

Grant recipient's letter head

To  
Bundesministerium für wirtschaftliche  
Zusammenarbeit und Entwicklung (BMZ)  
- Referat 213 –  
Stresemannstraße 94

10963 B e r l i n<sup>1</sup>

Disaster Risk Management, Food Security  
Project title: " MAHAFATOKY" to inspire confidence" in Malagasy and also refers to systems or tools used to protect oneself and adapt to a situation.  
Project number:  
Country: **Madagascar**

Interim statement<sup>2</sup> for the fiscal year of 2016

Re: Grant notice dated ..... - 213 - E 6050 –

---

<sup>1</sup> Translator's note: address of the German Federal Ministry of economic cooperation and development, Division 213

<sup>2</sup> Explanatory notes on the preparation of interim statements:

Interim statements comprise a narrative and a financial part concerning the use of all financial contributions (received from BMZ, NGOs or others). They are required after the end of a fiscal year. The textual part (narrative report) must be presented in a way that will allow to check the actual project implementation against the aims and activities specified in the application for the respective grant. The financial report (proof in numbers) must include a summary of the receipts and expenses in the reporting period. Interim statements (narrative reports and proof in numbers) shall be submitted to the BMZ in duplicate and must conform to the following structure.

## **List of Acronyms**

CBA: Community Based Adaptation  
CCA: Climate Change Adaptation  
CFW: Cash-For-Work  
CARE: Cooperative for Assistance and Relief Everywhere  
MCDRM: Municipal Committee for Disaster and Risk Management  
DCDRM: District Committee for Disaster and Risk Management  
LCDRM: Local Committee for Disaster and Risk Management (or LRC: Local Relief Committee)  
COBA: Local Community  
CVCA: Climate Vulnerability and Capacity Analysis  
DAGT: Director of General and Territorial Administration  
DIPECHO: Disaster Preparedness European Commission Humanitarians AID Office  
PDT: Participatory Diagnostic Technology  
DRM: Disaster and Risk Management  
MOU: Memorandum of Understanding  
CCAP: Community Climate Adaptation Plan  
RDP: Regional Development Plan  
DRR: Disaster and Risk Reduction  
SAVA: Sambava Antalaha Vohemar Andapa  
SRA: Improved rice-farming system  
SRI: Intensive rice-farming system  
DTS: Decentralized Technical Service  
VSLA: Village Savings and Loan Association

## **A. Narrative report**

### **1. State of project implementation:**

(Give an account of the activities planned for the reporting period and their present state of implementation. If implementation lags behind the planning, describe any delays or other difficulties that occurred, identify their causes and specify what arrangements were made to overcome these obstacles.)

This report covers the project's achievements during the period running from January 1<sup>st</sup> to December 31<sup>st</sup>, 2016. The project has achieved an overall progress of 96% for its activities compared with the targets set for Year 2 for activity implementation in its 16 communes of intervention (see Annex Table 2). At this stage of the project, 27,952 households out of the 50,000 planned, or 139,760 people out of the 250,000 planned, have been directly reached, i.e. 56% of the final beneficiaries.

### **Expected Result 1 - The network of local disaster risk management committees has the capacity to develop and mobilize public support for gender-responsive climate change adaptation plans**

**Activity 1.1:** Train the DRM committees of 182 villages and 16 communes and provide them with technical support, enabling them to fulfil their mission and operate.

Project plan: 16 CC DRM; 182 LC DRM  
Plan for the period: 16 CC DRM; 182 LC DRM  
Achievement: 16 CC DRM; 182 LC DRM

This activity was completed during the first year.

**Activity 1.2:** Work with DRM committees to conduct a Climate Vulnerability and Capacity Analysis (CVCA) in each commune.

Project plan: 16 Communes  
Plan for the period: 16 Communes  
Achievement: 16 Communes  
Progress: 100%

Climate change poses additional challenges for the eradication of poverty. Indeed, rising temperatures, erratic and poorly distributed rainfall, cyclones, and droughts have already caused losses and damages, including crop destruction and losses (i.e. food stocks) as well as loss of property and human lives. Rice, the staple food of communities in the project area, is a crop that is the most sensitive to climate hazards and has seen a significant drop in yields. Food insecurity is a real and constant threat especially for poor households. The CVCA will enable communities to understand the implications of climate change for their lives and livelihoods that are particularly threatened.

#### **o Training of staff on the CVCA process**

Before operationalizing the CVCA (Climate Vulnerability and Capacity Analysis) approach in the targeted communities, the project provided capacity-building to its technical staff on the process and the tools to use. This activity aims in a first stage to provide technical training to project staff to enable them to efficiently implement the CVCA process according to the Community-Based Adaptation (CBA) approach and in a second stage to establish in a participatory way a model for the gender-responsive Climate Change Adaptation Plan (CCAP) in the Communes, the Districts and the Region.

To this end, an external consultant was hired to provide capacity-building to the project staff. The staff was trained on the use of various analysis tools including:

- ✓ hazard mapping;
- ✓ events calendar;
- ✓ events timeline;
- ✓ vulnerability matrix;
- ✓ summary table;
- ✓ Venn diagram.



**Figure 1: Training of staff and community on the CVCA process in Ambohitralanana**

The training took place in two stages, namely theoretical classroom training at the project office in Antalaha, and practical training during three days in Ambohitralanana. In addition to project staff who numbered 32, 126 people including 28 women from the communities living in 11 villages in the rural commune of Ambohitralanana took part in the hands-on exercises in their respective villages. Participants were selected so as to have the different social categories represented. The training enabled project staff to acquire and strengthen technical knowledge so as to be able to conduct efficiently CVCA sessions in the project's intervention communes.

○ **CVCA in the project's 16 intervention Communes.**

The purpose of the analysis is to identify the needs, priorities and strategies of villages and communes in terms of CCA. In order to develop Commune Adaptation Plans, one (01) workshop was organized in each commune in March 2016, bringing together leaders, members of the DRM committees; women's associations' representatives and other community members from every village. After benefiting from capacity-building on the use of the CVCA manual according to the CBA methodology, the project's technical staff led in turn a workshop until a CCAP was available for each village. The village CCAPs were then compiled into a Commune Adaptation Plan by the members of commune DRM committees with the support of project staff. A total of 16 CCAPs were developed for the project's 16 intervention communes. (Annex 15: sample CCAP). It came out of the analysis that the population's major concern in the project intervention areas between 2000 and 2010 was cyclones. From 2010 to date, the main concern is the decrease in rainfall (water deficit) followed by torrential rain causing sudden rise of water that floods the paddy fields and causing a drop in production and hence food insecurity.



**Picture 2: Practice of CVCA tool in Ambohitralanana**

In June 2016, a second round of workshops was organized in each commune to present back and refine the outcomes of the analysis carried out in the previous workshops. Adaptation actions were prioritized based on the criteria proposed in the tool CRISTAL version 4 (planning tool for climate change adaptation projects at the community level). Eight (8) assessment criteria related to climate change were applied, each with its weight according to its level of importance in relation to climate change (see Table 1).

**Table 1: Assessment criteria for activities included in the commune adaptation action plans**

Selected criteria	Significance	Notes
Assistance to vulnerable groups	5	Assess the importance of the activity for the groups that are the most affected by climate change.
Number of beneficiaries	3	Assess the number of beneficiaries to avoid that the activity reaches only limited groups.
Sustainability under climate change	5	Assess whether the activity mitigates the impact of climate change and contributes to the eradication of its causes.
Political feasibility	2	Assess the feasibility of the proposed activity in relation to local politics
Cultural compatibility	2	Assess whether customs and habits may stand as obstacles to the implementation of the activity.
Long-term profitability	3	Assess the profitability of the activity to avoid that the activity is not exploited or is even neglected.

Emission of greenhouse gases	5	Assess the importance of the activity on reducing the emission of greenhouse gases.
Impact on the most affected resources	4	Assess the activity's contribution to the resources that are considered most affected by climate change.

In each workshop, the project identified the priority activities in each commune (sample provided in Annex 3: Report on the prioritization of climate change adaptation measures in the commune of Ambinanifaho and Report on the prioritization of climate change adaptation measures in the commune Sahantaha).

The synthesis and consolidation of the prioritized activities in the project's 16 intervention communes yielded a list of activities according to the order below.

- 1) Reforestation and forest conservation
- 2) Construction and/or rehabilitation of irrigation infrastructure
- 3) Drinking water
- 4) Restoration of road infrastructure
- 5) Improved farming techniques
- 6) Construction of health huts

The project trained all members of village level DRM committees on the CVCA methodological process. They were closely involved in the process of vulnerability analysis at the community level to ensure good control of the approach so they can in turn and by their own means, conduct the analysis as part of updating their risk reduction and climate change adaptation plans in their respective villages.

**Activity 1.3:** Conduct field research on gender, marginalization and climate vulnerability.

Project plan: 1 research  
 Plan for the period: 1 research  
 Achievement: 0 research  
 Progress: 0%

The project planned to carry out a specific in-depth research on “gender and marginalization” in relation to climate change in Year 2. The activity was not carried out because of the “vanilla phenomenon”: a very large majority of community members were engaged in the vanilla business, ensuring various functions such as security, harvest, sale, preparation and other activities (small shops, agricultural labor, transportation on their backs) as there was a sudden and substantial increase in demand for labor with very attractive compensation during the farming season. This situation that lasted from May to October 2016 could have caused bias in the gender and marginalization analysis among vulnerable groups. Accordingly, the project decided to postpone the research activity. Every household seemed to have reaped benefits from the soaring of vanilla price<sup>3</sup> during the farming season, with people purchasing TV with satellite channels, hifi devices that work with solar panels, kitchen utensils, furniture, etc. The price of food commodities sky rocketed in rural areas as villagers were supplying rice and poultry in towns. For instance, the price of a whole chicken was over 11 euros, a 1.5 liter water bottle cost as much as 1.4 euros, i.e. 3 times the normal price. However, in November, the vanilla stock at farmers decreased causing a decrease in cash flow as well as income among vanilla farming households. However, the prices of basic commodities did not follow the same downward trend.

The field research on gender, marginalization and climate vulnerability will be launched in March-April 2017, before the harvest of vanilla to better understand the strategies of the various groups affected by and sensitive to climate change.

<sup>3</sup> 1 kg of processed vanilla = 1 million ariary or 312 Euro

**Activity 1.4:** Assist DRM committees to incorporate climate change adaptation needs and priority actions in the DRR plans using the findings of Climate Change Vulnerability and Capacity Analysis.

Project plan: 16 commune DRR plans integrating CCA needs  
 Plan for the period: 16 commune DRR plans integrating CCA needs  
 Achievement: 16 commune DRR plans integrating CCA needs  
 Progress: 100%

Despite the vanilla boom, the project was able to conduct a second round of workshops, reaching the 16 communes in June 2016 to further obtain and confirm the data and the needs identified in the CVCA (March-April 2016) in relationship with the various categories of people affected by climate change. Participants were members of the DRM committees in the project's 16 intervention communes. The information gathered during the CVCA sessions in each community were compiled in the CCAPs and incorporated in each Commune's Disaster Risk Reduction Plan. The plans were then presented back to the DRM committee members and were validated.



