



seed **madagascar**
sustainable environment, education & development



End of Phase I Report for

PROJECT MAHAMPHY

Improving and sustaining livelihoods for traditional female reed weavers through targeted capacity development and research

May 2022

Summary

Context

Madagascar is globally renowned for its rich biodiversity, yet it is one of the most impoverished nations in the world, with 77% of the population living in extreme poverty.¹ Livelihood opportunities for women are limited; those from the Anosy region typically work with *mahampy* (*Lepironia mucronata*), a local reed, to weave traditional products to provide a small but vital income for their households. However, weaving is labour-intensive, with products taking multiple days to make and selling for comparatively little.

Traditionally, weavers sell their products independently and thus, with little negotiation power, are vulnerable to pricing set by buyers in a supplier-rich market. This imbalance is exacerbated by weavers' need to convert products into income in order to contribute to their families' daily needs, including food, clothing, medicine, and housing.

The source of raw material, the *mahampy* reedbeds, are vital habitats for a variety of species and provide many ecosystem services including water filtration and carbon sequestration.² Despite their environmental and cultural importance, the *mahampy* reedbeds are severely understudied.³ Fire, land degradation, and an ever-growing population increase pressure on the reedbeds, threatening both *mahampy* weaving as a livelihood and the existence of a variety of threatened species and ecosystems.

Project Overview

SEED Madagascar (SEED) has helped to address these issues in pursuance of improving the livelihoods of rural women in Madagascar whilst ensuring that the reedbeds upon which they rely are healthy, resilient, and productive. The Mahampy Weavers' Cooperative was established to increase the weavers' supplier power, and the Mahampy Weavers' Workshop to create a space for sales to local buyers and tourists. Throughout the project, training sessions were conducted to build the capacity of weavers and the Cooperative to increase their income. Regular wetland monitoring, conducted by both SEED's Conservation Research Programme (SCRIP) and the weavers themselves, have contributed to gaining a better understanding of the *mahampy* reedbeds.

Summary of End of Phase I Report

This report is being produced at the 36-month point of Project Mahampy, which marks the end of Phase I. The report assesses the project's progress (April 2019 – March 2022) and identifies lessons and opportunities that have informed the development of Project Mahampy: Phase II.

The completion of Objective One informed SEED's approach to achieving the remaining objectives, providing SEED with an increased understanding of existing *mahampy* markets, the cultural and social context of *mahampy* weaving, and biophysical wetland characteristics and reedbed properties. The establishment of the Mahampy Weavers' Cooperative and the construction of the Mahampy Weavers' Workshop proved an effective support mechanism for weavers, providing greater opportunity for weavers to sell *mahampy* products and improve their weaving skills. The outbreak of COVID-19 limited the progress of activities that intended to build the weavers' capacity to capitalise on opportunities to improve income generation, with cross-visits, training sessions, and the Value-Added Product (VAP) pilot delayed. In response, SEED reallocated project funds to a menstrual hygiene management (MHM) pilot and reassessed the approach to the mat money system, adjusting activities to ensure the project effectively addressed weavers' needs during a time of heightened vulnerability and uncertainty. After COVID-19 restrictions eased, SEED facilitated training sessions to improve Workshop operations and resumed VAP activities for the Cooperative to identify products that would appeal to tourists. Throughout Phase I, SCRIP collected data on the characteristics and biological importance of the wetlands; the wetland monitoring programme was expanded to involve five weavers who researched the effect of harvesting techniques and fire on the regrowth of the *mahampy* reeds.

Project Mahampy: Phase I substantially strengthened *mahampy* weaving as a livelihood opportunity for women in Sainte Luce. Given the impact of COVID-19 on project activities, further support to the Weavers' Cooperative is required. Project Mahampy: Phase II will respond to challenges that limit the potential of *mahampy* weaving as a profitable and sustainable livelihood and build upon the successes and learnings of the previous phase.

