and relevant training	Number of local people completing training in cooperative structure and functioning, in entrepreneurial culture and in green charcoal burning techniques	People Proportion	Men/women	51/5			51/5	60/10
DI-A03	Number of local/national organisations with improved capability and capacity as a result of project.	Number of cooperative with improved capability and capacity as a result of project	Number of organisations	Organisation type	1			1	1
DI-A06	Number of people with improved access to services or infrastructure for improved well-being	Number of people with improved access to warehouse for storage of green charcoal product, boat for transporting green charcoal products	People	Men/women	61/9			61/9	80/20
DI-A07	Number of government institutions/departments with enhanced awareness and understanding of biodiversity and associated poverty issues	Number of technical services benefiting cross-training and understanding of biodiversity and associated poverty reduction	Government institutions	Govt. Organisation Type	2			2	2
DI-B01	Number of new/improved habitat management plans available and endorsed	Number of ecosystems having research plan for removal of Melaleuca and for ecological restoration post-control endorsed by government service	Number	Ecosystem	2			2	2
DI-B02	Number of new/improved species management plans available and endorsed	Number of invasive species having management plan for control	Number	Typology of species management plan	1			1	1

DI-B04	Number of new/improved sustainable livelihoods/ poverty reduction management plans available and endorsed	Number of sector to be developed available and endorsed	Number	Typology of sustainable livelihoods/ poverty reduction management plans.	1			1	1
DI-B10	Number of individuals / households reporting an adoption of livelihood improvement practices as a result of project activities	Number of people gaining extra income from day labour from removal of Melaleuca	People	Men/women	42/40			42/40	75/75
DI-B11	Area identified as important for biodiversity	Area where pressure from illegal charcoal burning reduced in Protected area and buffer zone by community daily patrol	Area (hectare)	Habitat	3000			3000	3000
DI-C12	Social Media presence	Number of project-themed posts	Number	None	1			1	20

Checklist for submission

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