Programme on Climate Change Adaptation and Mitigation in COMESA-EAC-SADC Region

UP SCALING CSA IN FARMING'S SYSTEMSTO MITIGATE CLIMATE CHANGE AND TO IMPROVE FOOD SECURITY IN THE MID WEST AND SOUTH EAST OF MADAGASCAR

MANITATRA PROJECT

Progress Report

Period: July 2015– September 2015

GSDM
Professionnels de l'Agroécologie

Date of submission: 27th October 2015

Department for International Development

NORWEGIAN MINISTRY OF FOREIGN AFFAIRS

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EXECUTIVE SUMMARY

The main objective of the MANITATRA project is to support up scaling of CSA in Madagascar in order to mitigate climate change and to improved food security. It is implemented in two regions of the Country with two different challenges: *(i)* the Mid-West of the Vakinankaratra area from 800 to 1100 m above sea level, having limited paddy fields, but high potential for upland crop productions although being subject to erratic rainfall and Striga prone areas; *(ii)* the South East of Madagascar, one of the most vulnerable region to climate change (floods, erosion, but also drought from time to time) and used to be one of the most populated area of Madagascar and where population are the most vulnerable to food insecurity. In the two regions and in the Mid-West in particular, recurrent bush firings and cattle free grazing are among the sources of land degradation causing spectacular gulley erosion and siltation in the lowlands. Also, uncontrolled cattle grazing are not in favor of biomass conservation and crop residues for good CA. Target beneficiaries in the Mid-West are estimated in the project document to 1000 small scale and medium farmers of which 200 are women. By the end of this 4th quarter (end September), total beneficiaries of the Manitatra project in the Mid-West is 3355 farmers (335% of the target) of which 21% are women. Target beneficiaries in the South East are estimated to 1400 food insecure small scale farmers of which 900 are women. By the end of this 4thquarter, total beneficiaries of the project in the Southeast is 3546 farmers (253% of the target) of which 43% are women. The trainings on vegetable crops and on orange flesh sweet potatoes increased significantly the number of women reached by the MANITATRA project in the South East.

In the two regions confounded, total number of direct beneficiaries of the Manitatra project is 6.901 farmers of which 31% are women. Taking in account the number of persons per family (5.6 persons per family in the Mid-West and 9.0 persons per family in the South East, Baseline data), total number of project beneficiaries is about 50.702 of which 50.9% are women.

The project is adopting a holistic vision of land degradation addressing erosions and siltation in the lowlands, bush firings, sources of energy for cooking, agroforestry, forestry, livestock, and livelihood of the rural population and in particular children and gender issues. The main project components are therefore, (i) up scaling CSA[1], (ii) training of farmers' organizations and lead farmers, (iii) study on sources of incomes, sources of energy and impact on deforestation and gender issues, (iv) advocacy of CSA at national, regional and local levels.

Most of project targets were achieved but the most outstanding results data concerns the achievements on some best practices like lombricompost and use of bio-pesticides added to compost which innovations were brought by the Manitatra project. Also, the high dissemination of yellow flesh sweet potatoes among women farmers in the food insecure region of the South East is worth noting as well as the use of farm manure which is a breakthrough in extension work because farm manure still remains a taboo among some tribes of this region (the Zafisoro tribes).

[1] CSA is defined as CA + Best Practices

The Ivory site in the Mid West which has been under CA for 15 years having side by side CA and conventional tillage has been visited by 332 persons during the year of which 56% were farmers, 20% students, 18% technicians, 0.6% researchers and 5% policy makers. This site laid out in a striga infested plot was a very good demonstration for the efficiency of the Stylosanthes CA based system to combat *Striga asiatica*. More research work by CIRAD and Africa rice are underway in the same site.

The Vohimasy site at Iandraina in the Southeast which is a Farmer's Fields School (FFS) having a panel of CSA agro-systems has been also fully used for all types of trainings but also for advocacy for CSA for policy makers at regional level, especially during the field days organized in this region.

INTRODUCTION

As per Agreement signed between COMESA and GSDM on the 15th September 2014 on the MANITATRA project, GSDM should report quarterly. During project review on February 2015, it was agreed that a 6 months report will be due as of March 31st 2015 for the first 6 months and after, a quarter report will be done. This report concerns the 4th quarter for the period of July to September 2015 and the achievements at the end of September 2015.

TITLE OF PROJECT: **Up Scaling CSA in Farming's Systemsto Mitigate Climate Change and to Improve Food Security in the Mid-West and South East of Madagascar**

COUNTRY/IES**: MADAGASCAR**
SECTOR/S**: AGRICULTURE**
CLIMATE CHANGE ISSUE ADDRESSED (PLS CIRCLE): **ADAPTATION**, **MITIGATION,**
IMPLEMENTING ENTITY**: GSDM, PROFESSIONNELS DE L'AGROECOLOGIE**
TYPE OF IMPLEMENTING ENTITY: **NGO**
FINANCING REQUESTED (IN U.S. DOLLARS)**:250 000**

Main objective:

T**o support the up scaling of CSA in Madagascar in order to mitigate climate change and to improved food security**

Project development goal and Outcome

CSA and CA techniques and approaches are up scaled as a sustainable way for the agriculture development, in the Midwest and South East of Madagascar

Outputs and activities

5 main outputs are expected from this project:

- CA and CSA up scaled by 80% in the Mid-West Madagascar
- CA and CSA up scaled by 50% in the South East of Madagascar
- Farmers sensitized and trained in CSA and CA and small scale farmers supported for seeds
- CA and CSA is advocated for Government and stakeholders at both local and regional level
- Monitoring and Evaluation

PROGRESS TOWARDS RESULTS

The following activities were undertaken during the period of July to September 2015:

- Continuing CSA sensitizing and training through:
  - Exchange visits in the demonstration plots at Ivory site for the Midwest and Farmer's Field School (FFS) in Vohimasy for the Southeast
  - Training sessions with professionals (FIFAMANOR for orange flesh sweet potatoes, DRDA-Rural Development Regional Direction of Vakinankaratra for the 7 days compost and vegetable crops)
  - Training sessions by lead farmers in their FFS (Farm Field School)
  - Collection of data on composting especially on 7 days compost and lombricompost in the Mid-West with a high adoption by farmers (number of farmers adopting, quantity produced and use in counter season crops…)
- Harvest of cover crops seeds in the Mid-West: Stylosanthes, Cajanus, Mucuna and Tephrosia
- Delivery of 10 Stylosanthes rollers and demonstration of their performance in farmers fields
- Backstopping the design and building of 14 improved cowshed in the Mid-West and 5 in the South East
- Continuing implementation of CSA at farm level especially in the Southeast :
  - Basket compost extension;
  - Yellow flesh sweet potatoes diffusion;
  - Composting;
  - Hedgerows and tree agroforestry
  - SRI;
  - Vegetables growing
- Yield sampling on the yellow flesh sweet potatoes diffused by the Manitatra project in the South East: avg yield of 12 t/ha
- Field days in the South East: 17 and 18 September: field day and wrap up workshop, film production and reporting
- Registering the lead farmers as services providers at the district level
- Financial auditing by a local audit firm for the period October to December 2015.