Activities

Objective One: Establish a full understanding of the barriers and opportunities facing *mahampy* weavers through market, socio-economic, and environmental research

Commencing April 2019, SEED conducted a research and community consultation phase to gain an understanding of the barriers and opportunities that faced *mahampy* weavers in Sainte Luce. SEED conducted market research, conducting 49 interviews with traders and buyers to understand the accessibility of existing *mahampy* markets in Sainte Luce and the wider Anosy region, and the market potential of VAPs. SEED also completed a socio-economic baseline survey and conducted focus groups and interviews with weavers to gain a contextualised understanding of the cultural and social factors associated with *mahampy* weaving, documented in a socio-economic report. Remote mapping of the reedbeds and observational data collection enabled SEED to gain an understanding of the properties, health, and ecosystem services of the reeds and the wetlands, also documented in a technical wetland report (submitted with the Project Mahampy 24-month Report). Collectively, the completion of Objective One informed SEED's initial approach to achieving the remaining objectives.

Objective Two: Foster effective support mechanisms for weavers through the development of a Weavers' Cooperative

Mahampy Weavers' Cooperative

The Mahampy Weavers' Cooperative was established in December 2019. The Cooperative totals 166 weavers and is composed of five sub-Cooperatives who govern themselves through an elected committee. Collectively, members of these five sub-Cooperative committees form the Mahampy Weavers' Cooperative Committee, who, when COVID-19 restrictions permitted, met monthly throughout the project to oversee Cooperative operations. The Committee also led the development of the Cooperative's policies and procedures, which were formalised and signed by each member by project end. The Cooperative has proved to be an effective model to organise weavers, with 98% of participants at project end stating that the Cooperative was well organised and 100% stating that the Committee was good at managing the Cooperative. Identified by 98% of weavers as the three most important benefits of the Cooperative, the Cooperative has created a community of weavers, increased the weavers' sales, and enabled weavers to share skills with one another, thus increasing the capacity of weavers overall.

Mahampy Weavers' Workshop

The Mahampy Weavers' Workshop formally opened in April 2021 and was used by the Cooperative to store mahampy reeds and host training sessions during the MHM pilot. After formalising Workshop policies and procedures in December 2021, the weavers began using the Workshop to store and sell mahampy products. With 100% of weavers stating that the Workshop was a good space to sell to resellers and 96% stating that the Workshop was a good space to sell to tourists, the Workshop has been an effective means of increasing the weavers' sales capacity, addressing a need identified by the weavers' themselves. Whilst more than 74% of weavers commented positively on the functionality of the space for weaving, storing products, and meeting other members, 91% of complaints related the size of the Workshop being too small, preventing weavers from maximising the potential of the space.



Mahampy products pictured inside the Workshop

Cross-visits

Members of the Mahampy Weavers' Cooperative visited a women's embroidery Cooperative in September 2021 to gain an understanding of a cooperative's organisational structure, operations, and policies. The weavers' learning informed the development of the Cooperative's five operational departments, with the Cooperative deciding to replicate the same organisational structure of the embroidery cooperative, adapted to the context of mahampy weaving. At project end, 96% of weavers stated that the visit helped them to understand the different roles within the Cooperative.

Mat Money System

SEED revised the project's approach to the mat money system after discussions with weavers highlighted the cultural significance of, and dependence on, the system amongst Cooperative members. Whilst the system provides a short-term solution for weavers in need of immediate financial support, many vulnerable weavers risk becoming trapped in a cycle of debt, which can result in tension in the local community. Whilst weavers expressed a will to lessen their reliance on the system, the economic impact of COVID-19 on the *mahampy* market and the subsequent decline in the weavers' income meant that their involvement was unavoidable.

Deeming it no longer appropriate to eliminate the system without establishing an alternative, SEED sought to gain an updated understanding of the mat money system within the Cooperative and develop strategies to ease weavers' reliance on the system by project end. In addition to focus groups and discussions with weavers, SEED launched the Mat Money Tracker in September 2021 to record the number of weavers participating in the system throughout the year. Having improved SEED's understanding of how and why weavers were involved in the system, SEED developed an alternative loan scheme.

Objective Three: Train the weavers to capitalise on opportunities for improving income generation

Technical weaving skills, finance, and business training

Weavers participated in technical weaving, finance, and business training in 2020. Weaving skills training intended to create a uniform skill level across the Cooperative, ensuring all members are able to produce the same products, namely hats, mats and baskets. 80% of weavers stated the training sessions helped improve the quality of *mahampy* baskets and the speed in which to weave, and 78% stated that the sessions helped to improve their design.