**Figure 3: Vulnerability matrix**

In Year 3, the project plans to conduct refresher sessions on the process of developing a Disaster Risk Reduction Plan incorporating the Climate Change Adaptation in each of the project's intervention villages and communes.

**Expected Result 2 - Local DRM committees have the technical and organizational capacities to operate sustainably and implement gender-responsive climate change adaptation plans**

**Activity 2.1:** Support the DRM committees in sensitizing neighboring communes on gender-responsive CCA priorities

Project plan: 16 communes  
 Plan for the period: 16 communes  
 Achievement: 16 communes  
 Progress: 100%

Climate change is a phenomenon whose impact is felt directly by the project's beneficiary communities. One of the roles the DRM committee members is to raise awareness among members of their communities as well as neighboring communities. This approach was adopted by the project to ensure the sharing of information and experiences across communities but also to ensure that the information held by committee members and the information shared among community members are of the same. Thanks to the CVCA workshops and field sessions for the operationalization of the approach, participants came to acknowledge that climate change is a real threat to everyone and that everyone should participate in raising awareness around them.

To reach as many people as possible, various communication and awareness-raising tools on climate change were proposed by the project, including:

- An awareness campaign organized for young people under 18
- The design of radio-television programs with interviews and film/documentary to inform and sensitize on climate change in collaboration with local media
- The organization of events such as the World Climate Day and mini agricultural fairs.

a- Awareness campaign organized for young people under 18

This activity had already begun in the first year of the project in each locality of the project's two intervention districts under the leadership of the heads of district and with the support of project technicians, local authorities, DRM committees and representatives of schools. In Year 2, each institution continued sensitization on the need to continue advocacy for behavioral change and for further actions by youth on climate change, further to the encouragement by the heads of district, and in collaboration with school officials. DRM/DRR and climate change were integrated in schools' curriculum as cross-cutting subjects and as such are addressed in courses to raise awareness among students, the goal being to develop DRR/DC reflexes and culture in everything they do as well as to encourage them to share with their peers and families.

b- Production of radio and TV broadcasts

Working through the DRM committees, the project produced radio programs on the topic of climate change and food security. Each village was mobilized on the design of at least two awareness messages relating to climate change and food security in the context of their village. The project's communication officer used these messages to design radio broadcasts. In all, 29 radio programs were produced by the project for a total of 35 broadcasts and reruns at 39 local stations. The topics addressed by the programs produced by the communities included:

- Information and awareness-raising on climate change and disaster risks reduction;
- Information and awareness-raising on the hazards warning system;
- Awareness on disaster risk reduction (LRC: role and responsibilities, actions preparation, prevention and mitigation) at the community level
- Information, awareness-raising and testimonials on VSLAs
- Information and awareness-raising on farming techniques (field schools, seed production, market gardening, etc.)

The programs or awareness-raising spots were aired at times when audience is high at a rate of at least two times a week. The broadcasts were usually done on Tuesdays (a day it is taboo to work on) and Sundays (when people rest and prepare for the next week of work) from 6: 00 to 7:00 p.m. With this timing, about 90% of the households were reached with the programs. The programs have had an impact on the population's perception and knowledge of climate change and food security. Some talk shows allowed listeners to enter live on the set to give their views on climate change but many could not due to high participation and short time and expressed their interest to have more such debates organized. Therefore, the project plans to organize discussion sessions during cultural events in the communes.

#### c- Organizing community awareness-raising meetings

Apart from the tools proposed by the project, each village, through their DRM committees, suggested continuing using the communication channels they have used since the completion of the DIPECHO program, such as community meetings in each hamlet of the villages, folk songs with a specific topic and inter-personal communication of messages as relevant to the villages. DRM committee members identified the topics to discuss during their regular meetings and changed them at each session. In general, the topics included preservation of plant cover (forests, plants on watersheds, etc.) to mitigate erosion, and especially the preservation of water sources which had become a serious issue in the region at that time. The project provided technical support to the committee members in developing messages so as to ensure the messages are easy to understand and best describe the information they want to convey. DRM committees do not limit their sensitization work to their villages of origin but go also in hamlets and villages of neighboring communes. On average, DRM committees conduct one or two awareness-raising sessions per month in their village. There are regular exchanges between DRM committees (once every two months on average) on conducting advocacy, one of the goals being to show people that their action is not an isolated one limited to their village but an action that brings together all villages in the district. This facilitated the implementation of the awareness-raising actions and helped the population understand the risks and challenges associated with climate change and its link with their food security. The sessions are generally held during market days on a monthly basis to reach as many rural people as possible. The number of awareness-raising beneficiaries varies across localities and marketplaces. On average, each sessions reaches about one hundred people. The project has reached at least half of the population through the sensitization sessions that were then amplified by personal communication among people, especially when they go back to their villages.

#### d- Organization of the World Climate Day

The project supported local authorities in the organization of the celebration of the World Climate Day on December 8, 2016, and took the event as an opportunity to inform and educate the population on the effects of global warming and the need to carry out reduction and adaptation actions. The celebration lasted three days, from December 8 to 10, 2016:

##### - Day 1:

- Reforestation in Belfort Mahevadoany, a village of lepers where CARE had been supporting the planting of windbreaks since 2007. The village was selected by the project for community reforestation during the event to help the community extend the length of the coastal area reforested for protection against wind and rising waters (300m) as well as to raise awareness on the actions that the lepers have taken themselves for the preservation of their residential areas, and thus encourage people in general to do the same in their respective communities;



**Figure 4: World Climate Day, Reforestation in Belfort Mahevadoany with Chief of District Antalaha and team of Directorate General of Meteorology**

- Carnival along an 8 km route through the town of Antalaha with diverse disguises to attract people's attention. The project supported local authorities in organizing the carnival by making available to them a vehicle and a mobile sound system for sensitization sessions;
- Official opening speeches that raised awareness on the causes and impacts of climate change by the Regional and Local Authorities<sup>4</sup>;
- Tour of exhibition booths setup by the Mahafatoky Project, the weather department, local nurseries, florists, members of micro-processing units;
- After visiting the booths, yam-based snacks (stuffed tomato and various fritters) were offered to participants to show the audience that climate change adaptation can be achieved by developing crops that are more climate tolerant and suited in replacement of rice, especially when crops are lost to extreme weather conditions;



**Figure 5: World Climate Day, booths of Directorate General of Meteorology and CALA-Macolline Association**

- Organization of a conference on climate change and food security with the participation of the Director of Meteorology, the Project Manager of Mahafatoky, representatives of beneficiaries of the Mahafatoky project and representatives of the beneficiaries of the AINA project (Integrated Action for Nutrition and Food) implemented by CARE in Amboasary in southern Madagascar (they came on an inter-community exchange visit as part of the project);
  - Then to end the day, a video show was organized, featuring a movie on climate change produced by the project staff and the regional meteorology service as well as videos on cooking and processing of local food.
- Day 2 was devoted to the finals of a folk song contest (Vakodrazana) focusing on climate change and food security. A total of 15 singing bands from 14 project beneficiary communes took part in the contest. The number of people per group was set at 20 at most to facilitate logistics. The final contest was preceded by preparations in villages through awareness campaigns. The criteria for the selection of bands included: the topic which must be linked to climate change, the beat of the songs, the gestures of participants, their dress and appearance, lyrics easy to understand, and musical instruments used. During the qualification rounds, each community was invited to judge, criticize and give their suggestions to improve the songs of each band. They then selected the band that would

<sup>4</sup> The Mayor of Urban Commune of Antalaha, the Representative of the SAVA Region, the Director of Territorial Planning and Management of the SAVA Region, the Head of District of Antalaha, the General Directorate of Meteorology, the Chair of the Leaders' Association of Antalaha, the Director of the Mahafatoky Project

represent them. Members of the DRM committees validated the choice of the community as regards the band that would represent the commune. This competition was important for each commune for a number of reasons: first, the songs are a reflection of the work on climate change and food security they had undertaken in their commune and second, they were a way to express their identity and pride as regards the risk reduction actions they had taken. Towards the end of the day, there was a replay of the nine video clips on cooking demos, and on the storage and processing of local products (dryers, preparation of chips, papaya jam, banana paste, concentrated juice, fritters and cakes made with yam flour, etc.).



**Figure 6: Film for training in the manufacture of dryers**

- Day 3 (final day): various games for young people were organized, including RRC races, and prizes were handed out to the folk song and slogan contestants. The winner of the folk song contest was the band from the commune of Vinanivao, whose main message was: "Climate change is nothing but the result of what man has sown and he is the one responsible." The lucky winner of the slogan contest was Maria INDROKONY a 26 year old woman from the village of Ampahana who wrote the slogan "*Tokantrano miomana amin'ny toetrandro, lavity ny silôgno*" which means "A home preparing for climate hazards is saved from starvation".



**Figure 7: prizes for to the folk song and slogan contestants**

During the three-day event, the booths were open from 8 a.m. to 9 p.m. and were visited by over 5,000 individuals from the 16 communes in the district of Antalaha. As CARE usually does in such events, the project presented the actions that had drawn the most visitors' attention during past events:

- Setting up of a living model of a watershed of a size of 8 x 12 m. Two situations were shown: in the first one, the resources were degraded as the ecosystem had not benefited from any intervention to mitigate the impact of climate change and human actions. In the second situation, the same ecosystem is shown but with all the resources protection and restoration actions and mechanisms set up by the community. This approach has long been used by CARE projects to demonstrate and raise awareness on the consequences of human pressure and climate hazards on the environment and livelihoods. This model makes it easier to explain the interaction between men and the environment as well as to help people understand that the destruction of one element in the ecosystem leads to the collapse the other elements (drying up of water sources, erosion, silting of rice fields, and loss of mangrove), all of this leading to a drop in the production of food crops and fisheries, and ultimately to food insecurity for the population.



**Figure 8: living model of a watershed**

- Installation of two "greenhouses" of a size of 10 x 6 m made of bamboo and transparent laminated tarpaulin. One of the greenhouses was put directly under the sun near the booths with nothing inside it. The second greenhouse was placed in a "forest" (it was surrounded by trees) and plants in pots were placed inside. The aim was to show visitors the difference in temperature and humidity between an area without trees and an area with trees and thus demonstrate the ability of trees to filter solar radiation for our well-being. All visitors were surprised at the large difference between the two greenhouses and began to really understand the value of trees and environmental preservation in general. Students and young people were the most attracted to the real-life size illustrations. These are good ways to raise awareness among their peers and adults on the issue of massive deforestation that has been affecting the SAVA region, and especially the district of Antalaha, over the last 15 years.