The following summary tables (corresponding to the Project monitoring/evaluation and performance framework) give achievements as of end of September 2015 (table 1) and the progress towards results (table 2):

Table 1 : Project activity performance

Performance Area	Monitoring areas	Targets	Achievement	Unit
Adoption of Climate Smart Agriculture (Conservation Agriculture)	**M1:**Number of farmers practicing CSA	**2400** MW: 1000 SE: 1400	**6901** **(31% women)** MW: 3355 (21% W) SE : 3546 (43% W)	Farmers
	M2: Number of total project beneficiaries (by gender)	**14 400**	**50 702** (50,9% women)	Person
	M3: Acreage under CA	**600**	**430**	ha
	M4: Total yield (per crop cultivated)	60% increase to conventional system **MW : Rice (1.76), Maize (1.28), Groundnut (1.6) and Cassava (4.8)** **SE : Sweet potato (8)**	**MW : Rice (2.6), Maize (2.0), Groundnut (n.a) and Cassava (n.a)** **SE : Orange flesh Sweet potato (12)**	T/ha
	M5: Number of trees planted	**900,000**	**632,087** Midwest: 514,910 Southeast: 117,177	trees
	M6: Acreage underagro-forestry and hedgerows	**500**	**144**	ha

DETAILED REPORT PER RESULT AREA / ACTIVITY

Progress towards results is summarized in the following table:

Table 2: Progress towards results, MANITATRA PROJECT, 4th quarter and 12 months situation

Project Development Goal : **The main objective is to strengthen the up scaling of CA and CSA in Madagascar in order to mitigate change and food security in a sustainable way**	***Impact indicators :*** **Livelihoods improved ; Sustainable and resilient agrosystems adopted by farmers (area under CA and CSA increased) ; Better access to fast growing trees**
Project Outcome : **Upscaling of CSA techniques and approaches as a sustainable way for the agriculture development, soil and forest smart conservation in Mid West and South East of Madagascar**	

Verifiable indicators	Unit	Target for 12 months	Achieved End of JUNE	New Achievement 4rd QUARTER	Achieved END OF SEPTEMBER	Performance %	Remark / Comments on targets vs achievements	Budget 12 months US $	Total US$ End of JUNE	Total US$ 4th QUARTER	Total end of September	Achievement end of september months %
1/2. CA and CSA up scaled in the Mid West and South East of Madagascar												
Number of farmers practicing CA/CSA	Farmers	2 400	5 708	1 193	**6 901**	287,5	31% of Women and 69% of Men (3355 farmers with 21% of women in the Mid West and 3546 farmers with 43% of women in the Southeast)	172 246,37	124 689,68	31 033,30	155 722,98	90,41%
Number of beneficiaries	Person	14 400	40 136	10 566	**50 702**	352,1	Beneficiaries are composed of all person touched by the project impact (so all the family member). The average of family size in the MW is 5,6 and in the SE is 9 (source: baseline data).					
Area under CA	ha	600	430	-	**430**	71,6	It is only CA systems (Minimum of soil disturbance+crop rotation/association+permanent organic soil cover)					
Small scale farmers practicing basket compost	unit	80	53	1 059	**1 112**	1 390,0	A lot of sensitizing and implementation was done during the 4th quarter					
Number of farmers (especially women) practicing vegetable crops	unit	150	132	691	**823**	548,7	823 farmers with 75% of women. This activity is still running during the dry season on july and august in the two regions					
Number of farmers (especially women) practicing yelow flesh sweet potatoes	unit	250	1 189	32	**1 221**	488,4	Specific sensitizing was done with women about this activity. With 1221 farmers, 99,8% are concerned by yellow flesh sweet potatoes					
Number of farmers practising SRI	unit	100	17	458	**475**	475,0	Activity mainly planed during the dry season in the SE (hosy season) on August					
Number of trees	unit	900 000	632 087	-	**632 087**	70,2	514 910 trees (70% *Acacia mangium*) in the Mid West. 117 177 trees (99% *Acacia mangium*) in the Southeast. In the Southeast, 450 000 trees was planed but 80% of plants was destroyed by floods during the cyclone on february					
Surface of Agroforestry (hedgerows)	ha	500	140	4	**144**	28,8	Acacias plantation (afforestation in the top or on th side of watershed) is also considered as Agroforestry but not considered in this data					
New rice varieties	kg	600	-	10	10	1,7	Activity organized during the *Hosy* season in the South East and for the next season preparation in the Midwest					
Number of long term demonstration plots	unit	2	2	2	**2**	100,0	One per region (Mid West and South East)					
Number of lead farmers	unit	22	22	22	**22**	100,0	12 Lead farmers in the Mid West and 10 in the South east					
Lombricompost training session	unit	1	-	-	**1**	100,0	Held in the Mid West, this session was organised with expert. However, many other sessions were organised with lead farmers					
7 days Compost training session	unit	1	1	-	**1**	100,0	Organised with DRDA (Agriculture Development Regional Direction)					

