



ANNUAL REPORT 2017



OUR VISION



Madagascar is a land full of possibilities, with a unique and beautiful biodiversity but also with unique challenges when approaching biodiversity conservation projects.

Well known by its endemic and iconic flora and fauna, Madagascar is also known by its high rates of poverty and deforestation.

Impact Madagascar was born from the idea that it is not possible to protect the environment without also considering the people who depend on its resources on a daily basis.

Since its foundation, in 2013, Impact has been working with the people of Madagascar to provide solutions for the problems of deforestation, pollution, and poverty through a variety of projects which involve community development in relation to biodiversity conservation and conservation education.

Through these projects, our small team of staff works alongside local people in order to empower the population and build capacity at the community level. With these actions Impact Madagascar pretends to aid in building a bright and sustainable future for the biodiversity and the people of Madagascar..



OUR PROJECTS

FOTSIFE PROJECT

This project has been successfully conducted and finished during 2017. It took place between January and July and we are very proud to share our outcomes.

This project consisted in a study into the use of timber plantations by the endangered southern woolly lemur (*Avahi meridionalis*) and other nocturnal species in the Mandena Forest. The southern woolly lemur, known locally as Fotsife ('white thigh'), is threatened by deforestation and fragmentation of its habitat. The species, which lives in monogamous pairs, can't move across the open spaces caused by logging and becomes vulnerable to population isolation. Our team investigated whether plantations of native and non-native tree species can be managed in such a way that they not only provide a sustainable supply of fast-growing timber for local people but also provide safe habitat for these lemurs.

After five months of fieldwork activities and the analysis of the data has confirmed that plantations of non-native



species are of limited value to *A. meridionalis*, and that conservation strategies should focus on protection of primary and secondary forest. We also have provided data on the behaviour and habitat use of *Avahi meridionalis* in primary versus regenerating forest and we have confirmed that there is population of *A. meridionalis* within the forest fragment of Antokonala.. Using data that we have collected on the behaviour and habitat use we hope to identify a strategy to protect and conserve this very vulnerable population. During the project we also involved local communities for example supporting the development of a newly created COBA (a local association responsible for the management of the conservation zone) through

the payment of forest fees and by providing feedback on how the Association can work with visiting researchers.

We hope that in the future our research will be helpful in necessary actions for the conservation of *Avahi Meridionalis* like identify suitable habitat for the species within the region, including that which is currently uninhabited by the species and ensure that this habitat is effectively protected from human disturbance and more specifically working with forest managers to ensure the protection of the population of currently inhabiting these forest fragments.



SIFAKA CONSERVATION

The Sifaka Conservation Programme aims to protect the remaining population of Crowned Sifaka (*Propithecus coronatus*) and its habitat in the northwest and central highlands of Madagascar, while improving the livelihoods of local communities to become less dependent from natural resources.

Through scientific research and community based conservation programmes, the sifaka team works every day to protect these lemurs from threats such as habitat destruction, forest fragmentation, slash and burn agriculture and illegal hunting.



MADIROMIRAFY SITE



The natural habitat of Madiromirafy is characterized by its rich diversity of ecosystems, namely wetlands, lakes and rivers, the Mandrava gallery forest and the wooded savannahs of the western Madagascar. This habitat is particularly exceptional due to the presence of endemic and/or threatened species such as lemur species - *Propithecus coronatus* (EN) and *Eulemur rufus* (VU) -, and bird species *Haliaeetus vociferoides* (CR), *Lophotibis cristata* (NT), and *Adasonia* sp. Due to the exceptional value of the Mandrava gallery forest, preserving the habitat for a sustainable use of local communities is highly recommended and constitutes the main mission of the Sifaka Conservation programme. During 2017, the sifaka team has continued working on threat surveys and ecological studies of *P. coronatus* in the Mandrava gallery forest. Regular patrolling activities were implemented by local patrol agents.

The community-based conservation programme through the installation of the local management transfer was reinforced: capacity building was provided to the local management committee on governance, management tools, budget management and ecological surveys.

The VOI 'AINA' with the support of the local communities is now more engaged in conservation. Through the 3 sessions of big campaign awareness in the 3 main villages (Madiromirafy, Anjiakely and Ambodimadiro) about the conservation programme, the local population received more information about the different zones in the management transfer in order to improve their respect and knowledge about the access to these zones.