**Figure 9: Greenhouses: (L) without forest; (R) with Forest**

- To inform the public on the role and usefulness of the micro meteorological stations set up by the project in the project areas, the team of Directorate General of Meteorology from Antananarivo set up an automatic micro-station provided by the Mahafatoky project in their booth. This innovative approach initiated by project (i.e. showcasing micro meteorological stations) has influenced communities to seek accurate weather information and to regularly follow such information to make decisions on their farming program and the types of crop to be used. Visitors had the opportunity to experience live local weather information (temperature, humidity, pressure, precipitation and rain forecast...) using the console connected to the station, 50 m from the booth. The DGM also brought flip stands to inform visitors. Many questions and discussions came up between the meteorology service team and visitors during visits at the booth. What especially intrigued visitors is the fact that through these micro stations set up in the villages, the meteorological service can give them a forecast of local climate situation. According to visitors, this would have a significant impact on their cropping patterns (cropping period, crop type, and duration) and would enable them to address climate change and better fight against food insecurity.

#### e- Organization of a mini-fair

During Year 2, five (5) mini-fairs were organized by CCDRMs and LCDRMs in collaboration with the Mahafatoky project in the communes of Vinanivao, Ambalabe, Antsahanoro, and Antalaha Manakambahiny in June, August, and October 2016. This brings the number of mini-fairs organized since the beginning of the project to eight (8). The aim was to showcase the climate change adaptation practices that exist in the region along other innovative techniques (mulching, use of green fertilizers, composting) to generate discussion and exchange experiences among communities.



Figure 10: Speech during the mini-fair in Manakambahiny

In collaboration with Community Workers (CWs), local DRM committees organized awareness-raising campaigns and training on the cultivation and processing of yam in 39 villages of the project's 16 intervention communes. The sensitization sessions were planned to fall on market days in each selected village as people from nearby villages would also be present at that time. The topics focused on the nutritional quality of yam, the various dishes that can be prepared with it, the wide range of processing options, and its tolerance to strong sunlight.

**Activity 2.2:** Support CCDRMs in the implementation of the gender-responsive climate change adaptation “projects” identified during the CVCA (one or two projects per commune)

Project plan:	at least 28 projects identified and implemented
Plan for the period:	at least 28 projects identified and implemented
Achievement:	13 identified projects in progress
Progress:	46%

The “Community Action Plan for Adaptation” identifies the list of priority activities in the villages and communes. Among the 16 communes, 10 chose reforestation and forest conservation as a priority, and 6 construction and/or rehabilitation of irrigation infrastructure. Safe water supply was ranked second or third among 11 communes out of the project's 16 intervention communes.

#	Commune	Number of projects in progress further to the priority activities identified in the CCAPs		
		Reforestation (NRM)	Hydraulic infrastructure	Drinking water
1	Sahantaha	2	1	3
2	Ampohibe	1	2	3
3	Ambalabe	1	2	3
4	Ambohitralanana	1	2	3
5	Ampanavoana	2	1	7
6	Vinanivao	1	2	3
7	Antalaha		1	3
8	Antombana	1		2
9	Marofinaritra	1	3	2
10	Manakambahiny	3	1	2
11	Antsahanoro	1	3	4
12	Ampahana	1	2	4
13	Ambinanifaho	1	2	3
14	Lanjarivo	2	1	
15	Farahalana	3	1	
16	Sambava	1	2	3

Classification of activities according to their prioritization (1 = Priority No. 1; 2 = Priority No. 2, 3 = Priority # 3 ...).

**Reforestation** was ranked first by 10 communes and second in 3 other communes. In Year 2, the project financed community reforestation with the Community Initiative Flexible Fund. This initiative will contribute to the reduction of greenhouse gas emissions in the atmosphere. In all, 162,915 seedlings were purchased and distributed in 12 communes for:

- Community reforestation (49,025 plants)
- Family reforestation (71,120 plants)
- Reforestation made by VSLA members (42,770 plants).

The area covered with the trees is estimated at 282 ha (7x7m per foot for cloves and 2x3m per foot for the other species).

The list of plants, their number, variety, destination, and number of beneficiaries among VSLAs is provided in Annex 4



**Figure 11: Reforestation / windbreak Nosy Antafana: (L) Director of Human Resources of the Ministry of Energy and Mines, representative of the Minister; (R) Head of Region SAVA, The Senator of Madagascar, SG of the Region**

**Hydro-agricultural infrastructure** was ranked second in the overall prioritization in the communes. Given the complexity of developing irrigated perimeters, the project called upon the Rural Engineering/Regional Agricultural Directorate team and bought a theodolite to minimize errors in studies and implementation. However, the summary and detailed design of the perimeters proposed in the CCAPs showed that the cost of developing a perimeter is too high compared with the budget provided for in the flexible fund at an average of € 30,000 against the € 4,500 budgeted. To allow the projects to materialize, the project will support the commune authorities in seeking additional funding in Year 3.

The Urban Commune of Antalaha ranked the drainage of the perimeter of Anjavy as its top priority, but this is very difficult to implement because of the risk of flooding by river Mananara-be river in case water rises because the rice fields and river are roughly at the same level. As for the cleaning of the town's canals, which was ranked second, it would be very relevant as the smallest rain episode is enough to flood many neighborhoods. However, before starting works, a prioritization of the neighborhoods should be conducted. At least € 45,000 would be required for the dredging and cleaning out (repair of crossing structures and dredging). The town of Antalaha is very vulnerable to climate hazards and the communities live in an "all-or-nothing" situation: when it rains, most of the neighborhoods rapidly find themselves flooded, but once rain stops for a week, the population has virtually no water. To do laundry, women have to walk at least five kilometers because water from the public utilities JIRAMA does not reach users due to the drying up of sources and the lack of water supply infrastructure. In collaboration with the Mayor of the urban commune of Antalaha, the project funded the construction of a well with a wash house in the village of Andampy as well as the rehabilitation of another well and the construction of washhouse in the village of Ambatomitrika. The 156 beneficiary families are very enthusiastic about the development of infrastructure because it would alleviate the tedious water fetching chore, especially for women.

During field visits, community nutrition workers in the villages mentioned the difficulty of processing yam into flour with the traditional mortars that they use. This reduces the motivation of households to produce yam flour. Villagers complained and asked whether there were ways to ease this task. Thus, the project sought suppliers of manual

grinders/mills for processing yams into flour. As a pilot, the project bought 16 manual grinders to be distributed to 16 communes. This activity was ranked among the top three priority actions for the communes as a whole and is very relevant as part of encouraging the population to produce more root crops and store food to cope with difficult times and times when hazards occur and to alleviate women's workload.



**Figure 12: Evaluation (Preliminary Project Summary), Sahantaha and Ambodivarotro**

**Expected Result 3. CCA strategies, programs and debates at the regional/national levels reflect increased transparency and accountability to local communities**

**Activity 3.1:** Contribute to the identification of CCA needs, priorities, and strategies at the regional level and influence this process.

Project plan: Needs and priorities identified and strategy defined  
Plan for the period: Needs and priorities identified and strategy defined  
Achievement: 100%

The purpose of this activity is to integrate climate change adaptation actions into the Regional Development Plan (RDP).

To this end, two 2-day workshops were organized with the Regional Development Directorate to conduct a vulnerability analysis of the SAVA region, using the CVCA method.

The first workshop focused on the analysis of the SAVA Region's vulnerability to the effects of climate change. The participants were divided into three groups: Group 1 brought together the technicians from the decentralized technical services and the decentralized territorial collectivities (selected by their respective entity), Group 2 was made up of women (10 representatives) and Group 3 by men (10 representatives at least). Participants in Group 2 were selected by the people to represent them and were very familiar with the history and the region's vulnerability. The outcomes of the women's group were discussed in a little more in depth to facilitate their inclusion in the priority list. The outcomes of the group work were processed with the tool CRYSTAL, version 4.



**Figure 13: Regional Workshop, prioritization of adaptation activities at regional level**

The second workshop focused on:

- ✓ Restitution of the outcomes of the workshop on the prioritization of climate change adaptation activities conducted in the project's 16 intervention communes.
- ✓ Restitution of the outcomes of the vulnerability analysis conducted at the regional level during the first workshop mentioned above.
- ✓ Data compilation and identification of climate change adaptation activities in the SAVA region.

In all, 47 people took part in the analysis, including the Head of the SAVA region (01); the Prefect of Sambava (1), Members of Parliament elected in the Region (2), the Director of Regional Development (1), Heads of Decentralized Technical Services (6), Heads of schools (8), representatives of women's associations (7), NGOs and the president of the Association of Mayors in each District (5). The mayors of the project intervention communes (16) were invited so they can advocate for the activities they had already proposed in the CVCA conducted in their respective communes.

At the end of these two sessions, climate change adaptation needs and priorities for the SAVA region came out and an implementation strategy for these actions was developed. The SAVA region is now among the very few regions in Madagascar to be equipped with a climate change adaptation plan. The challenge now is to operationalize the plan and integrate it in any sustainable development process undertaken in the region at all levels.

**Activity 3.2:** Develop and implement a CCA advocacy strategy

Project plan: 01 CCA advocacy strategy  
Plan for the period: 01 CCA advocacy strategy  
Achievement: In progress

Thanks to the inclusion of regional leaders in the CVCA process led by the Mahafatoky project, everyone in the SAVA region is committed to integrating the needs and priorities in the implementation of the Regional Development

Plan. However, that lack of resources is an obstacle to its materialization. The next challenge is now to advocate for the RDP that integrates adaptation activities at national level.

During the regional workshop on the development of regional CCA strategies, it was determined that it would be necessary to organize a national advocacy workshop for the integration of the regional CCA plans into the National Development Plan (NDP) prior to its implementation. The project will contact the Climate Change Working Group and the various entities working in the field of climate change to initiate a workshop for preparing the CCA advocacy strategy. CARE will call upon colleagues and partners to support the local team on the development of the CCA advocacy strategy.

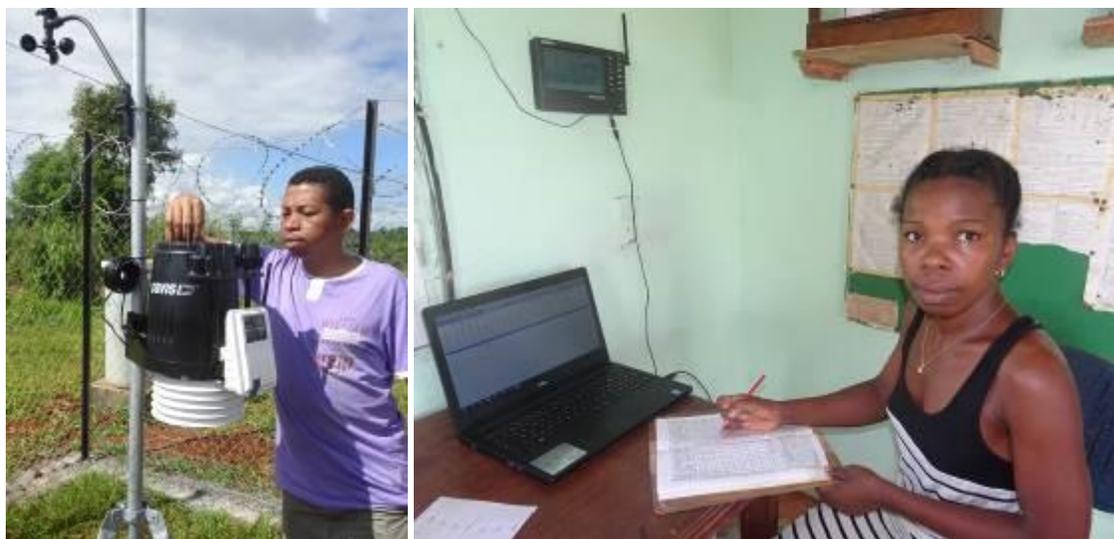
This activity will be conducted in Year 3.