Verifiable indicators	Unit	Target for 12 months	Achieved End of JUNE	New Achievement 4rd QUARTER	Achieved END OF SEPTEMBER	Performance %	Remark / Comments on targets vs achievements	Budget 12 months US $	Total US$ End of JUNE	Total US$ 4th QUARTER	Total end of September	Achievement end of september months %
3. Farmers and farmers' organizations trained in CSA an CA												
Number of local exchage visits	Unit	14	35	32	67	478,6	Exhange visits are a continued activities	7 224,19	4 553,75	428,24	4 981,99	68,96%
Number of brochures and IEC	Unit	2	2	-	2	100,0	Target not specified in the initial project document					
Number of training tools	Unit	10	11	-	11	110,0	Target not specified in the initial project document					
Number of films on CSA produced	Unit	2	6	1	7	350,0	It is planed to produce 2 films of 26 mn. At the moment, three 4 mn video sequences have been produced					
4. CSA is advocated for Government and stakeholders at both local and regional level												
Number of field days with regional and Governement authorities	Unit	2	1	1	2	50,0	One held in the Mid West. The other fields days in the Southeast is planed on August or September	15 972,81	8 991,73	3 907,33	12 899,06	80,76%
Number of broadcasting on local radio	Unit	2	6	1	7	300,0	The number of broadcasting is much more but we just consider the event broadcasted whatever the number of TV or Radio					
Number films and broadcasting on national radio and television	Unit	2	6	1	7	300,0						
5. Monitoring and evaluation												
Base line study documents number	Unit	2	2	-	2	100,0	Base line study about household and socio-economic data	29 800,00	9 484,61	3 918,86	13 403,47	44,98%
Number of financial auditing	Unit	1	-	2	2	200,0	End of 2014 by GSDM and one financial auditing organised by COMESA					
Final evaluation number	Unit	1	-	-	-	-	Planed in october at the end of the project					
6. Project managment												
Director backstopping days number	days	60	45	15	60	100,0	This support remains theoretical duration (for 6 months) following the project document because the backstopping of GSDM is more than this duration	18 000,00	7 362,83	4 500,00	11 862,83	65,90%
CA agronomist backstopping days number	days	120	90	30	120	100,0						
CA economist : M&E backstopping days number	days	60	45	15	60	100,0						
Project management fee (3%)								6 757,00	2 840,79	1 629,37	4 470,16	66,16%
Bank charge + VAT								70 997,00	4 475,07	326,92	4 801,99	
INDICATIVE PROJECT PERFORMANCE						**232,7**		**250 000,37**	**162 398,46**	**45 744,03**	**208 142,49**	**83,26%**

Targets fixed for this project are mostly achieved. The number of farmers adopting CSA with the support of Manitatra project is6901 farmers with 31% of women directly concerned (the target is 2400 farmers) with 3355 farmers in the Midwest (20% of women) and 3546 farmers in the Southeast (43% of women). The total of the project beneficiaries is 50 702 (composed by the family member).

The percentage of the financial achievement is 83% of total budget. Some big expenses like final evaluation (13.000 US $) still has to be done by the end of 2015.

Output 1: CA and CSA up scaled by 80% in the Midwest of Madagascar targeting1000 small and medium farmers

The Mid West of Madagascar, between 800 and 1100 m asl, has high potential for crop production in terms of available land but with a strong threat for *Striga asiatica* due to the decline of soil organic matter and as a result a decline of soil fertility. Due to recurrent bush firing and mining agriculture practices there is a lot of erosion accelerating this decline of fertility and also almost no more trees for fuel in most of households leading to high use of crop residues for fuel and for livestock.

This region may be affected by climate change especially in terms of rainfall pattern (short rain, intensive erosion...).Agroforestry using fast growing legume trees like *Acacia mangium*, *Cajanus cajan*, *Crotalaria sp* has been widely adopted by farmers but need to be up scaled. Rainfall may be erratic in this area and that is the reason why CA can contribute to buffer this erratic rainfall. CA based system using *Stylosanthes guianensis* has given a good biomass to inject carbon in the soil and therefore to improve soil fertility and to mitigate the negative effect of *Striga asiatica*.

By the end of September 2015, total CSA beneficiaries of the Manitatra (CA, Agroforestry and hedgerow, organic manure, other best practices…) in the Midwest is3355 farmers, which represent **335%** of the targeted 1000 farmers. Among these farmers, 20% are women.

Activity 1.1 Management of Stylosanthes based CA improved

Stylosanthes based CA system has been used in the Midwest during previous project BVPI-SEHP[2].This system constitutes the most important system in the Midwest. In fact, this system has proven to be efficient in increasing soil fertility in the highly degraded soil and Striga prone area of the Mid West. **The project document has mentioned 600 ha of Stylosanthes based CA in the project area (BVPI-SEHP report) but the baseline study showed only 121 ha, therefore, this figure will be used as the reference data for the project.**

After sensitization by lead farmers, exchange visits and farmers' testimonies, the situation of CA implementation as of end of September 2015 is as follows:

Table 3: CA implementation in the Midwest

CSA system	Target	Reference data before project		Achievement at the end of june 2015		New achievement 4th quarter (july-september)		Achievement at the end of September 2015		Remarks
		Acreage	Farmer	Acreage	Farmer	Acreage	Farmer	Acreage	Farmer	
Conservation Agriculture	CA upscaled by 80%	121 Ha	210	344 ha	600	-	-	344 Ha	600	No new implementation since march (dry season)

There is no new implementation during the dry season, since March. The period of July-August was devoted to the cover crop (Stylosanthes) preparation in order to have a mulching for the next season sowing.

Total area under CA has increased by 300% compared with the beginning of the project.

[2]BVPI-SEHP: Project on watershed and CA under French Grant

Activity 1.2. Legume trees for agroforestry or hedgerows available

Agroforestry using legume shrubs (Cajanus, Crotalaria, Tephrosia...) is highly supported by the MANITATRA project not only for soil fertility but also as repellents against insects like the cutworms (*Heteronicus plebejus*) very common in most soils.

Apart from Agroforestry, the MANITATRA project is also engaged in afforestation using the widely adapted legume tree *Acacia mangium*, which has been tried successfully in the project areas and in many parts of the Country.

Achievements for agroforestry and hedgerows as of end of September 2015 are as follows:

Table 4: Legume trees and hedgerows for Agroforestry in the Midwest

CSA system	Target	Reference data before project		Achievement at the end of june 2015		New achievement 4th quarter (july-september)		Achievement at the end of September 2015		Remarks
		Achievement	Farmer	Achievement	Farmer	Achievement	Farmer	Achievement	Farmer	
Legume trees	CSA upscaled by 80%	650 000 plants in 3 years by BVPI	2000	514 910 trees	2742	-	-	514 910 trees	2742	No new implementation since march (dry season)
Hedgerow, contour plants	CSA upscaled by 80%	n.a	n.a	78 ha	107	-	-	78 ha	107	

During the fourth quarter, a period of dry season, no new implementation was done. Farmers have as activities the tree plants maintenance. Some farmers have also harvested cover crops and hedgerow seeds to meet their own need and also in order to sell for other farmers or for the project need.