Finance and business training sessions aimed to improve the weavers' business, marketing, and financial acumen, and included how to identify new markets, tailor products to customers, and use methods to track both personal and Cooperative finances. However, with only 16% of weavers reporting that they were able to track their spending, the Cooperative requires additional support to improve their financial management.

Value-Added Products

SEED restarted VAP-related activities after Madagascar's borders re-opened in November 2021. In March 2022, the presidents of each sub-Cooperative visited a weaving cooperative based in the regional capital, Fort Dauphin, to conduct VAP market research, learning from an experienced cooperative with the same target market. The visit enabled identification of suitable products for the Mahampy Weavers' Cooperative to sell, including *mahampy* coasters, which the presidents learnt how to weave over the course of the day. Weavers also increased their knowledge of, and ability to use, new weaving materials; natural resources which are freely available to the weavers in Sainte Luce. The visit equipped the five presidents with practical knowledge and skills to share with other members, enabling the Cooperative to begin expansion of their product range.



The presidents of the five sub-cooperatives learning how to use sisal, a new weaving material

MHM Pilot

In response to the collapse of the tourism industry due to COVID-19, project funds were partially reallocated into a MHM pilot in January 2021. Weavers were trained how to create sustainable, reusable, and low-cost menstrual hygiene products, producing at least five pads each by June 2021. MHM information sessions also addressed how menstruation can affect women's physical and mental health and how the weavers can prepare for and track their menstrual cycle. The MHM endline survey revealed that the pilot was well-received and built capacity, skills, and MHM knowledge amongst Cooperative members. This reportedly minimised the disruption of menstruation on their daily life and wellbeing, whilst empowering weavers to manage their menstruation with confidence. Further results are discussed in the MHM endline report.

Department Role Training

Starting in November 2021, Cooperative members of each department (Sales, Stock, Materials, Quality Control, and Cleaning) participated in training to improve their confidence and ability in their roles' tasks and responsibilities. The weavers were taught how to handle and track product sales, source resources and weaving materials, review the quality of products before they are sold, and ensure the Workshop itself is fit for use. 74% of weavers stated that they felt confident to carry out their role, and thus have acquired the skills to manage the Workshop. Additional training is required for members who expressed uncertainty in their roles, ensuring that the Workshop operates effectively and that the Cooperative has access to reseller and tourist sales to improve income generation.



Members of the Cooperative receiving training on their departmental roles

Objective Four: Implement sustainable management and monitoring practices to safeguard *mahampy* resources

Since project start, the focus of Objective Four has shifted. Research and preliminary analysis revealed that a continued focus on research and skills building would ensure conservation management plans are context-appropriate, evidence-based, and grounded in traditional ecological knowledge. SEED has monitored the wetlands throughout the project; however, based on feedback from industry professionals, SEED revised the research aim and methodology in late 2021. SEED has since aimed to determine what differences, if any, exist among wetlands with historical harvest rates and to establish a previously unknown ecological baseline of the *mahampy* reedbeds. In order to gather sufficient data using the revised research method, research needs to continue past the end of Project Mahampy: Phase I.

Whilst the full results of SCRP's research to date will be detailed in the End of Phase I Technical Report, SCRP plan to continue monitoring the wetlands, conducting biodiversity and vegetation assessments for an additional month and water quality assessments for an additional six months. The participatory monitoring programme is expected to continue for an additional 24 months. Upon obtaining a detailed account of Sainte Luce's wetlands and the factors that influence the health and extent of the ecosystem, research results will be shared with the wider community and inform the development of a management strategy, now intended for Project Mahampy: Phase II.



Wetland 14, one of the six wetlands monitored by SCRP, pictured in June 2021

Wetland research monitoring

The wetland monitoring programme was designed in collaboration with SCRP, who began monitoring the wetlands after the completion of a preliminary technical wetland report. SEED's research included three components, conducted across six wetland study sites: a water assessment; a vegetation assessment; and aerial surveys to capture landscape-scale disturbances, such as fire. A detailed account of SCRP's methodology and research findings will be included in the upcoming End of Phase I Technical Report.

From September 2020 to September 2021, SCRP completed seven monitoring visits to the wetlands, using longitudinal quadrats to conduct 140 floral and 143 water assessments. Research findings provided SEED with an initial understanding of floral species in the wetlands, however, due to a lack of surface water, caused by the worst drought in southern Madagascar since 1981,⁴ conclusions could not be drawn about water quality.