**Expected Result 4. Local farmers have access to up-to-date weather and climate information for proactive decision-making in the agricultural sector**

**Activity 4.1: Set up meteorological micro stations in each commune.**

Project plan: 14 meteorological micro stations set up  
Plan for the period: 10 meteorological micro stations set up  
Achievement: 8 meteorological micro stations set up  
Progress: 80%

The initial objective of the project was to set up 14 meteorological stations. This activity could not be implemented in Year 1, as the corresponding budget line could not cover the purchase of micro-stations of the DAVIS Vantage Pro2 type (standard requirement of the Department of Meteorology). The CMP negotiated with the donor for approval of a change in the budget to allow for the purchase. By the time the discussion for the budget planning was completed and the purchasing was launched, the price of a micro-station increased. Therefore, the project could buy only 10 Davis meteorological stations against the 14 planned. However, this number was still enough to cover the project area.



**Figure 14: Meteorological microstation in Antalaha, Bodimena Olivier, head of the weather station and Bemiasa Solange, weather observer Antalaha**

Each micro-station is equipped with an anemometer, a wind vane, a rain gauge, a thermometer, a hygrometer, a UV and solar collector, a barometer, and a console connected with the station through 868 MHz Wi-Fi. The location of each meteorological station was determined in coordination with the General Directorate of Meteorology, CARE and local authorities taking into account the issue of safety for the equipment and the need to cover the entire project area. Before they were installed on site, the devices were calibrated at the central office of the DGM in

Ampandranomby, Antananarivo. The 10 micro-stations were then sent to Antalaha by car. Three technicians from the DGM accompanied the stations.



**Figure 15: Installation of weather station in Antanambaon'i Gavo, Ambohitralanana**

During project Year 2, eight stations out of the ten were installed. Despite the will of the technicians, travel between sites and bad weather have not allowed for an achievement rate of 100%. The installation of the two remaining stations are planned for the first week of February, 2017. Given the cost of equipment, the DGM requested the project to build a fence around the devices and ensure their safety in addition to community volunteers who supported the Community Safety Officers in checking on the facilities. Currently, five stations out of the eight have been fenced. The materials for the other sites were purchased in 2016 and are ready to be installed.

**Activity 4.2: Train volunteers to use micro-stations and to look for climate and weather data reports.**

Project plan:	30 volunteers trained
Plan for the period:	30 volunteers trained
Achievement:	29 volunteers trained
Progress:	97%

Once the micro-stations were set up, the technical team of the DGM from Antananarivo provided training to community volunteers tasked with collecting and sending regional data as well as to the staff of the meteorological service in Antalaha and Sambava that will ensure data processing, exploitation and sharing at the municipal and national levels.

The objective of the activity is to have competencies available locally that master the basic theoretical concepts and the operation of micro-stations. Thus, the volunteers were selected among those in the beneficiary villages who expressed interest to play the role of community volunteer during the information and awareness-raising sessions organized by the project. The selection criteria included:

- Good level of literacy;
- Residents in the village where the infrastructure is located;
- People morally accepted by the community (good conduct, model, influence ...)

The volunteers were grouped in three training sites: Antalaha, Ambodirafia and Marofinaritra. In all, 29 volunteers were trained to manage the eight stations already installed. They do not receive any allowance or other forms of compensation. They are just motivated by the benefits that their communities would obtain from the weather and climate information, namely in terms of income-generating activities in the agriculture and fishing sectors.

The theoretical and practical training focused on:

- ✓ Understanding the data processing software;
- ✓ Direct reading and data collection (data extraction, converting data into text);
- ✓ Maintenance of the station (mounting and dismounting, maintenance of equipment)
- ✓ Reporting system (data forwarding, data processing by the meteorological service, feedback to the community)



**Figure 16: Training of volunteers (L) Office Project Antalaha; (R) Base life Natur'algues Ambodirafia**

**Activity 4.3:** Create a climate and weather information system available to small farmers

Project plan:	1 MOU signed
Plan for the period:	1 MOU signed
Achievement:	1 MOU signed
Progress:	100%

The climate and weather information system set up by the project in collaboration with the local meteorological service aims to provide small farmers with weather data and information to better manage their agricultural production in the context of climate change. The system operates as follows:

1. Micro-stations automatically collect weather and climate information through the various devices mentioned above ;
2. Community volunteers collect the information automatically provided by the micro-stations devices using a collection tool provided to them and on which they had been trained and send them to the regional meteorological service;
3. The regional meteorological service analyze, process, and share weather and climate information with small farmers.

To ensure that this mechanism is operational, a MOU was signed between the General Directorate of Meteorology and the Project. The agreement sets out the respective responsibilities for the rational and sustainable exploitation of the meteorological station (see Annex 5).

The data are important for the understanding weather information in relationship with planning of their activities by small farmers. This may include anticipating the planting period (shift in cropping calendar), understanding the production cycle of a variety in relation to the underground water reserve after rain, establishing crop forecasts, anticipating the drying of vanilla, algae and root crops in relation to air moisture rates. For fishermen, the weather information helps them decide whether they should go out based on the weather. Technicians from the local meteorological service translate that data into simple information for farmers, such as the forecasted amount of rain, the humidity in the air, wind speed, etc. Training on the interpretation of weather data was also provided to representatives of small farmers in each village as well as to agricultural services officials. Questions that may be answered based on rainfall forecasts include: What does that mean for agriculture? Should we go ahead with planting or wait? The training aimed to help users understand the meaning of the data provided by the meteorology service so as to enable them to make the right decisions for agriculture.

At this stage, the eight stations are operational and have begun collecting data. To ensure that the volunteers properly transcribe the data in the data collection forms, technical support by the local meteorological service technicians is currently being provided. The local meteorological service will be soon able to provide information on weather and climate to help small farmers in their agricultural and fishing activities.

## Expected Result 5 - Small farmers are practicing improved agricultural techniques to maintain stable levels of food production in the face of cyclones, flooding and rainfall variability

### Activity 5.1: Identify and train 26 community agriculture agents from the project zone

Project plan:	26 agricultural agents trained
Plan for the period:	26 agricultural agents trained
Achievement:	26 agricultural agents trained

Early in the project, community agricultural agents were recruited in each project intervention zone to serve as trainers and resource people for farmers in each area after the project ends. They were selected in their communes of origin. The selection criteria included:

- Farmers expressing interest to work as volunteer agricultural agents and with enough time available to perform the associated duties;
- Farmers aged 18 to 45 with ability to travel in the villages to raise awareness among their peers;
- Farmers from the villages and accepted by the community to ensure the duties entrusted to them.

The agricultural agents are 23 men and 3 women. The imbalance between men and women is due to the remoteness of several intervention fokontanys.

In all, the project planned to hold five training sessions on basic agricultural techniques. Four training sessions were provided during Year 1 and addressed the following topics respectively: (1) basic techniques in agroforestry, (2) cash crops techniques, market gardening and other food crops, (3) techniques for setting up village nurseries and reforestation techniques, and (4) compost and green fertilizer production techniques.

In Year 2 of the project, the last training was provided to community agricultural agents to complete the training on all basic agricultural techniques that are necessary to them in the performance of their function. The training was conducted by a consulting group hired by the project through a call for expressions of interest at the regional level. The three basic principles of conservation agriculture were at the heart of the training:

- ✓ Minimal tillage.
- ✓ Permanent soil cover with plants that can live in symbiosis or with mulch
- ✓ Diversification of crops, in combination and/or in rotation.

All the training conducted by the consultants referred to these three basics of conservation agriculture. Agricultural agents benefited from capacity-building (theoretical and practical) on cropping techniques, including growing rain-fed rice with leguminous plants, SR/SRA, crop rotation (rice-legumes). The agents were encouraged to apply the agro ecological techniques to improve soil and reduce tillage, especially for vulnerable households with young children.

To avoid the use of chemical pesticides, the project conducted a training (refresher training for the staff) on the promotion of biological control, using plants such as manasy be (*Agave rigida*), leaves of *Gliricidia sp.*, etc.

Vanilla remains the main concern of households that have fields. The project's agricultural agents requested specific support from the consultants on vanilla plantation management. The consultants conducted a field assessment that was followed by recommendations for integrated management and control of diseases, pests, and deficiencies in vanilla plantations. (Cf. Annex 10: Consultant's report on agroecology training)

After the training, the community agricultural agents became operational and started providing support to local farmers through outreach session and practical capacity-building at the village level based on the crops farmed by the community and according to the farming calendar. The training usually took the form of farmers' field schools and involved practical training on climate-smart farming techniques. The topics addressed were mainly techniques for

market gardening (tissam, petsai, green beans, beans, maize, etc.) for two reasons: the weather conditions prevailing at the moment in the region were suitable for this type of crop; farmers were motivated to practice market gardening because it is both easy to practice (does not require too much land) and the time to harvest is short. At least one training per crop was conducted by the agricultural workers in their village under each farmers' field school. Project technicians ensured ongoing formative monitoring of their activities at the village level and requested them to give short reports on the sessions they conducted on a monthly basis.

**Activity 5.2:** Provide technical support to 22,500 small farmers for adopting basic, climate-smart agriculture techniques

Project plan: 06 training sessions per fokontany  
Plan for the period: 06 training sessions per fokontany  
Achievement: 06 training sessions per fokontany

After their training, community agricultural workers led training sessions for farmers under the supervision of the project technicians. The skills transfers were conducted according to the "farmer field school" approach. These fields were set up in each fokontany to serve as demo and practice fields during the technical orientation of farmers.

The six training topics provided to community agricultural agents were those on which they were expected to train farmers in the localities and included:

1. Basic principles of conservation agriculture,
2. Basic principles of SRI/SRA for rice cultivation,
3. Vegetable garden and box gardening system
4. Use of green fertilizers
5. Use of multipurpose trees: hedgerows, windbreaks, fuel wood, and source of green fertilizers
6. Principles of improved composting.



**Figure 17: Rice growing on tanety without burning under mulch**

During Year 1, the community agricultural workers were able to cover only the last four topics in the farmer field schools in the 182 beneficiary fokontany, with a total of 4,186 beneficiary small farmers. This is actually due to the fact they were trained only on these four topics during the first year.