Harvesting of Stylosanthes and Mucuna seed is much easier compared with other legumes such as Cajanusand Crotalaria due to the insect attack.

The following table provides informationsabout the quantities of seeds collected by farmers in each Commune.

Table 5: Seeds collected by farmers in each Commune

Type of legume seeds	Ankazomiriotra (Kg)	Fidirana (Kg)	Inanantonana (Kg)	Vinany (Kg)	Total	Number of Seed growers
Stylosanthes	310	145	110	475	1040	23
Cajanus (Kg)		5	5	30	40	3
Mucuna (Kg)	5	20	52	80	157	13
Tephrosia (Kg)	-	-	40	6	46	3

Activity 1.3. New rice varieties from research available

For irrigated rice, farmers have already the latest varieties. The MANITATRA project has supervised some pilot irrigated rice plots as SRI[3] or SRA[4] after the training of the lead farmers by the DRDA.

[3]SRI : System of Rice Intensification : young seedlings (8 days at transplantation), good system of irrigation allowing weekly succession of irrigation and drainage to allow a good soil oxidation

[4]SRA is the same principle as SRI but the seedlings are older (20 days): the younger the seedlings, the more tillers at transplanting.

Table 6: Achievements in irrigated rice (SRA and SRI) during the 4th quarter in the Mid-West

Communes	Achievement as of end of June		New achievements during the 4th quarter	
	Number of farmers	Areas (ha)	Number of farmers	Areas (ha)
Ankazomiriotra	-	-	4	0.65
Fidirana	-	-	4	1.2
Inanantonana	-	-	15	3.75
Vinany	-	-	3	0.19
TOTAL	-	-	26	5.8

For upland rice, farmers have already all of the new varieties from the Ivory site (Nerica's, SEBOTA's, FOFIFA's..). For this reason, the project did not provide new varieties in the Mid West.

The promising activity as far as rice is concerned by the use of the lombricompost in the nursery (see activity 1.5), one activity which is new for the farmers and introduced by the project. Farmers realized that lombricompost is very efficient in seedling development as compared with manure or even with N fertilizer. This was an outbreak in rice cultivation. They discovered the same effect in vegetable crops during the counter season cropping season.

Activity 1.4. Training of lead farmers and training of farmers

The MANITATRA project uses for extension the "farmer to farmer approach" which consistsin training the lead farmers who will train their peer farmers. It is therefore a Training of Trainers (ToT).Experiences from another GSDM project partner show that it is effective and efficient. It is also more sustainable than "technician to farmer approach». Lead farmers are experienced farmers who have practiced CSA for many years and who have a good CSA plot to be used as a Farmer's Field Schools (FFS).

The following trainings have been achieved from the beginning of the project:

Table 7: Lead farmers training sessions in the Midwest

October 2014 to June 2015			4th Quarter (July to Septamber 2015)		
Session	Thematic of training	Trainers	Session	Thematic of training	Trainers
November 2014	Presentation of the project / Roles of lead farmers / Use of training tools and materials (bâches) / Use of the vouchers	GSDM Director			
February 2015	Training of lead farmers lombricompost production / Installing 2 pilots training site (Ankazomiriotra and Vinany)	Ferme Farihitsara Vinaninkarena			
March 2015	Training of lead farmers on the use of pesticides and veterinary medecines	Agricom Point vert			
May 2015	7 days compost / Vegetable crops	DRDA			
4 sessions during the first 9 months			No new session during the fourth quarter		

All trainings are supposed to begiven during the first 9 monthsforlead farmers in order to allow themto run their training activities. The following table shows the number of trainings achieved by the lead farmers in group sessions training during the 12 months of the Project.

Table 8: Training achieved by lead farmers in Midwest during the first 6 months and during the 4th quarter

Communes	Achievement during the first 9 months				Achievement during the FOURTH QUARTER			
	Lead farmers number	Group session number	Participants	% women	Lead farmers number	Group session number	Participants	% women
Ankazomiriotra	3	48	1253	33,5%				
Fidirana	3	34	1173	33,0%				
Inanantonana	3	37	1030	26,2%				
Vinany	3	27	564	22,2%				
TOTAL	**12**	**146**	**4020**	**29,9%**				

During the 12 months from the beginning of the Project to September 2015, 4020 farmers have been trained by lead farmers of which 30% were women. No new training was organized during the 4th quarter. Lead farmers have done some monitoring and discussions with other farmers.

The role of GSDM is to promote the "farmer to farmer" extension approach. For the sustainability of this approach, GSDM has registered 10 lead farmers at the Service Center[5] of the Vakinankaratra Middle West. If they are accepted as service provider, they may be able to respond to a call for proposals from this Service Center on a competition basis. GSDM may support them in responding to such calls.

Activity 1.5. Livestock and farm manure management

Survey in 2014 (T. Raharison) has shown that the average quantity of the organic matter per farm (especially manure) is less than 2T/ha whereas, the minimum required for ferralsoils is about 5T/ha (FAO, 2005).Moreover, the quality of farm manure has been always a problem in rural areas.

In order to help farmers in this problematic, the project sensitizes the farmers to keep the cattle in a good cowshed and to use litters. A training material has been prepared for this purpose for each lead farmer. Besides that, composting is also supported in order to have quality compost.

In order to develop organic manure, the project try to improve the quality of cow shed. In the Midwest, 14 cow sheds were built/improved (Vinany: 4, Ankazomiriotra: 5, Fidirana: 1, Inanantonana: 4) following the standards prescribed by the project. For each farmer, building materials may change (depending on their availability) but the construction plan and standards follow generally the Project recommendations. The aim is to keep the animals in a better condition but also to produce quality manure by using litter. Quality manure is also required to start lombricompost, a new initiative brought by the Manitatra project.

The compost process is also developed to increase the quality of organic manure. 3 types of composts are currently valued by the Manitatra project in the Midwest of Vakinankaratra:

- Classic compost
- 7 days compost obtained by the use of special ferment derived from rumen liquid of ruminants: this is a good technique to get compost ready for use or for further

[5]Service Center for Agriculture known also as CSA: Implemented by the Ministry of Agriculture, there is one CSA per district: this CSA lunch a call for proposals based on farmers request.

incorporation in lombricompost within 7 days. Some farmers were able to manage this technique including the storage and maintenance of the ferment.

- Lombricompost which uses lombric (special earth worm called *Eusenia foetida*) to boost the quality of organic manure. This technique gives quality compost and many farmers have now the skill to handle this technique.