Local households were trained in sustainable development activities such as the pest control, poultry & fish farming and improved agriculture. More than 105 households are involved in the development projects in order to improve their livelihoods and their non-dependency on natural resources.

As results of the combination of conservation actions and community development programmes, the number of threats in the gallery forest has significantly decreased up to 86% (mainly the illegal logging) during 2017 and the local communities start to benefit from conservation actions.



ANKIRIHITRA SITE



The VOI VOAVONJY was officially set and received a series of capacity building sessions to ensure the sustainable use of the natural resources existing in their localities. The main objective of the local management transfer processes was to reach an agreement between the different users and managers of these resources, which was translated into a contract in order to put in place a sustainable management of the forest resources.

Ten local patrol agents were trained on forest patrols. They work regularly to monitor the habitat and the threats. The threats were significantly reduced particularly the bushfire which is the main pressure on natural habitat.

A comprehensive behavioral survey was implemented on *P.coronatus* and *E.mongoz*, as well as on habitat description.

The population survey demonstrated the presence of (but not limited to these numbers) 137 groups of *P coronatus*, 10 groups of *E. rufus* and 5 groups of *E. mongoz* in Ankirihitra forests.

A production of 3000 saplings of *Khaya madagascariensis*, endemic species in the region – and a number of 100 plants of *Citrus* sp., a fast-growing species – was implemented to prepare the reforestation and to provide more access to timber to local communities

Local communities received training on vegetable gardening, Intensive rice cultivation and pest control. Sifaka Conservation also provided equipments and seeds to them.

The income generating activities include improved agriculture on rice cultivation and vegetable:

11 households benefited from the training of the intensive rice cultivation on 2.73 Ha of ricefields

50 households participated in the pest control training and are implementing the skills.

24 households are supported with the improved vegetable farming – on 1.08 Ha of agricultural land.

Four awareness sessions were implemented in order to raise the conservation profile in the localities and also to train local people on practical environmental activities, mainly on the use of fuel efficient stoves.

- A detailed study of the habitat was implemented in the area for legal exploitation of timbers and the conservation zone.

As a general impact, the activities carried out in 2017 lead to a secure environment for Ankirihitra natural resources through regulated access to these resources, but also our actions intend to encourage the commitment of the local residents to be responsible of the conservation of the biodiversity in their localities. These actions reinforce the establishment of a mutual trust between stakeholders including the forestry administration, local authorities and local communities of Ankirihitra, the VOI Voavonjy and Sifaka Conservation. The programme also brings alternatives to mitigate threats.



MAHAJEBY SITE



Sifaka Conservation has continued several conservation actions in Mahajeby gallery forests. An annual survey of the crowned Sifaka population was carried out alongside the threat assessment. There has been a reduction of pressures and threats (up to 80% decrease of logging and habitat destruction) and an increase in the sifaka population in the forests.

In addition, about 10,000 of *Acacia* and *Eucalyptus* seedlings have been produced from 9 villages' tree nurseries at Mahajeby and Kiranomena for reforestation purposes in 2018. The aim of this reforestation is to bring more access to timber of firewood to local communities.

The formation of the local management committee under the VOI 'FIARO' was a great success to engage local communities in conservation and to help them to understand the need for a sustainable use of natural resources.

Apart from conservation actions, local communities benefited from development activities to improve their livelihoods: 89 households benefited from the livelihood programme in 2017, mainly focused on improvement of vegetable agriculture.



DABOLAVA SITE



Dabolava forest is one of the well-established site for crowned sifaka conservation.

The activities in 2017 include the following:

- Seedling production at the tree nursery
- Ecological restoration
- Installation of firebreaks
- Sifaka Group monitoring
- Patrols with the local agents

All these actions have resulted in:

- Zero fire in the forest and in the reforestation areas.
- The three sifaka groups are still present in the forest, mating was seen in one group
- Birth of Sifaka babies in September (one baby from the male Lekely and the reintroduced female Mila)
- 66% survival rate of the reforestation in 2017 (from 3026 reforested plants). All died plants were replaced after the survey.
- The reforested surface is currently 13 hectares of which 30% are now used by the lemurs.
- 8562 seedlings produced in the nursery for use in 2018 tree planting programme
- 60% of VOI members benefit from the vegetable farming programme and 55% benefit the training on intensive rice cultivation (SRI).