In Year 2, the two remaining topics on which they were trained by the consultant were shared with the small farmers in the 182 beneficiary villages to complete the capacity-building on climate-smart agriculture. In all, the community agricultural agents trained 9,522 small farmers, representing 42% of the beneficiaries under the project, out of which 5,015 were women. To achieve the target set, the project chose to use the cascade training approach given the number of beneficiaries to reach. This approach allows for reaching more beneficiaries. The farmers that benefited from training will subsequently supervise their peers in their respective villages at the field schools. A register was implemented at the field schools to allow for counting the people who visits the field schools and who have received technical support from farmers.



**Figure 18: Bedimasy in his field at Ampohibe; RANOROVELO Sela in the Field School, Cowpea, Yam in Anjiamangotroka**

Various crops were promoted by the project with the associated techniques under this capacity-building activity:

- Market gardening (petsai, tissam, lettuce, onion, carrot, chive)
- Legumes (beans, soybeans, groundnuts)
- Cereals (rice, sorghum, maize)
- Tubers (yam, taro, sweet potato)
- Cash crops (cloves, pepper, coffee, vanilla)

With the soaring of vanilla prices in the SAVA region (up to 312 USD per kilo), the prices of the basic commodities also increased on the markets. The cost of living in general increased by a factor of 3 compared to the normal period. The soaring price of vanilla has been beneficial for many farmers in the SAVA region as almost every farming household has at least a few vanilla plants in their fields and a large majority of farmers were able to raise money during the farming season. However, farmers are aware that this increase in the price of vanilla is only temporary and once the situation is back to normal, their income will drop. Hence their interest to also produce vegetable crops to enable them to earn money in the short term as well as to grow tubers to build their food stocks in preparation of more difficult periods. Thanks to the market gardening production by the project's beneficiaries, the price of these products on the market remained stable and affordable for most households. Being aware that speculative practices by resellers is one of the causes of high inflation, producers kept their price at the same level as before as a way to influence resellers' prices. Once the crops flooded the market, the resellers' prices followed the farmers' prices and this had a spillover effect on the prices of other products, resulting on more stable prices overall.

**Activity 5.3: Support small farmers to identify and produce hazard-tolerant seed varieties**

Project plan: 48 reflection workshops  
Plan for the period: 32 reflection workshops  
Achievement: 32 reflection workshops

Starting on project Year 1, Mahafatoky has organized a series of workshops for Participatory Technology Development (PTD) that bring together small farmers, agricultural community workers, technicians from the Ministry of Agriculture, and volunteers affiliated with the Agricultural Service Centers (CSA) to identify seed varieties and cultivation techniques that are more suitable and tolerant to the erratic climatic conditions in the zone. In Year 1, 567 people, including 25% of women, participated in sessions to identify seed varieties that are resistant to hazards.



**Figure 19: (L) Sorgho and Sela planting; (R) Yams at Ampatakamanitra**

In Year 2, 32 workshops were held in the project area, gathering the 552 participants supported in Year1, including 35% of women.

Communes benefiting from the workshops	Number of participants		
	Men	Women	Total
Antsahanoro	34	10	44
Antombana	38	19	57
Ampahana	33	15	48
Antalaha	42	26	68
Farahalana	25	24	49
Ambalabe	25	27	52
Amphibe	35	13	48
Vinanivao	11	9	20
Ampanavoana	15	5	20
Ambohitralanana	34	7	41
Sambava	28	20	48
Lanjarivo	41	16	57
<b>TOTAL</b>	<b>361</b>	<b>191</b>	<b>552</b>

As regards climate-tolerant crops, as in the sessions in Year 1, farmers declared that maize, sorghum, yams and sweet potatoes are more tolerant climate conditions variations compared to other food crops. However, there is a need to keep on looking for innovation as climate conditions are worsening, hence the importance of individual experimentation by farmers followed by exchange sessions at the field schools. Experiments were conducted individually or collectively by farmers to adapt technology to their context as well as to find ways to increase production. Varieties were tested on dry land during dry periods in a first stage and on wet land during the rainy period in a second stage to allow to see what would production be in the two cases. The test showed that the difference in outcomes results from the technique used. Therefore, the varieties were deemed to be tolerant to climate variations.

In terms of biological control, the greatest innovation was the use of animal urine and "*amposihy*" - a plant used in gardening to fight against pests and slugs. The bio-pesticide is not applied to plants but sprinkled around to scare away pests.

The principles of agroecology were much debated during the workshops. The discussion focused primarily on soil management:

- Fertilization: use of sugarcane residue (bagasse in decomposition) as mulch and as basal fertilizer for rice.
- Conservation: importance of shade trees for agro-forestry crops
- Associated crops: rain fed rice and sweet potato, sweet potato being planted at the time the first weeding is performed

The workshops were held over two days: the first day was used to discuss the technique selected and the second day was devoted to visits and experimentation in the field schools where the proposed techniques were implemented.



**Figure 20: (L) Peasants with their tarot harvest; (R) Facilitator of the MAHAFATOKY Project during weighing.**

At this point, all the 182 field schools benefiting from the project in the villages are using these techniques in their demonstrations, namely bio-control of pests under market gardening, and use of fertilization techniques and soil management for other crops.

**Activity 5.4:** Provide technical support and inputs to small farmers to facilitate the adoption of hazard-tolerant seeds and crops.

Project plan:	48 discussion workshops
Plan for the period:	32 workshops for reflection
Achievement:	32 workshops for reflection

During the first year of implementation, the project started the distribution of seeds adapted to local climate conditions to 6,075 local farmers.

The activity continued in Year 2 with the promotion of varieties of rice and maize that are more tolerant to water stress and are more productive. Soybean and cowpea were also promoted as part of crop diversification along sorghum which is well-known for its capacity to adapt to water stress. The distribution of seeds of orange-flesh sweet potato, beans, and vegetable crops continued.

The project distributed quality seeds that allowed the 8,570 vulnerable households in the 16 intervention communes to plant at least two crops promoted by the project. These households were among the vulnerable groups living the project's beneficiary villages who owned exploitable land plots but did not have the means to purchase quality seeds to increase their production. They were selected by community agricultural agents in the villages further to information and awareness-raising sessions. An Expression of Interest register was opened in the villages so that every farmer could register. To select the beneficiaries, community agents with the help of the population carried out checks on land plots and assessed how motivated the farmers were to practice the crops.

Surface area cultivated and production by crop

Variety	Unit	Quantity distributed
B22 upland rice	kg	1750
X265 irrigated rice	kg	200
Poly-ability rice	kg	7000
Local maize	kg	1827
Mailaka maize	kg	7000
Irat maize	kg	3500
Panar maize	kg	400
Soya	kg	9000
Cowpeas	kg	4000
Bean	kg	2189
Market gardening	bag	10293
Yam	cuttings	88700
IRAT 203Sorghum	kg	200
<b>TOTAL</b>		



**Figure 21: Production vegetable field school Ambato, Lanjarivo and Arlette Bira security in the project office MAHAFATOKY**

**Activity 5.5:** Train farmers on food processing and storage techniques as well as on safe seeds storage

Project plan: 48 sessions  
Forecast over the period: 16 sessions  
Achievement: 14 sessions

In Year 1, 16 training sessions on fruit and tuber processing and storage were provided to 570 people, out of which 86% were mothers, at the rate of one training session per commune. The training was ensured by an all-women team of 32 trainers who professionalized in the drying and processing of agricultural products with the support of the previous DIPECHO programs and addressed the following topics: storage techniques, cooking demos, and tuber and fruit drying techniques. In Year 2, the project conducted a refresher further to first training. Due to the trainers' busy schedule, only 14 of the 16 sessions planned were held. In all, 412 people out of the 570 trained in Year 1 benefited from the refresher training in Year 2. The remaining trainings will be conducted in February 2017.



**Figure 22: Processing, Conservation of Products: (L) Maromokotra and Ampatakamanitra Farmers' Group; (R) Evelyne Ampatakamanitra**

After the training on processing and storage techniques, the project distributed transparent polyethylene tarp to training participants to allow them to build their own dryers. A total of 5,460 m of PEB sheeting were distributed at a rate of 30 m per village. One model per commune was built by the project to allow recipients to easily replicate it. Thus, 10 dryers per village were built by the villagers themselves for a total 1,820 dryers in the 182 project beneficiary village. Beneficiaries are grouped by commune for use of dryers and plan together the drying schedule.

Farmers in the project intervention zones have now been able to dry and store agricultural products, especially yams, sweet potatoes and fruits in preparation for difficult times and also for sale to generate income (yam flour, processed products, etc.). Drying allowed for storing more food among beneficiary households, for diversifying the types of foods consumed and for earning more money through the resale of processed products. (cf. testimony by Beanjara Francis in Annex 14)

**Expected Result 6- Communities have adopted improved natural resource management strategies to mitigate the effect of climate shocks on their productive assets and homes**

**Activity 6.1:** Restore 14 hectares of mangroves through a Cash/Food-For-Work program

Project plan: 14 ha of mangroves maintained  
Forecast over the period: 23.4 ha of mangroves maintained  
Achievement: 42ha of mangroves maintained

In Project Year 1, the Mahafatoky project restored 23.4 hectares of mangrove (against the 14 ha planned) at a density of one plant per square meter. To maintain this density, the project organized a maintenance campaign to replace the dead mangrove trees during the second year. Given that the actual planting rate has doubled compared to the project's estimate, the project decided to take charge of the mangroves restored during the different phases of the DIPECHO project in the villages of Sahanjana and Ambohimahery.

The Cash-for-Work system was used again for the maintenance and refilling of mangroves. A total of 409 people, out of which 67% were women, worked 5 hours per day for a daily amount of 3,000 ariary per person, or 15,000 ariary per week for three weeks.

The refilling campaign was carried out on 10% of the 23.4 ha area of mangrove restored during the first year so to ensure complete coverage of the area. The mangroves in two DIPECHO sites were expanded with the plantation of 221,550 propagules over a surface area of 18.8 ha. This brings the number of propagules planted by the project to a total of 416,390 over a surface area of 42 ha, i.e. 300% of the project target.



**Figure 23: Restoration of the Mangroves: (L) Planting by the MAHAFATOKY Project; (R) Visit of BNGRC, planting of DIPECHO, with maintenance by MAHAFATOKY**

In a few years, these mangroves will offer spawning areas and a refuge for fish. With proper management of these resources, they may constitute a considerable food reserve for the population. Indeed, the DIPECHO project showed that restored mangroves have allowed people to catch more fish and more species of crustacean.

**Activity 6.2:** Develop infrastructure for 109 village nurseries through a Cash/Food-For-Work program.

Project plan: 109 village nurseries  
Forecast over the period: 109 village nurseries  
Achievement: 182 village nurseries

As a response to the massive demand for seedlings in the SAVA region further to the sensitization and training provided by various projects, the project plans to set up 109 groups of nurserymen who will specialize in the preparation and sale of seedlings.

Project Year 1 was dedicated primarily to the identification of 109 sites for the village nurseries. As a result of the advocacy and training provided by the project on conservation agriculture and the various cultivation techniques, the 73 villages that were not selected for the implementation of nurseries continued expressing interest to join the nursery program. In collaboration with the groups of nurserymen, the project set up 182 village nurseries against an initial plan of 109, which is 167% of the project target.