The lombricompost has been used already on vegetables and rice nursery with good results. The next step for the famers will be their use in upland rice.

One group of farmers have created one cooperative to produce and to market lombricompost. They have already started packaging the lombricompost in bags of 1, 5, 10 and 25 kg.

Samples of lombricompost have been sent for analysis in two sol laboratories to have data on their quality.

The following table shows the achievements on these compost types (on organic management) during the 4th quarter and until the end of September 2015.

Table 9: Achievements on farm manure development including quality compost

	Achievement at the end of June 2015		Achievement during the 4th quarter		Achievement during the 12 months (end of September 2015)	
Type	**Farmers number**	**Composting place number**	**Farmers number**	**Composting place number**	**Farmers number**	**Composting place number**
Lombricompost	10	11	27	29	37	40
7 days compost	13	14	57	71	70	85
Classsic compost	197	232	60	110	257	342
TOTAL	**202**	**257**	**89**	**210**	**291**	**467**

To have a good reference for this activity, a survey was done by the Manitatra project.

It was measured that for each of these 467 composters installed, farmers can produce on average 800 kg of compost from two oxen driven truck[6] of manure.

It was also noted that about 40% of surveyed farmers buy manure at a rate of 5000 Ar/truck (1.53$/truck). In most cases, these farmers don't have cattle but they realize that compost process increase the quantity and quality of organic manure at the farm level.

There is also a small proportion of farmers, especially those who use lombricompost process, who prefer to buy good quality manure despite the fact that they have cattle, in order to have good quality manure for earthworm.

Green materials are used in composting and selected for their natural properties (insecticides like *Melia sp*, high N content like legumes).Surveys have shown that over 70% of farmers using compost process incorporate in their compost green materials with special properties: insect repellent property, rich in nutrients such as nitrogen and phosphorus. Among these green materials, they use,

- For nitrogen : Cajanus (Pigeon peas), Crotralaria, *Azolla asiatica*, Tephrosia, Stylosanthes and Acacia leaves,
- For plants repellent property : false Neem (*Melia azedarach*), Sisal and Tephrosia, Crotalaria
- For phosphorus: Tithonia.

[6]One oxen driven truck can hold 500 kg of manure

Activity 1.6. Vegetable crop development

This activity was not planned on the project document. It was developed as a cash crop to increase income but also, because this activity is mainly done by women. Lead farmers were trained on this topic with the support of DRDA during the previous quarter.

In the Midwest, the lowland are limited and mostly without irrigation network. The cultivation of these areas during the dry season is possible for only a few numbers of farmers.

This table summarizes achievements during the 4thquarter (situation at the end of September 2015).

Table 10: Achievements on vegetable crops

	Achievement at the end of june 2015			Achievement during the fourth Quarter			Achievement during the 12 months (end of September)		
Commune	Nb farmers	% Women	Acreage (Ha)	Nb farmers	% Women	Acreage (Ha)	Nb farmers	% Women	Acreage (Ha)
Ankazomiriotra	35	46%	3,4	30	47%	2,6	65	46%	6
Fidirana	29	34%	3,4	39	41%	10	68	38%	13,4
Inanantonana	39	67%	1,2	15	73%	0,5	54	69%	1,7
Vinany	29	31%	2,3	11	45%	0,3	40	35%	2,6
TOTAL	**132**	**46%**	**10,3**	**95**	**48%**	**13,4**	**225**	**48%**	**23,7**

The most developed vegetable crops are: tomato (26%), Onion (19%), Potato (19%)and Petsay-green vegetables (17%).

Output 2: CSA up scaled by 50% in the South East of Madagascar (region Atsimo Atsinanana) targeting 1400 food insecure and small scale farmers

The South East is one of the most vulnerable region to climate change (floods, erosion, but also drought from time to time) and used to be one of the most populated area of Madagascar and where population are the most vulnerable to food insecurity. This is a high rainfall area (1500 to 2000 mm of rainfall) but due to environment degradation (bush firing, poor soil management) and the high density of population, some period of drought may occur from time to time.

Activity 2.1. CSA up scaled with 1400 farmers

Different components of CSA have been developed in this area during the Manitatra Project:

- Conservation Agriculture based on Stylosanthes and Brachiaria mostly for Cassava on the hillsides.
- Arachis under cash crop which is also considered as a CSA system
- Basket compost, a resilient agro-system for soil fertility using cassava as a first crop and was widely adopted by farmers in these highly degraded soils.
- Agroforestry and use of farm manure were also starting to be adopted as an impact of previous projects and up scaled by the Manitatra project.

- SRI (intensive rice system) has given good results in this region wherever water management is possible. This is possible only during the dry season crop because most of the paddy fields are flooded during the rainy season (January to April).
- In this region of recurrent food insecurity, dissemination of orange flesh sweet potatoes, rich in A vitamin, from research (FIFAMANOR) was also a success story and up scaled by the Manitatra project.

The total number of CSA beneficiaries in the South East at the end of September 2015 is therefore 3546 farmers which represent **253%** of the target (1400 small scale farmers). Thanks to project awareness rising and to some activities like vegetables crops and orange flesh sweetpotatoes, **43% of beneficiaries are women**.

Conservation Agriculture

In the Southeast, Conservation agriculture is essentially based on the use of Brachiaria and Stylosanthes as cover crops. They are mainly used with cassava (in conventional crop or basket compost), and also with peas. Improved fallows are added to these systems. These cover crops play several roles: Soil protection and improvement of soil fertility, weed control especially Imperata, biomass production for basket compost.

Table 11: Achievements on Conservation Agriculture in the Southeast

Target	Reference data (Before project)		Achievement at the end of june 2015		Achievement during the FOURTH QUARTER		Achievement during the 12 months (end of September)		Remarks
	Acreage	Farmers	Acreage	Farmers	Acreage	Farmers	Acreage	Farmers	
Upscaling by 50%	53,6 ha	212	75,03 ha	420	0,6 ha	4	75,6 ha	424	• 94% of target • Limited available Stylosanthes seeds (210kg) • Rluctance of farmers on the use of Brachiaria (available 100kg of seed not totaly used)

Basket compost

Basket compost is a technique which can increase the production of cassava about 3 to 10 times compared with conventional system. It consists on planting cassava cuttings in holes (size: 60cm x 60cm x 40 cm) filled with organic matter (green materials including legumes or banana trunk…) dry materials, potting soils and manure if possible. It has been also used for yam before being used in the production of cassava.