COMMUNITY DEVELOPMENT

Madagascar is one of the poorest countries in the world. Most people rely on the land and natural resources to make a living, and agriculture is the main source of income. We believe that in order to protect the environment, we must also consider the people who depend on its finite resources. At the Sifaka Conservation sites, we are working closely with local communities to introduce alternative and sustainable livelihoods activities as well as improved agricultural practices in order to increase productivity to reduce pressures on the environment.

ANKIRIHITRA

In Ankirihitra, the actions have focused in developing income generating activities (IGAs) like improving farming techniques (vegetable gardening, rice cultivation, yam plantation), breeding techniques (beekeeping, Malagasy chickens, laying hens and ducks) and in the creation of a small veterinary and phytosanitary deposit.

Inside of these activities, our team have been training and providing materials in:

System of Intensive Rice cultivation (SRI)

-11 people trained, 10 beneficiary households, more than 2.73 ha of rice field for application, distribution of 25 kg of seeds + 2 tillers to beneficiaries

Pest control

- 50 people trained, distribution of Equipments for pest control

Vegetable gardening

- 24 people trained and registered for the programme on 1.08 Ha of land. Distribution of 120 bags of seeds + 13 watering cans + 02 sprayers to beneficiaries

DABOLAVA

The community development actions in Davolaba have been centered in the income generating activities like:

- Improvement of techniques for vegetable gardening,
- Improvement of rice cultivation, rain-fed rice.
- Improvement of breeding techniques for pigs, poultry and fish farming.

Vegetable gardening and pest control techniques

- Ambinda village: 26 trained people, 23 beneficiary households - 26 ares of cultivated land, distribution of 94 bags of seeds and materials
- Valoanaka village: 8 people trained, 8 beneficiary households - 20 ares of cultivated land, distribution of 25 bags of seeds and materials



- Soanafindra village: 6 people trained, 5 beneficiary households
- 16 ares of cultivated land, distribution of 29 bags of seeds and materials

- Dabolava village: 4 people trained, 4 beneficiary households
- 22 ares of cultivated land, distribution of 12 bags of seeds and materials

Launch of SRI (Intensive Rice cultivation)

- Ambinda: 20 people trained, 11 registered households, working on 0.77 Ha of ricefields
- Valoanaka 6 people trained, 7 registered households, working on 1.40 ha of ricefields
- Soanafindra 17 people trained, 13 registered households, working on 0.69 ha of rice fields
- Dabolava 26 trained people, 22 registered households, working on 2.37 ha of rice fields

In addition, a demonstration site of vegetable agriculture has been created : 2 acres of green beans, greens, salad, cabbage, tomato and zucchini – in order to sensitize local communities in the effectiveness of an improved agricultural techniques.

MADIROMIRAFY

The community development actions in Madiromirafy have been centered in:

- Training in pest control and provisioning of tools and sprays.
- Improvement of poultry farming techniques.
- Improvement of vegetable gardening techniques.

The beneficiaries of the pest control activities per village are:

- Madiromirafy: 42 households
- Anjiakely: 32 households.
- Anosibe: 31 households.

The beneficiaries of the poultry farming training and monitoring programme are:

- Madiromirafy: 16 housholds,
- Anosibe: 31 Households

A refined survey was conducted in Ambodimadiro village in order to understand the needs of the local communities in relation to the use of land and natural resources in order to bring an effective programme on livelihoods.





These are the beneficiaries of some of these actions:

Vegetable agriculture

In Kamolandy: 25 beneficiary households with 1.75ha of cultivated land.

In Ambohimena: 38 beneficiary households - 2.15ha of cultivated land.

In Mahajebby: 26 beneficiary households - 1.2ha of cultivated land.

Fast-growing species plantation

In Mahajebby 26 trained households. They worked on 3 nurseries including 1 Eucalyptus nursery + 1 Acacia nursery + 1 Neem nursery.