While it was planned to use a Cash-for-Work system to set up the nursery infrastructure, the project did not have to provide financial support ultimately due to the dedication and enthusiasm of community members in the 182 intervention sites: they wanted to complete the activities on their own means.



**Figure 24: Nursery: (L) Gilbert Handicap of Leprosy Mahevadoany; (R) Village Nursery**

**Activity 6.3: Provide technical assistance and inputs for 109 existing village committees so that they can begin managing village nurseries**

Project plan: 109 village committees  
Forecast over the period: 109 village committees  
Achievement: 182 village committees

During the first year of the project, nursery management groups were trained by the project's field schools on various modules ranging from site selection to planting techniques, to potting, to transplanting and maintenance of seedlings in nurseries. Once the village nurseries were set up in February 2016, the project distributed 455, 00 plastic pots (i.e. 2,500 pots per group) as well as gardening materials for the maintenance of nurseries.

The project provided each group a starting stock of seeds and cuttings. In all, 182 groups composed of 1,903 members, including 958 women, are currently in charge of the management of nurseries. They were trained either by members of the local DRM committees (65 people) or VSLAs (25 people) or both groups (92 people).



**Figure 25: Nursery: (L) Visit of Antsirabe Nursery (R) Nurseries & student in Antohomaro**

As regards seeds and cuttings, the project distributed agro-forestry cash crop plants as per the groups' request (cloves, pepper, and coffee; fruit trees such as rambutan litchi, zatte) as well as fast-growing varieties resistant to the wind such as *auriculiformis Acacia*, *Acacia mangium* and the Australian pine and forest species such as Hintsina and raffia (see Annex 9). Other plants such as noni and foraha were collected locally by group members to be sown directly in germination trays.

To promote good accounting and monitoring of the groups' income, cashboxes sales are being design and will come with printed formats for streamlined accounting as a way to facilitate the management of the sales of seedlings.

Over this period, the 182 village nurseries produced a total 202,770 tree seedlings and the Mahafatoky project was their first client for its Community Reforestation Campaign.

**Activity 6.4:** Organize community reforestation along 6 km of coastline and train 10 communities to sustainably manage their coastal forests

Project plan: 10 windbreaks plantation sites  
Forecast over the period: 10 windbreaks plantation sites  
Achievement: 4 windbreaks plantation sites

The objective of this activity is to create windbreaks along the shoreline as a buffer against strong winds in places where the trees had been felled. With the village nurseries set up in 182 villages, the project was able to support groups of nurserymen while acquiring quality young plants to build the windbreaks. Local varieties resistant to strong winds such as *Casuarina*, noni and *Terminalia superba* and fast-growing varieties such as *Acacia mangium* and *Acacia auriculiformis* were selected by the project.



**Figure 26: Childhood Month in Ambodikakazo; Wind breaker in Mahevadoany**

During this period, coastal reforestation concerned four sites (Farahalana, Antseranambidy/Ampahana, Mahevadoany, Ambodikakazo) out of the ten planned. Indeed, a number of trees produced in the village nurseries are not yet in a condition to be transplanted, hence the delay in covering the 10 sites proposed under the project. In all, 7,100 tree seedlings were planted in the four sites, covering 645 linear meter of coast, i.e. 11% of the project target.

The remaining eight sites will be covered during in February 2017, when the seedlings at the nurseries will be mature enough to be transplanted.

**Activity 6.5:** Promote the creation of inland family trees reserves in the project area.

Project plan: 14 watersheds reforested

Forecast over the period: 8 watersheds reforested  
Achievement: 6 watersheds reforested

The main objective of this activity is to create a reliable source of firewood and timber for households to prevent them from cutting trees in sensitive areas.

To this end, the project conveyed messages to encourage families to plant trees on their own land in all its mass sensitization activities. During the World Environment Day on June 5, 2016 the project organized a reforestation campaign on watersheds. In all, 1,004 participants including 702 students were mobilized to plant 6,500 young plants of cash crops (clove, coffee, etc.) and fruit trees (lychee, tangerine, etc.). The beneficiaries included 172 families with plots in the two watersheds covered by the program.

During this period, the project was expected to work on eight watersheds in addition to the five already reforested the previous year. Due to delays in the supply of seeds, the village nurseries supported by the project could not produce enough tree seedlings to achieve this target. In all, six watersheds out of the eight planned were reforested by the project. The project plans to catch-up in February 2017 when the seedlings in the village nurseries will be mature enough.

**Activity 6.6:** Support the DRM committees in community to organize reforestation on State-owned lands within the land in the project area

Project plan: 16 reforestation campaigns  
Forecast over the period: 16 reforestation campaigns  
Achievement: 19 reforestation campaigns  
Progress: 118%

The long-term objective of this activity is to conserve the communities' soil and water resources. During the development of climate change adaptation activities, community reforestation was identified as a priority in 12 communes in the project area. The project consulted with the DRM committees and the leaders of each commune on the possibility of organizing community reforestation actions on public land they proposed. Once validated in collaboration with the DRM committees in each of the communes, the project used the flexible fund to organize 19 community reforestation campaigns in 12 communes. During these campaigns, 46,861 tree seedlings (see Annex 10) provided by the project were planted over 28 ha of State-owned land.



**Figure 27: Reforestation on World Environment Day 5 June 2016**

A program for monitoring and maintaining the plantations will be carried out using the Cash-For-Work approach in the first quarter of project Year 3.

**Expected Result 7- Vulnerable women have reduced their climate risk through increased levels of income and strengthened collective voice**

**Activity 7.1: Develop and provide training for 182 Village Savings and Loans Associations (VSLA)**

Project plan: 182 VSLAs created  
Forecast over the period: 182 VSLAs created  
Achievement: 221 VSLAs created

VSLA is an approach targeting poor people to enable them to manage cash flow in their households in a more efficient and flexible manner, and to invest in income-generating activities as a way to diversify their sources of cash income. The main income-generating activities practiced include market gardening, collection of agricultural products for resale (e.g. rice, beans), small hotels to sell cooked foods (fritters, fish, etc.), purchase and processing of fruits and tubers into intermediate or finished products (flour, fritters, fruit paste, jam). At this stage of the project, 221 associations out of the 182 planned have been set up, of which 80 were trained during the reporting period. Among them, 164 have already passed the final stage of their cycle (sharing of the funds) and have graduated in to self-managed VSLAs for their new cycle, i.e. they will no longer be supervised and trained by the project but will be only monitored.



**Figure 28: Awareness Campaign for the Implementation of VSLA, on International Women's Day 8 March 2016**

Among the groups, 182 received management equipment such as a cashbox and notebooks from the project. Membership has much increased over the year while the size of a group is limited to 25 members. Those who could not join an existing group had to create new groups sponsored by the VSLAs supported by the project. These new group did not received equipment and support from the project. In the commune of Ambohitralanana, a group set up by a previous project is sponsoring 11 self-managed associations without any equipment provided by the project.



**Figure 29: VSLA: Fund Sharing of the Association; Common meal after sharing**

Regarding capacity-building and sharing of achievements among VSLAs, six members of VSLAs in the project area were taken to visit their peers supported by the Apinga project in the District of Vatomandry. The exchanges pertained to their usual operation and the use of funds. Back in their communities, these six members shared the good practices they noted during the visit with the other group members in the project area.

**Activity 7.2:** Create and build the capacity of two VSLAs for women and women's allies at the district level.

This activity aims to mobilize VSLA members in the two districts to ensure their sustainability, i.e. VSLAs should be able to operate independently without CARE's support. The idea is to establish a network of champions who are technical experts and can support the newly created VSLAs manage their challenges until they reach maturity. To this end, the project team convened five representatives from the VSLAs of each village in their respective commune capital town to set up a structure of trainers and technical advisors at the commune level. This structure is led by a Chair; a Vice-Chair; two Secretaries; two Treasurers; six Advisors; and two Auditors. The members of the structure's executive committee were then convened in their district's capital city to duplicate the same structure at the district level. Once the two structures were in place, the 384 members (360 at the municipal level and 24 at the district level) were trained by project staff on their mission of promoting VSLAs and on their functioning as a structure in charge of supporting newly created VSLAs.



**Figure 30: Implementation of the VSLA Platform and Election of Office Members**

The two structures also have a role of promoting women's role in society in general and to find ways to amplify the voices of vulnerable people in advocacy opportunities arising in the Region.

**Activity 7.3:** Assess each of the actions in terms of efficiency/contribution to achieving the objectives.

The purpose of this activity is to monitor progress and assess change in indicators among beneficiaries, using M&E tools, in order to further thinking on the project.

To this end, the project conducted participatory monitoring and evaluation of the project throughout the year, using standard tools.

Monitoring activities showed that 4,448 persons including 3,607 women have now joined VSLAs at this stage. Drop-out rates are significantly low at 1% against a new membership rate of 7%. The groups have an average credit fund of MGA 1,298,243. Each member contributed an average savings of MGA 165,573 and received an average net profit of MGA 720 per share.

The rate of members taking a loan is somehow low. The survey conducted by the project team noted that this is due to a lack of confidence and fear of not being able to repay. However, this issue is getting solved little by little.



**Figure 31: Transparency within the VSLA**

## **2. Grant recipient's views on the future course of the project:**

(State whether the project can, according to the grant recipient's assessment, be continued as planned. If delays or other difficulties were encountered, describe how these will affect the future course of the project, taking into account their programmatic as well as their financial impact.)

Unless major socio-political problems and climate-linked problems (cyclone) occur in the project areas, the project should progress as initially planned. The delays in project implementation noted during the reporting period will be made up for during the first quarter of 2017.

In Year 3, the project will focus more on the multipliers of the impact of initiatives implemented among targets in order to achieve the desired level of ownership and possible application of the approaches promoted by the project.

## **3. Other comments**

The introduction of micro-meteorological stations will enable farmers to anticipate cropping seasons by adapting to climate variation and to produce more in preparation of difficult periods.

With the price of vanilla soaring, households in the project intervention areas did not follow the actions initiated by the project because they wanted to take advantage of this opportunity to make more money though it is not a long-lasting opportunity. They would have done better investing invest in what the project proposed and thus significantly decrease their food insecurity on the long run. There is evidence of the commitment of the people in project intervention areas to contribute to the achievement of objectives set for their own interest (households) as well as of the communities' interest in actions to strengthen their resilience to shocks and climate variations.

**B. Proof in numbers**

BMZ Project - No.:.....

Interim Statement

Financial statement for the fiscal year of 20 ..

<b>Total expenditure in the reporting period</b>		<b>€.....</b>
including costs for	food: €.....	
	relief supplies: €.....	
	transport: €.....	
	recurrent needs: €.....	
	staff: €.....	
<hr/>		
<b>Total income in the reporting period</b>		<b>€.....</b>
Balance brought forward from 20 ..	€.....	
including government funds to the amount of: €.....		
Government funds received in the reporting period:	€.....	
Additional financial resources (such as interest):	€.....	
<b>Balance:<sup>5</sup></b>	€.....	<b>€.....</b>
including government funds to the amount of:	€.....	