Hole digging is labor intensive. However it can be started very early (from March taking advantage of soil moisture) and to avoid duplication of work (during the *vatomandry* rice harvest in June). For cassava, plantation is usually between August and September.

The main interest of basket compost is to install perennial crops, generally after cassava, benefiting from the after effect of organic matter.

Table 12: Achievements on Basket compost

Target	Reference data (Before project)		Achievement at the end of june 2015		Achievement during the FOURTH QUARTER		Achievement during the 12 months (end of September)		Remarks
	Acreage	Farmers	Acreage	Farmers	Acreage	Farmers	Acreage	Farmers	
Upscaling by 50%	48,3ha	392	7,4ha	53	0,62	4	55,5	1112	• 76% of target on acreage • 189% of target on farmer number

Orange flesh sweet potatoes

The South East Region is marked by the persistence of food insecurity. To contribute to the food security, the Manitatra project has introduced improved varieties of sweet potato.
These introduced sweet potatoes:

- are not photoperiodic, which allows beneficiaries to be able to produce during the lean period,
- are orange-fleshed (the "Bora and Mendrika" varieties) and can reduce vitamin A deficiency, which affects almost all children in the area.

With the collaboration of FIFAMANOR, 11.500kg of orange flesh sweet potato cuttings were distributed among 1154 women and two farmers' organization, supervised by the project. Technical trainings were provided by FIFAMANOR for Project staff, lead Farmers and farmers. Culinary processing trainings were also provided by FIFAMANOR.

The table below shows the achievement of the Project on Orange flesh sweet potatoes and results.

Table 13: Achievements on orange flesh sweet potatoes

Varieties	Target	Reference data (Before project)		Achievement at the end of june 2015		Achievement during the FOURTH QUARTER		Achievement during the 12 months (end of September)		Remarks
		Acreage	Farmers	Acreage	Farmers	Acreage	Farmers	Acreage	Farmers	
Bora	Upscaling by 50%	0,15ha	23	1,445	268	0,10	6	1,54	274	• Short cycle : about 3,5 months • Average Yield : 12,42T/ha
Mendrika				1,205	232	0,37	18	1,57	250	• Short cycle : about 3,5 months • Average Yield : 12T/ha
Naveto				3,35	660	0,80	33	4,15	693	• Long cycle : about 5 mois • Average Yield : 11,55T/ha
Mixed varieties						0,00	2	0,00	2	
TOTAL		**0,15ha**	**23**	**6ha**	**1156**	**1,26**	**32**	**7,26**	**1188**	• 3229% of target

Afforestation

Afforestation was finished in mid-June 2015 (no new afforestation during the 4th quarter, period of dry season). As a reminder, 117.177 plants was used, 99% of *Acacia mangium* and 1% of *Eucalyptus camaldiensis.*

Table 14: Achievements on afforestation

Target	Reference date (before project)		Achievement at the end of June 2015		Achievement during the FOURTH QUARTER		Achievement during the 12 months (end of September)		Remarks
	Plants number	Farmer number	Plants number	Farmer number	Plants number	Farmer number	Plants number	Farmer number	
300.000 plants	9264 plants	68	117177	620	00	00	117177	620	• 39% of target • Flooding during the cyclone destroying 80% of young nursery plants

These afforestation concern about 52, 59ha on acreage.

Hedgerows and contour planting

In the South East, rainfall is relatively high (1500 to 2000mm per year). This makes *tanety* (upland) generally steep, subject to erosion. In this sense, the Manitatra project tries to develop with farmers the application of different methods of erosion control by the use of hedgerows and contour plantings.

Table 15: Achievements on Hedgerows and contour plantings

Type	Target	Reference data (Before project)		Achievement at the end of june 2015		Achievement during the FOURTH QUARTER		Achievement during the 12 months (end of September)		Remarks
		Acreage	Farmers	Acreage	Farmers	Acreage	Farmers	Acreage	Farmers	
Hedgerow	Upscaling by 50%	11,47ha	21	16,14ha	128	2,58ha	10	18,72ha	138	380% of target
Contour planting				45,68ha	244	1,03ha	9	46,71ha	253	
TOTAL		**11,47ha**	**21**	**61,82ha**	**351**	**3,61**	**16**	**65,43ha**	**359**	

The hedgerows and contour plantings allows farmers to demarcate their plots, also to limit erosion, diversify crop production (pineapple), or having wind breaks (using trees or shrubs). Pineapple remains the species mostly used because:

- It is available locally;
- It can be more easily transplanted;
- Apart from the positive impact on the protection in the watershed, it also allows farmers to obtain various productions on the same plot.

Agroforestry system

The Southeast Region, like the entire east coast of Madagascar, is characterized by its high potential of cash crops (coffee, cloves, pepper, vanilla, litchi, banana ...). Almost all households have at least one plot of cash crop around their residential area. These perennials crops provide seasonal productions to farmers.

However, with population pressure there is less and less land for food crops. In addition, the new perennial crop will take some years (4 to 6 years) to give productions. Therefore agroforestry is important for farmers in the Region because this system combines perennial crops, food crops and cover crops. It allows farmers to diversify production in the same plot.

Table 16: Achievements on Agroforestry system

Target	Reference data (Before project)		Achievement at the end of june 2015		Achievement during the FOURTH QUARTER		Achievement during the 12 months (end of September)		Remarks
	Acreage	Farmers	Acreage	Farmers	Acreage	Farmers	Acreage	Farmers	
Upscaling by 50%	2,73ha	51	10,67	152	0.15	5	10,82	157	264% of target

Vegetable crops

In the South East, vegetable is part of women activities. Therefore, the Manitatra project decided to work especially with women on this topic. Following the request by farmers, the project has provided seeds of various vegetable species. The aim is to improve both quality but also to improve the family's income.

In May 2015, the project team was trained by the DRDA technicians on vegetable production techniques, composting and integrated pest management. Lead farmers organized in their turn training of farmers (especially women).

Table 17: Achievements on vegetable crop development

Target	Reference date (before project)		Achievement at the end of June 2015		Achievement during the FOURTH QUARTER		Achievement during the 12 months (end of September)		Remarks
	Acreage	Farmer	Acreage	Farmer	Acreage	Farmer	Acreage	Farmer	
Upscaling by 50%	nd	nd	00	00	4,83ha	466	4,83ha	466	

Among the 466 adopters, **97.4% are women**. Petsai (1,88ha) and eggplant (1,62ha)are the most developed and chosen by adopters.