In Kamolandy 25 trained households with 3 established nurseries including 1 Eucalyptus nursery + 1 Acacia nursery + 1 Neem nursery

In Ambohimena: 38 trained households with 3 established nurseries including 1 Eucalyptus nursery + 1 Acacia nursery + 1 Neem nursery

In Kiranomena: 1 Acacia nursery installed

Bamboo lemur site -

VOHITRARIVO

The main activities in Vohitrarivo site were:

- Improvement of vegetable gardening techniques
- Installation and monitoring of Eucalyptus nurseries
- Monitoring of the pig farming for the school canteen
- Training on fish farming; monitoring and assessment of the status of existing fishponds.
- Longoza seed harvest
- Creation of a pilot rice field

Vegetable gardening

- 41 ares of plantations in mid-December 2016 (20 ares of corn and pistachios + 10 ares of greens and zucchini + 5 ares of melon and corn + 6 ares of peas and corn)



MAHAJEJBY

The priority IGAs (income generating activities) carried out in this site were:

- Improvement of agriculture techniques
- Reforestation (*Eucalyptus*, fruit trees, *Acacia*, *Rafia*)
- Education of local populations on health and hygiene
- Sensitization in the use of fuel efficient stoves.
- Construction of wells (ongoing for 2017-2018)
- Improvement of the zebu pasturing area.

-10 ares of plantations in April 2017 (cabbage, zucchini, carrots, greens, green beans, peas.

- 40 ares of beans plantation in August 2017 + Moringa on the borders of the plantation plots (extended over a length of 200m)

Pig breeding

-8 pigs raised by 2 breeders (4 heads / breeders)

SRI (Intensive rice cultivation)

-Vohitrarivo: 3 out of 30 beneficiaries practiced SRI during the big December campaign because of lack of water while 33 beneficiaries practiced the off-season rice campaign in July 2017; the production yield of the first season is averaging the 3.3T / ha

-Ambohipo: 22 beneficiary households, 2ha of cultivated rice fields

-Sahofika: 31 households, 4.19 ha 2ha of cultivated rice fields.

Eucalyptus plantations

- Volotara: 2 nurseries installed
- Vohitrarivo: 11 nurseries installed
- Vohimarina: 6 nurseries installed
- Ambohipo: 3 nurseries installed
- Ambodimanga: 3 nurseries installed

Silo management

The members of the association were trained on the silo management

80% of Vohimarina households are members of this association

Fish farming

- 19 beneficiary households trained, 28 fishponds in place inventoried.

Beneficiaries in vegetable farming

- Sahofika: 21 beneficiary households, 99 ares of cultivated land;

- Vohimarina: 23 beneficiary households - 13 ares of cultivated land,

- Volotara: 24 beneficiary households - 28 ares of cultivated land,

- Vohitrarivo: 45 beneficiary households - 40 ares of cultivated land.



Longoza seed harvest

- 10 women trained and working in the programme

A pilot rice field has been created

- With the objective of demonstrating the effectiveness of improved techniques to help in threats reduction, the pilot ricefield for the Intensive rice cultivation technique was set on an area of 7 ares, located in Ambohipo.



ECOLOGY

CROWNED SIFAKA (*Propithecus Cononatus*)



- Two groups were followed in each site: Ankirihitra and Madiromirafy for ecological behavioral observations.
- The data from the two groups in Ankirihitra are reported below.
- The data from the two groups in Madiromirafy will be reported later.

- *Propithecus coronatus* spends 55.52% of their time resting, while feeding and moving are respectively 20.88% and 12.53%.
- Seventeen (17) plant species were recorded as part of the food composition of the crowned sifaka. *Treculia perrieri* is the most consumed, then *Ficus tiliaefolia*, *Tamarinindus indica* holds the third place, and then *Crateva greveana*;
- Ripe fruits are the most consumed, up to 98.19% during the rainy season. The percentages of consumption of young leaves and mature leaves are respectively 36.08% and 16.49%.
- *Propithecus coronatus* is strictly frugivorous during the rainy season which can be attributed to the fruiting period of most of the tree species in the forest, like *Treculia perrieri*, *Ficus tiliaefolia* and *Tamarinindus indica*;
- *Propithecus coronatus* spends most of their time on large branches and in the tree canopies. Groups rarely descend to the ground (0.13%) and rarely use vines (0.03%). They use heights between 15 and 20 m more often (41.23% of their time).

MONGOOSE LEMUR (*Eulemur Mongoz*)



Two groups of mongoose lemur were followed in Ankirihitra in order to collect data on their ecological behavior and their environment (habitat description and temperature & other climate parameters).