This is to confirm that the expenses were necessary, that the use made of funds was thrifty and economical and that the data coincide with the figures found in journals and vouchers.

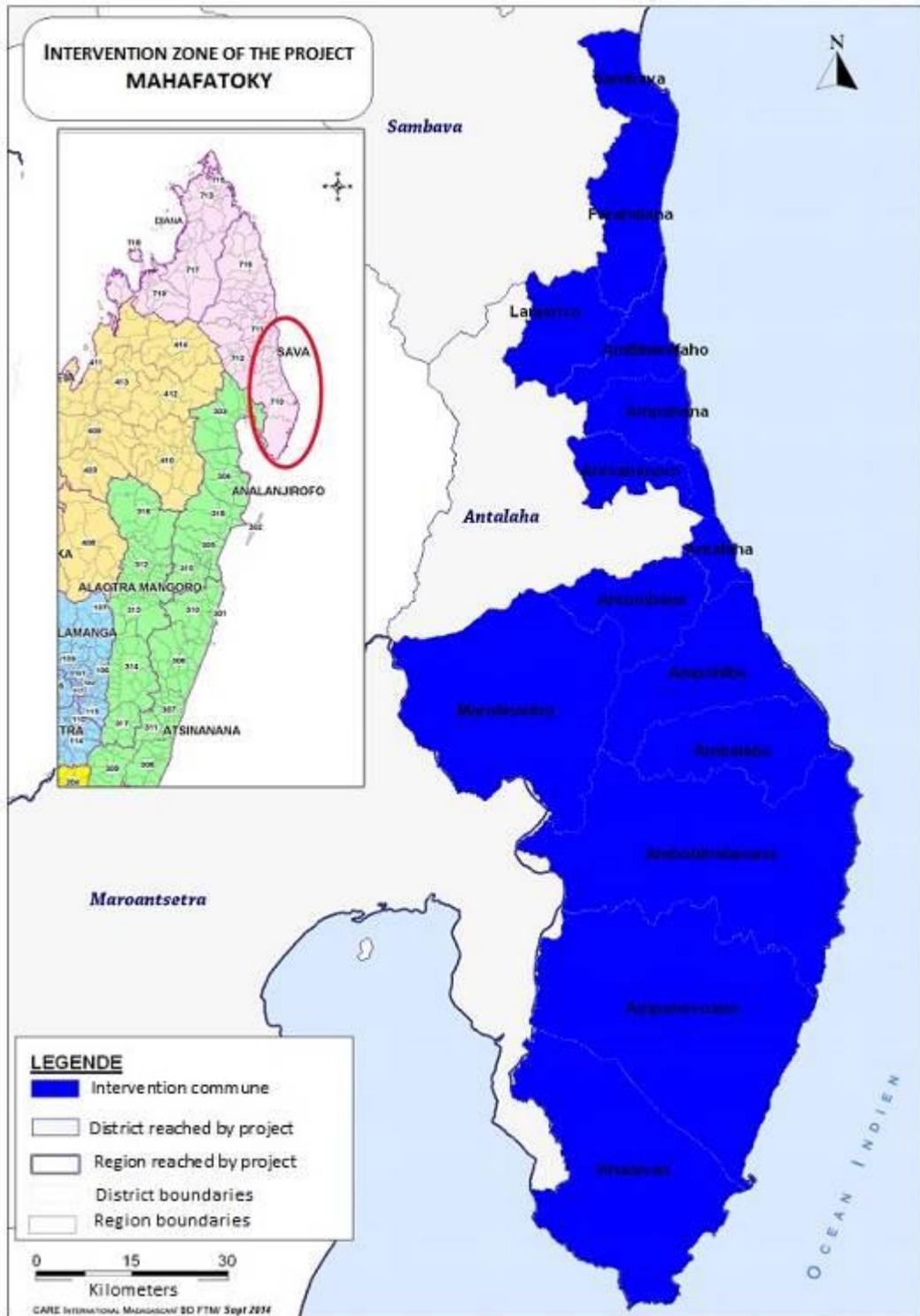
....., date .....  
(signature)

**ANNEXES**

**ANNEXE 1: Map of the project’s intervention zone**

<sup>5</sup> **Explanatory notes concerning the balance:**

If there is any balance of federal funds, private organisations are required to comment on the issue of interest. An added interest to the amount of 5 percentage points above the base interest rate according to Art. 247 of the German Civil Code (BGB) will be imputed – consistently whenever [government] funds were requested for payment too early. This shall apply to any [government] funds which are not spent within the prescribed period of two months or four months for payments in the partner country (as stipulated in item 1.4 of the Special Auxiliary Conditions entitled *BN/Best-P/ENÚH*). If applicable, the grant recipient shall include a calculation of the interest in the interim statement and shall transfer the interest to the Federal treasury to the name of Bundeskasse Halle, account no. 800 010 20 at the Bundesbank-Filiale Halle, bank code no. 800 000 00, indicating the reference number specified by the BMZ. Only if there are substantial reasons beyond the responsibility of the project partner in the partner country can the claim for payment of interest be waived; these reasons must be presented.



**ANNEX 2: ACTIVITY PROGRESS BY INTERMEDIATE RESULT**

INTERMEDIATE RESULTS	R1	R2	RI3	RI4	RI5	RI6	RI7
PROGRESS OF ACTIVITIES	88%	63%	88%	94%	95%	124%	116%

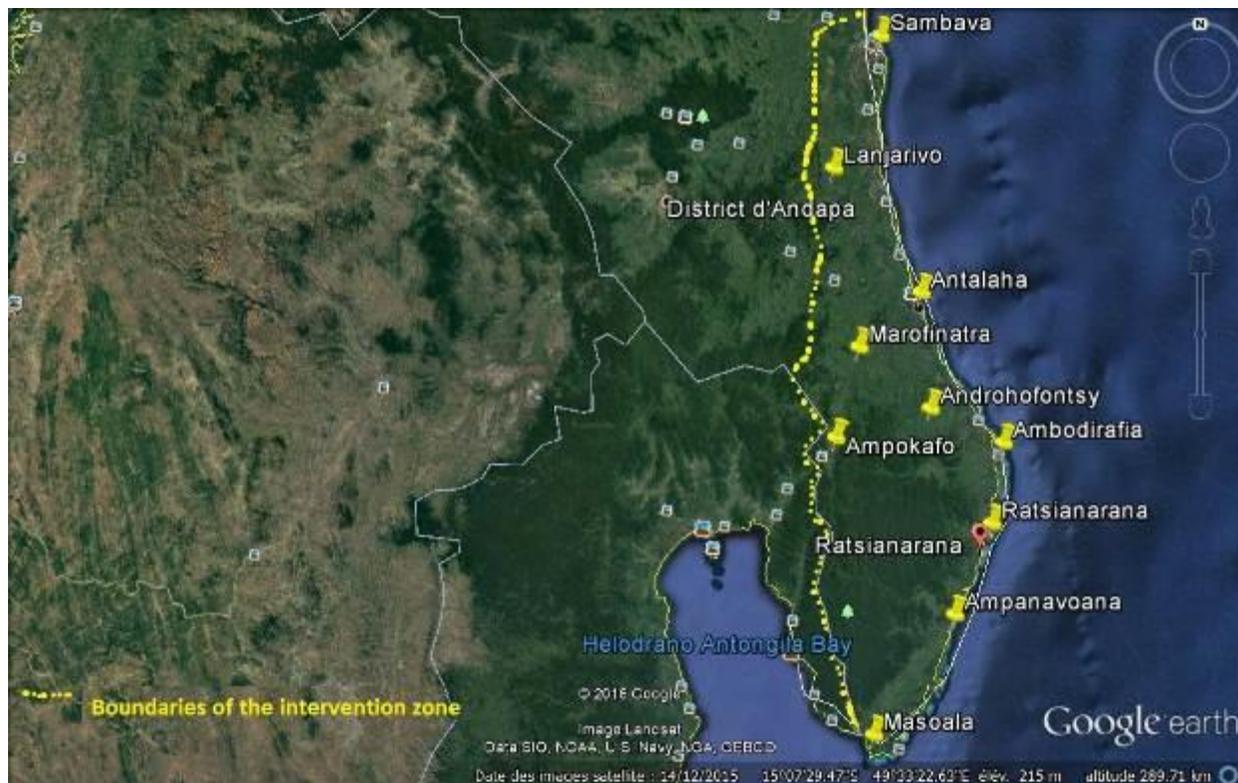
**ANNEX 3: Report on the prioritization of climate change adaptation measures of the commune of Ambinanifaho**

**ANNEX 4: List and number of seedlings for reforestation**

Espèce	Qty ordered	Qty for VSLA	Qty for reforestation	Qty for family/group reforestation
Jlofo	83 815	42 770	-	41 045
Filao	7 179		5 954	1 225
Hintsina	5 244		5 411	167
Acacia	15 757		15 756	1
Bonara	1 100		716	384
Foraha	1 029		600	429
Cola	573		412	161
Polvre	1 497		-	1 497
Orange	2 277		2 277	-
Nanto	162		205	43
Tafononana	188		211	23
Todinga	186		186	-
FOTABE	280		280	-
Hôfa	500		500	-
Palmier	285		330	45
Raphia	10		-	10
Cacao	1 197		100	1 097
Café	3 555		1 590	1 965
Letchi Kakazo	115		110	5
Noni	25 800		6 117	19 683
Tsilaitry	191		190	1
Konikony	94		20	74
Phylarthron	331		120	211
Zato	196		30	166
Vapaka	3 841		337	3 504
Corossol	189		189	-
Canelle	270		270	-
Rambo	290		30	260
Grenadelle	187		180	7
Masoavela	94		94	-
Palmier rasta	275		-	275
Jacquier	300		224	76
Pongamier	106		-	106
Antohiravina	1 132		1 272	140
Hintsankitsana	20		-	20
Zamalak	50		60	10
Flamboyant	340		340	-
Combava	800		750	50
Terminalia Superba	1 100		1 100	-
Mandrorofo	1 000		2 314	1 314
Vontro	440		-	440
kininina	150		-	150
Bilahy	20		-	20
Eben	600		600	-
Palissandre	150		150	-
				-
<b>Total</b>	<b>162 915</b>	<b>42 770</b>	<b>49 025</b>	<b>71 120</b>

**ANNEX 5: MOU BETWEEN THE MAHAFATOKY PROJECT AND DGM**

**ANNEX 6: MAP OF MICRO-STATIONS SET UP**



**ANNEX 8: Consultant’s Report on Agroecology training**

**ANNEX 9: Quantity of seeds (seeds, cuttings) distributed**

Designation	Unit	Amount	Number of seeds/cuttings estimated
Clove Entofle	kg	46	16560
Hintsina	kg	67	42880
Raffia	kg	100	3500
Pepper	slip	5000	5000
Coffee	kg	50	37500
Acacia	kg	5	5000
Filao	kg	10	
Rambutan lychee	kg	10	
Zatte	kg	5	
citrus	kg	5	
<b>TOTAL</b>			<b>110440</b>