Rice intensification

In the Region, many hydro-agricultural infrastructures have been put in place (especially during the project BVPI SEHP). Rice intensification is already practiced by few farmers. The traditional practice is to install nurseries in upland and to make transplantation with very old plants (30 days old seedlings). With these practices, the yield is very low because tillering is very limited if any. In addition, the majority of farmers apply no fertilizer (organic or chemical). Weeding, part of women's occupations is undertaken manually.

Face to this reason, the Manitatra Project tries to develop rice intensification with two kind of techniques (SRA: Improved Rice System and SRI: Intensified Rice system). The challenge of SRI is to use young seedlings to boost tillering: young seedling gives more tillers than old ones: the target is to use 8 days seedlings at transplantation but this is labor intensive, therefore most farmers tend to use SRA (20 days seedlings).
Given the limited financial resources of most local households to purchase chemical fertilizers, composting and improving stables manure are recommended especially in nurseries to get good seedlings at transplanting.

Table 18: Achievements in SRI and SRA in the South East during the 4th quarter

Type	Target	Reference date (before project)		Achievement at the end of June 2015		Achievement during the FOURTH QUARTER		Achievement during the 12 months (end of September)		Remarks
		Acreage	Farmer	Acreage	Farmer	Acreage	Farmer	Acreage	Farmer	
SRA	Upscaling by 50%	nd	30%	00	00	65,89ha	432	65,89ha	432	
SRI				00	00	0,28ha	10	0,28ha	10	
TOTAL		**nd**	**30%**	**00**	**00**	**66,17ha**	**432**	**66,17ha**	**432**	

Agriculture-livestock integration and farm manure management

Agriculture / Livestock integration plays an important role in order to harmonize activities and optimize production within a farm. Cattle breeding provide both labor and manure at a farm household. The biomass produced on Conservation Agriculture plots and Agroforestry System can partially be used for animal forage.

The manure will be used to increase agricultural production. To develop the farm manure management, the Manitatra project try to improve in one side the cow shed and in the other side, promote the compost process.

For the cow shed improvement, the project Manitatra advised farmers to cover at least part of the cow shed, so the cattle can take shelter when it rains and it protects the manure. The litter will be maintained by putting in straws and by replacing them when they get muddy. A manure hole located below the cow shed will be built for further decomposition of manure. The target is to take care of animal health while producing quantity and quality manure for agriculture.

Table 19: Achievements on cow shed improvement

Target	Reference date (before project)		Achievement at the end of June 2015		Achievement during the FOURTH QUARTER		Achievement during the 12 months (end of September)		Remarks
	Number	Farmer	Number	Farmer	Number	Farmer	Number	Farmer	
Upscaling by 50%	4	4	00	00	5	5	5	5	66,67% of the target

For the compost process, as part of the collaboration with DRDA, the Manitatra project staff received training on the compost process. The aim is to produce locally organic fertilizer and to address the lack of manure at the farm level. The compost process takes between 2.5 to 3 months, depending on the frequency of watering.

All composts in the South East are classical compost. No quality compost (7 days composts, lombricompost) was engaged in this area for lack of professionals to provide the training at the start of the project.

Table 20: **Achievements on composting process**

Target	Reference date (before project)		Achievement at the end of June 2015		Achievement during the FOURTH QUARTER		Achievement during the 12 months (end of September)		Remarks)
	Number	Farmer	Number	Farmer	Number	Farmer	Number	Farmer	
Upscaling by 50%	13	13	00	00	95,6m^3	31	95,6m^3	31	33 place of compost produced 254% of target

Activity 2.2. Training of lead farmers, exchange visits

In order to develop the "farmer to farmer approach", trainings for lead farmers were also organized in the Southeast.

Three post trainings were organized during the fourth quarter with FIFAMANOR about orange flesh sweet potatoes and with the support of the DRDA Atsimo Atsinanana about composting techniques, vegetable crops and integrated pest management.

Table 21: **Lead farmers and project staff training sessions in the Southeast**

October 2014 to june 2015			Fourth Quarter (July to September 2015)		
Session	Thematic of training	Trainers	Session	Thematic of training	Trainers
November 2014	• Presentation of the project • Roles of lead farmers • Awareness rising • Climate smart agriculture and watersheed approach • Farm approach	Supervisor SE	July 2015	Post training (orange flesh sweet potatoes)	FIMAMANOR
January 2015	• Use of training tools • Lead farmers'roles in a meeting	GSDM Consultant	July 2015	Post training (Compost, Vegetable crops, IPM)	DRDA
March 2015	• Orange flesh sweet potatoes technical production • Husbandry techniques for sweet potatoes	FIFAMANOR	August 2015	Post training (Compost, Vegetable crops, IPM)	DRDA
May 2015	• Compost • Vegetable crops • Integrated pest management	DRDA Atsimo Atsinanana			
May 2015	• 7 days compost • Vegetable crops	DRDA Atsimo Atsinanana			
5 sessions during the first 9 months			3 post training during the fourth quarter		

Activity 2.3. Seeds and tree plantlets available locally

No activities fall in this heading during this dry season.

Activity 2.4. New rice varieties available for farmers

Ten demonstration plots were laid out on 10 lead farmers' plots using two rice varieties. Fertilizers (NPK, Nitrogen), seeds of two varieties (X265 and Mihary), and 10 rotating manual weeders were provided by the project for these demonstration plots.

Table 22: SRI and SRA demonstration plots in the South East Region

Number	Lead farmers	Commune	Fokontany	Sites	SRI		SRA	
					Varieties	Acreages (ha)	Varieties	Acreages (ha)
1	ERNEST	Vohimasy	Iandraina	Tsarasanandro	X265	0,025	Mihary	0,025
2	RAKOTOMALALA	Vohimasy	Vohimasy	Analavelo	Mihary	0,025	X365	0,025
3	RAVELOJAONA Philémon	Mahafasa	Mahafasa	Mahafasa Centre	X265	0,025	Mihary	0,025
4	ANDRIAMBOLOLOMANANA Justin	Mahafasa	Vohitromby	Ambinany	Mihary	0,025	X365	0,025
5	ROSIMANA	Evato	Mahazoarivo	Analakely	Mihary	0,025	X365	0,025
6	RAKOTOMALALA Filéson	Evato	Emena	Anosimbary	X265	0,025	Mihary	0,025
7	LEFATSY Nicolas	Evato	Samboritra	Tazomamiratra	X265	0,025	Mihary	0,025
8	SOAHERIVONY Victorine	Tangainony	Vohibitro	Vohibitro	Mihary	0,025	X365	0,025
9	RANDRIAMANDRESY Justor	Evato	Ambatomena	Ambatomena/ Vahadrakaka	Mihary	0,025	X365	0,025
10	FALINANDRASANA Marie Doline	Evato	Mahazoarivo	Mahazoarivo	X265	0,025	Mihary	0,025
	TOTAL					0,25		0,25

Since the SRA and SRI plots are laid out almost side by side in the same lead farmer, farmers will realize the difference between the two techniques of rice intensification.