The two groups were located in two different areas: one in the natural forest and the other in the agriculture area. Differences were observed from their behavior, which may result from the difference in the microhabitat.

Resting represents 51.03% of the daily activities of *Eulemur mongoz* living in the natural forest, while it is 47.74% for the ones living in the agriculture area. Sleeping is the second most common activity for the group living in the natural forest (29.08%) but very rare for the group in the agriculture area.



- Feeding activity is frequent in the agricultural land (17.38%) but quite low in the natural forest (3.94%). The group occupying the agriculture area is very active and spends 12.50% of their time for moving and travelling compared to the group from the natural forest (9.01%).
- The feeding time is significantly important for *Eulemur mongoz* in the agriculture area, where the availability of foods (mainly fruits) is quite high. In contrast, the percentage of time dedicated to sleep is highly significant in the natural forest, which could be due to low availability of food (absence of the fruits) compared with those of the cultivated areas.
- Three (03) plant species were identified as food sources of *Eulemur mongoz* in the natural forest, including 76.92% for *Treculia perrieri*, 21.33% for *Tamarindus indica* and 07.69% for *Ficus tiliacifolia*. In contrast, thirteen (13) species have been identified as food sources for *Eulemur mongoz* living in the agriculture area, the most important of which are *Mangifera* sp. (44.67%), followed by *Tamarindus indica* (21.33%) and *Combretum coccineum* (14%). The other species are complementary food sources such as *Terminalia taliala* (06.67%), *Syzygium* sp. (05.33%) and others.
- The diet of *Eulemur mongoz* consists of ripe fruits (61.35%), young leaves (24.54%), bark (09.82%), mature leaves (03.68%) and rotten wood (00.61%). *Eulemur mongoz* is frugivorous during the rainy season.
- *Eulemur mongoz* stays more under the canopies, using branches (51.91%) and tree trunks (45.64%). The heights of 10 to 15 m are the most frequented by the animals (56.31% of their time), which might be a strategy to avoid predators. The animal rarely frequents the level of 1 to 5 m (0.27%).

EMPOWERING FOR THE FUTURE

PRACTICAL CONSERVATION EDUCATION

We think that it's impossible to protect the environment without considering the people who depend on it on a daily basis and because we know the importance of the conservation education.

It is important to help people becoming responsible of their actions and empower population to respect and protect the resources they depend on. Only through education of households and the future generations will help them to understand the world they are living and to take the correct choices in order to improve their lives and to preserve the environment. People can't respect what they don't know, nor can they choose if they don't know that they have choices.

Campaign awareness sessions in local communities and schools were implemented in 2017 in Dabolava, Madiromirafy, Mahajeby and Ankirihitra where the Sifaka Conservation programme is ongoing.

Using the PACE (Pan African for Conservation Education) materials, practical environmental education was conducted in sustainable development in

schools and local households to help children and people develop practical skills and inspiration to appreciate and understand the wildlife and the environment.

The practical conservation education covers a range of programme such as the improvement of health and hygiene in schools (implemented in all sites of Sifaka Conservation and Vohitrarivo), the use of improved techniques to reduce the use of charcoal (particularly for Ankirihitra and Madiromirafy sites where charcoal production is very high), vegetable gardening in schools (implemented in Dabolava, Vohitrarivo, and Madiromirafy).

Local schools and families are part of the programme and are monitored household per household in order to assist local families in adopting eco-friendly habit for their Environment.

An ecobrick programme has been launched in Antananarivo, in order to contribute to the reduction of plastic waste in schools.



WOMEN'S EMPOWERMENT

Empowering the women has been identified as an essential component in conservation and development aspects

Incorporating a gender approach in our projects would ensure that men and women have equal opportunities to setting goals and priorities, to participate and benefit.



At this very moment girls and women continue to be the single most discriminated against and excluded group in the world. They are at greater risk of suffering from poverty or violence and abandon school prematurely.

In 2017, preliminary surveys and awareness on women health and skills were implemented in Mahajeby, Madimorafy and Dabolava sites in order to address emergencies and priorities related to women and biodiversity conservation.

In 2018 we will launch a specific project based on the needs of women and girls in local communities, to ensure that their voices are listened and also that they will be able to participate equally in the conservation of the wonderful biodiversity of their country.





Learn more about what we do at:

www.impactmadagascar.org

www.sifaka-conservation.org