**ANNEX 10: NUMBER OF PLANT DISTRIBUTES PER SITE**

#	COMMUNE	PLANTATION SITE	TOTAL
1	Sambava	Ambohitrakongona	1600
		Ampisasahanala	1600
<b>SUBTOTAL 1</b>			<b>3200</b>
2	Ambinanifaho	Marofalaza Ambodimanga:	1300
		EPP Ambodimanga	280
		Ankiakamiavotra Ampanantsovana	1600
		Ambinanifaho	300
Ambohimahavelona			750
<b>SUBTOTAL 2</b>			<b>4230</b>
3	Ampahana	EPP Ampahana	472
		EPP Antsiranambidy	400
		Maromokotra Ampandomana	800
		EPP Antampolo	1600
<b>SUBTOTAL 3</b>			<b>3272</b>
4	Antsahanoro	Antsahanoro CEG field FJKM	1600
		Antsahanoro EPP field	1600
		Antsahanoro field FJKM	1600
		Ampanisihana: EPP	990
		Antsahaniatina: Ampanalandrano	1060
<b>SUBTOTAL 4</b>			<b>6850</b>
5	Antombana	Antombana	1600
		Ampatakamanitra	2650
		marovany	660
		Maromandia	800
		Ambarabaha	1603
		Andongozabe	800
		Andrikiriky	1537
<b>SUBTOTAL 5</b>			<b>9650</b>
6	Marofinaritra	CEG Marofinaritra	400
		EPP Tsarafanahy	400
		Ambatofotsy (Ambohipariana)	1200
<b>SUBTOTAL 6</b>			<b>2000</b>
7	Ampohibe	Andranomena Antsirabato	1600
		Ampohibe	796
		Anjariny	164
		Ankiakahely (Ambonibe)	550
<b>SUBTOTAL 7</b>			<b>2946</b>
8	Ambalabe	Foahitra Marambo	925
		Marambo windbreak 2 km x 50 m	675
<b>SUBTOTAL 8</b>			<b>1600</b>

9	Ambohitralanana	EPP Ambodirafia	400
		Sahanjahana	980
		EPP Ambany Ambohimahery	400
		Fokontany Maharavo: windbreak 5 mx 800 m	1067
		fokontany Andranoampaha	500
		EPP Anjahamarina	400
<b>SUBTOTAL 9</b>			<b>3747</b>
10	Vinanivao	Besilaono (Vinanivao)	390
<b>SUBTOTAL 10</b>			<b>390</b>
11	Ampanavoana	Ampanio	966
		Fampotakely	600
<b>Subtotal 11</b>			<b>1566</b>
12	Antalaha	JMC	310
		Maevadoany	600
<b>Subtotal 12</b>			<b>910</b>
13	Farahalana	Windbreak	6500
<b>Subtotal 13</b>			<b>6500</b>
<b>TOTAL</b>			<b>46861</b>

## ANNEX 11: Article on market gardening

### Market gardening is gaining ground in Northeastern Madagascar.

As a result of the successive projects rolled out by CARE over the years, market gardening has become part of the daily lives of the farmers in the SAVA Region, especially in the two districts of Antalaha and Sambava. Farmers began to value this crop under the DIPECHO projects and their interest has kept on growing to date. Over the years, the demand for market gardening products has grown, calling for a concurrent increase in the products for sale. From the Masoala Project to the Mahafatoky Project, CARE keeps on distributing seeds of *petsay*, *tissam*, *angivy*, or tomato. These seeds were distributed in the projects' intervention areas. To this day, farmers are feeling fortunate that they benefited from these distributions as they not only provided them with an alternative source of income but also made them the actors of the development of market gardening. This is the case of Ms. Hery and her husband Augustin from Lanjarivo who farmed *angivy* even before their collaboration with CARE. In 2003, they attended trainings on market gardening with CARE and received seeds. Mixing their own seeds with those of CARE and applying the trainings received, they were able to improve their crops and now have 1,000 plants. *Angivy* has become one of their main sources of income. They sell their products at their village at MGA 5,000 the bucket of 15 liters. Collectors from Antalaha and even Sambava come to Lanjarivo to buy their *angivy*.

Another case is that of Beanjara François, a member of the Local Relief Committee or LRC of Ampatakamanitra: "I found out about CARE in 2003 through the committee's activities. At first, I just tried to follow the farming guidance that the technicians from CARE gave us. However, as I did so, I felt that I could do better. So, I took up market gardening in 2003. It is a short cycle crop but it is extremely profitable. At the beginning, I was unsure it would help provide for the needs of my family so I farmed only a small parcel. However, owing to the trainings provided every week at our farmer field school, I decided to expand. I started with a small garden close to my house and I now farm green leaves (*petsay* and *tissam*), taro, and *angivy* on a larger field. Market gardening now helps provide for the daily needs of my family. In 2014, we earned MGA 200,000 from selling green leaves. Thanks to *petsay* and *tissam*, I was able to pay the school fees of my three children. Today, I have over 300 plants of *petsay* and *tissam* on my fields. During the months of May, June, July, and August, I sell a hundred or so plants of *petsay* and *tissam*. The small ones sell at MGA 200, the bigger ones at MGA 500 to 1,000 per unit. I sell my products in Antalaha and with neighbors and every Tuesday and Thursday, we walk to Antalaha which is located 13Km from where we live. I sell about 50 units of leaves at each market and this earns me good money. Despite the distance between our village and the markets of Antalaha, I believe I can sell even more because I am confident in the quality of my products."

Most of the producers living in the *Fokontanys* located close to Antalaha - whether they are CARE beneficiaries or not - sell their products at the markets of the town. These include Antsiradambo, Ambohitsara, Antsahamanenona, Tanambao Ampano, etc. From June till September, the markets of Antalaha overflow with *petsay*, *tissam*, *angivy*, lettuce, eggplants, and tomatoes. Farmers from the outskirts would rather sell their products in town personally than sell them in their village. This year, especially during the abovementioned months, the quality and price of market gardening products has been good: the price of *petsay* ranges from MGA 200 to 1,000 per unit, depending on size, sometimes even reaching MGA 300 for 3 or 4 units; *tissam* and lettuce sell at similar prices, whereas *angivy* is sold at MGA 200 per pile and eggplant at

MGA 1,000 to 2,000 per pile. The price of tomato varies according to seasons, amounting to MGA 5,000 to 10,000/Kg during the rainy season and decreasing down to MGA 4,000/Kg during the winter.

In early 2016, CARE distributed 1,104 seed bags of petsay, 556 of cabbage, 374 of red onion, and 374 of lettuce. The seeds were distributed across the 182 *Fokontanys* that are intervention zones of the Mahafatoky project. Sensitized by CARE workers, farmers realize the importance of training and vegetable production. They even invite CARE workers to visit their fields to show their success.

### ANNEX 13: Testimony of Beanjara François



**Mr. Beanjara François in his market garden**

"My name is Beanjara François, I am member of the Local Relief Committee of Ampatakamanitra. I found out about CARE in 2003, through the committee's activities. At first, I just tried to follow the agricultural advice that the technicians from CARE gave us. However, as I did so, I felt that I could do better. So, I took up market gardening in 2003. It is a short cycle crop but it is extremely profitable. At the beginning, I was unsure it would actually help provide for the needs of my family so I farmed only a small parcel. However, with the trainings provided every week at our farmer field school, I decided to expand. I started with a small garden close to my house and I now farm green leaves (*petsay* and *tissam*), taro, and *angivy* on a larger field. Market gardening now helps provide for the daily needs of my family. In 2014, we earned MGA 200,000 from selling green leaves. Thanks to *petsay* and *tissam*, I was able to pay the school fees of my 3 children.

After the DIPECHO projects, the actions in support of farmers continued with the Mahafatoky project. Under the Mahafatoky project, I not only always attend the farmer field school on Thursdays but also scrupulously apply what I have learned. Today, I have over 300 plants of *petsay* and *tissam* (green leaves) on my fields. I can say that I owe all these benefits to the trainings I received at the farmer field schools. During the months of May, June, July, and August, I sell a hundred or so plants of *petsay* and *tissam*. The small ones sell at MGA 200, the bigger ones at MGA 500 to 1,000 per unit. I sell my products in Antalaha and with neighbors and every Tuesday and Thursday we walk to Antalaha which is located 13Km from where we live. I sell about fifty units of leaves at each market and this earns me good money. Despite the distance between our village and the markets of Antalaha, I believe I can sell even larger quantities because I am confident in the quality of my products. It is not that I am a professional - no, it is because I have been trained to become professional. During this Mahafatoky project, we, LRC members, never cease to sensitize our neighbors on market gardening. We strive to convince them to adopt the new farming techniques and above all, adjust to the climate change that we are currently going through. Convincing people is no easy task - even myself, it took me time to adjust to and adopt these techniques that I had never used in the past."

#### **Annex 14: Testimony of Ms. Kalo Delice**

"It has been over a year now that I attend trainings with the Mahafatoky project. I have been passionate about farming since childhood and I am a farmer and have several fields to farm. What I found most striking was to receive training on farming techniques that I did not know about before. The techniques that I used from my personal knowledge and the knowledge that my family and friends share with me used to be effective but as time went by, I noticed that my harvests were decreasing.

When I found out about the Mahafatoky project, I thought that it might help me solve this problem. The first time I attended a training, I was a bit scared to apply the techniques as they are new and I figured they could fail. Nevertheless, I tried. I started with yam. Since I was still trying it out, I farmed just a few plants of yam. Nine months later, the result was incredible, the yams were so big I could not believe my eyes. Aside from the training on how to farm it, I also learned to cook yam in different ways. This really is a new experience for me and it is important to me. After that, I decided that I would farm 2,000 plants of yam this year. At the same time, I came to understand what climate change is about and the actions I should take to adjust to it.

I have farmed sweet potato in the past but because of climate change, farming techniques have changed. A year ago, I took up a new farming technique: I started getting used to planting seeds in nurseries then farmed a field of 40m<sup>2</sup> and my harvest doubled.

Seeing how much I had progressed in a year, I decided to join forces with the Mahafatoky project to sensitize the population of Antalaha. During our exchange visit in the region of Vakinankaratra in July, I realized that our lands are even more fertile than those of that region and yet, farmers from there produce twice or three times more than what we do. That convinced me that we, farmers of Northeastern Madagascar, could do better. I have started sensitizing my neighbors now and there are times where I tag along the CARE animator to provide farmers with a living proof that the techniques currently promoted by the project are effective and important to face the climate change we are currently going through. I have already done sensitization in several *Fokontanys* of the Urban Commune of Antalaha, such as Anjiamangotroka, Ambodikakazo, Antsahanoro, Andamasina, Ampombolava, and Ambondrona. I firmly believe it is time to gain awareness of climate change and take more robust actions to adjust to it."