Following methodology revisions, SEED replaced the permanent quadrats with belt transects in December 2021,, enabling SCRP to gain a more holistic and detailed understanding of the biodiversity and environmental variables of each wetland. Using the new methodology, SCRP collected data on bird and herpetofauna species found in each wetland, in addition to water and floral assessments. Since December 2021, SCRP has conducted four bird and herpetofauna biodiversity surveys, 35 floral biodiversity surveys, and 20 water assessments in each wetland, observing 29 bird, 11 herpetofauna, and 54 floral species.

23 aerial surveys have been conducted since August 2020, to gain a landscape-level understanding of Sainte Luce's *mahampy* wetlands and to monitor how the wetlands responded to fire. Imagery is currently being analysed.

Participatory Monitoring

Identified by the weavers as a risk to the sustainability of the *mahampy* reedbeds, five weavers, one weaver from each sub-Cooperative, initiated research to assess the effects of harvesting techniques on the sustainability of the *mahampy* reedbeds. The weavers established three quadrats in three of the project's target wetlands, collecting data bi-monthly from June 2021 until November 2021, when a fire destroyed six of the weavers' nine quadrats. In response to this event, and after consultations with weavers identified fire as a key threat to the wetlands, the weavers expanded their research to assess the effects of fire on the regrowth of the *mahampy* reedbeds. In January 2022, the weavers established six new quadrats and began data collection in the two wetlands that previously burnt.

The participatory monitoring programme increased the capacity of weavers who, at project end, all reported that their numeracy skills and ability to use research equipment had improved since the programme began. In becoming the first women to partake in ecological research in Sainte Luce, the participatory monitoring programme equipped weavers with the skills and knowledge to lead on the development and implementation of a conservation management strategy that, intended for Project Mahampy: Phase II, will ensure the sustainability of *mahampy* weaving and the weavers' livelihoods.

Progress Towards Outputs

Below is a summary of project outputs that have been completed, partially completed, or are incomplete. An asterisk (*) indicates that an activity has been affected by COVID-19.

Key:












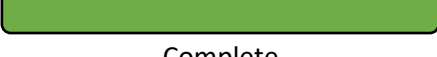
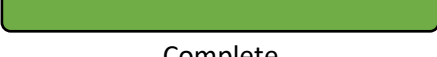

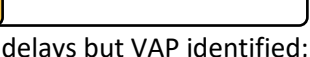



Complete






In progress but off track



Cancelled or incomplete

Output 1.1 Local and international market analysis report		Complete
Output 1.2 Socioeconomic economic report, including analysis of mat money system		Complete
Output 1.3 Technical reedbed assessment		Complete
Output 2.1 Establish a Weavers' Cooperative		Complete
Output 2.2 Facilitate elections for a Committee and establish operating procedures		Complete
Output 2.3 Build a Weavers' Workshop		Complete
Output 2.4 Gain an updated understanding of the mat money system, and develop strategies to ease weavers' reliance on loans*		Complete
Output 2.5 Conduct cross-visits to similar Cooperatives*		Complete
Output 2.6 Collaborate with neighbouring communities*		Cancelled due to COVID-19
Output 3.1 Technical weaving skills sessions		Complete
Output 3.2 Business and finance training		Complete
Output 3.3 Conduct a value-added product pilot*	 	COVID-19 delays but VAP identified; training planned for Phase II
MHM Output 3.4 Assess challenges and barriers regarding MHM in Sainte Luce		Complete
MHM Output 3.5 Conduct reusable sanitary pad sewing training		Complete
MHM Output 3.6 Deliver MHM information sessions		Complete

Output 3.7 Training in new roles	 <p>Initial training complete; further training planned for Phase II</p>
Output 4.1 Disseminate results of reedbed assessment through youth education sessions and community conservation workshops*	 <p>Reedbed assesment incomplete; dissemination planned for Phase II</p>
Output 4.2 Develop community-based wetland conservation strategy*	 <p>Monitoring in progress, reedbed assessment incomplete; strategy planned for Phase II</p>

Next Steps

Having implemented Project Mahampy: Phase I, SEED is well informed of the challenges facing the weavers in Sainte Luce, and has a unique opportunity to continue to address these. SEED is currently seeking funding for Project Mahampy: Phase II, a 36-month phase that will build on the progress made in Phase I, aiming to maximise the sales potential of the Mahampy Weavers' Workshop, improve the financial resilience of the Mahampy Weavers' Cooperative, and support weavers in the development and implementation of a strategy to sustainably manage the *mahampy* reedbeds.

To increase the number of sales through the Mahampy Weavers' Workshop, SEED will build an extension to the current building to enable weavers to utilise the space for weaving purposes. In addition, SEED will improve the Cooperative's routes to markets through increased engagement with local and regional buyers and resumption of the VAP pilot. SEED will aim to improve the financial resilience of the Cooperative through trialling an alternative loan scheme to the mat money system, increasing weavers' financial literacy, and promoting saving for individual expenses such as school fees. Continued monitoring of the reedbeds by both SCRIP and the weavers will inform the development of a reedbed management strategy that will protect the reedbeds for future use, ensuring the sustainability of *mahampy* weaving as a women's livelihood.

If interested in learning more about Project Mahampy: Phase II, please see the accompanying project proposal.



Weavers monitoring the wetlands

Conclusion

Project Mahampy: Phase I has made significant progress to improve the livelihoods of traditional reed weavers in the rural community of Sainte Luce, whilst conducting wetland research to identify and mitigate potential risks to the sustainability of the *mahampy* reedbeds.

The completion of SEED's initial research phase informed SEED's approach to achieving project objectives, providing SEED with an increased understanding of existing *mahampy* markets, the cultural and social context of *mahampy* weaving, and biophysical wetland characteristics and reedbed properties. The establishment of the Mahampy Weavers' Cooperative and construction of the Mahampy Weavers' Workshop created effective support mechanisms to increase the weavers' supplier and power and ability of weavers to share skills with one another. Whilst the weavers' visit to a local embroidery cooperative informed the Cooperative's policies, procedures and departments, additional role training and expansion of the Weavers' Workshop in Phase II will aim to further improve the capacity of members and increase the Cooperative's sales, as identified at project endline.

Project Mahampy: Phase I completed all activities impacted by COVID-19 safely and in line with government restrictions and guidance. Activities reliant on travel or large gatherings, were adapted to achieve project outcomes, supporting and empowering the Weavers' Cooperative through the pandemic, whilst continuing to build the weavers' capacity, independence, and technical skills. Revisions to the objective of the VAP pilot and the reallocation of project funds into a MHM pilot enabled SEED to maintain engagement with the Weavers' Cooperative, address additional needs expressed by the community, and presented the opportunity for the Cooperative to build transferrable skills. The alternative loan scheme, developed after SEED revised the objective of the mat money system, will be piloted in the next project phase alongside financial management training, after the endline identified this as an area as to where the Cooperative requires additional support.

Throughout the project, SCRPs and the weavers have monitored the wetlands to determine the health of the wetlands and the impact of harvesting techniques and fire on the regrowth of *mahampy* reedbeds. Following revisions to the research aim and methodology in late 2021, research will continue in the next project phase to gather sufficient data to contribute to the development of a management strategy, ensuring the sustainability of the *mahampy* reedbeds. Research findings to date can be found in the upcoming End of Phase I Technical Report.

To continue building on the progress made in Phase I, Project Mahampy: Phase II will play a crucial role in supporting the Mahampy Weavers' Cooperative to increase the income generated from *mahampy* weaving, whilst sustainable management of the reedbeds will ensure the future of *mahampy* weaving as a women's livelihood activity.

References

- ¹ ACAPS (2022). *Madagascar: Food insecurity crisis in the Grand Sud regions*. [online] Available at: <https://reliefweb.int/report/madagascar/madagascar-food-insecurity-crisis-grand-sud-regions> [Accessed April 2022]
- ² Bamford, A. J., Razafindrajao, F., Young, R. P., & Hilton, G. M. (2017). Profound and pervasive degradation of Madagascar's freshwater wetlands and links with biodiversity. <https://doi.org/10.1371/journal.pone.0182673>.
- ³ Ibid.
- ⁴ ACAPS (2021). Madagascar Drought. Available at: <https://www.acaps.org/country/madagascar/crisis/drought> [Accessed April 2022]