Output 3: Farmers organizations and other local stakeholders trained in CA/CSA and new farmers supported for seeds and specific equipment

Activity 3.1. Exchanges visits organized in the Midwest

The Ivory site, a long term demonstration plots (15 years under CA compared with tillage) is used as a site for exchanges visit in the Midwest. The following table shows that 56% of the visitors were farmers, 20% students, 18% technicians and 5% are policy makers and the rest are researchers.

Table 23: **Exchange visits in the Ivory site in the Midwest**

Period	Farmers organisations, NGO, University	Policy makers	Researchers	Technicians	Farmers	Students	Total
First 6 months	CARITAS	3		16			**19**
	CARITAS	2			23		**25**
	Farmers from Manitatra				13		**13**
	AIM Ambositra	2		23			**25**
	ASJA	1		1		20	**22**
	VFTV Mandoto			1	8		**9**
	ASJA	1		1		15	**17**
	ANDRIKO - SDMAD	1		2	42		**45**
TOTAL for first 6 months		**10**		**44**	**86**	**35**	**175**
11 April 2015	EPSA Bevalala			1		12	**13**
16 April 2015	Socota		2				**2**
20 April 2015	CRFPA Antanetimbohangy			2	23		**25**
23 April 2015	ONC Mediascop			1			**1**
18 May 2015	CRFPA Antanetimbohangy	1		3	20		**24**
20 May 2015	ACAMECA	1					**1**
20 May 2015	CFAMA			2			**2**
TOTAL for 3rd Quarter		**2**	**2**	**9**	**43**	**12**	**68**
13 June 2015	Réseaux paysan (projet MANITATRA			2	18		**20**
14 June 2015	DAHARI			1			**1**
07 August 2015	CARE Internationnal	2		3	17		**22**
10 August 2015	IRAG Guinée	1					**1**
	Fédération des Paysans du Fouta Djallon en Guinée Conakry (FPFD)			1	1		**2**
02 September 2015	GATE Université Ambohidratrimo	1				18	**19**
	PLAE	1		1			**2**
17 october 2015	Réseau paysans (projet Manitatra)				22		**22**
TOTAL for 4rd Quarter		**5**	**0**	**8**	**58**	**18**	**89**

TOTAL AT THE END OF SEPTEMBER	**17**	**2**	**61**	**187**	**65**	**332**
%	**5,1**	**0,6**	**18,4**	**56,3**	**19,6**	**100**

Activity 3.2. 4 exchanges visits organized in the Southeast at the Vohimasy Iandraina site

The South East region has the FFS site in Iandraina to serve as a training and exchange of experiences on CSA. 94 persons visit the site during 06 visits exchanges for this quarter. During 05 exchange visits, the project invited local authorities and leaders in the intervention areas to raise awareness about the benefits and opportunities offered by the agro-ecological systems practice. The main purpose of this is mainly to involve them much more in the fight against cattle free grazing, very destructive for crop residues and biomass.

Furthermore, by implementing an approach "farmers - farmers," the Manitatra project works with 10 lead farmers including 2 women. They were trained to enhance their capabilities. They ensure the dissemination of different themes developed by the project. They organize and conduct awareness sessions, training and exchange visits in their own farmer. Thus, each of these lead farmers set up exchange visits so, during the quarter, 26 exchange visits were carried out at lead farmers FFS. 341 farmers, of which 38% women, were involved during this fourth quarter.

Table 24: Exchange visits in the Southeast

	Achievement at the end of June 2015			Achievement during the FOURTH QUARTER			Achievement during the 12 months (end of September)			
	Session number	Participant	Women	Session number	Participant	Women	Session number	Participant	Women	% Women
Exchange visit in FFS Iandraina	05	77	14	06	94	08	11	171	**22**	**12,9%**
Exchange visit in Lead farmers FFS	29	380	72	26	341	130	55	721	**202**	**28%**
TOTAL	**34**	**457**	**86**	**32**	**435**	**138**	**66**	**892**	**224**	**25,1%**

Activity 3.3.Materials (documents, radio, film…) for training purposes

Training materials for lead farmers have been developed and printed on tarpaulin during the first six months to ensure a strong material to be used in the field. During this quarter, there is no more developing and printing of technical materials but the available ones were fully used by lead farmersfor training.

Output 4: CA and CSA is advocated for Government and stakeholders at both local and regional level

Activity 4.1. Sensitizing

The starting workshop, held in each of the two Regions, was organized at the beginning of the project. During the project, continuous sessions of sensitizing were organized in order to promote CSA techniques in the South East in the 4th quarter targeting mayors and traditional chiefs.

Table 25: Sensitizing sessions in the South East

	Achievement at the end of June 2015			Achievement during the FOURTH QUARTER			Achievement during the 12 months (end of September)			
	Session number	Participant	Women	Session number	Participant	Women	Session number	Participant	Women	% Women
Info/Comm. About Manitatra Project	01	21	3	00	00	00	01	21	**3**	**14,3%**
Sensitizing on CSA	45	1014	692	13	203	64	58	1217	**756**	**62,1%**
Training	93	1560	970	31	390	182	124	1950	**1152**	**59,1%**
TOTAL	**139**	**2595**	**1665**	**44**	**593**	**246**	**183**	**3188**	**1911**	**59,9%**

Activity 4.2. Fields days organized for authorities

Like in the Mid-West in March 2015, the field day in the South East was organized on the 17th of September in Farafangana and honoured for many local authorities, the local development actors, the lead farmers, nurserymen and the local press. The field day was followed by a workshop on the 18th of September in Impitiny Farafangana. The main objective was to sensitize the policy makers and local development actors on the effectiveness of CSA techniques in the vision of sustainable agriculture to combat climate change and food

insecurity. The field days were a real success, participants were able to express themselves and have discussions by sharing of experiences and exchanges. Minute of the field days may be accessed by this link**http://gsdm-mg.org/climate-smart-agriculture-for-food-self-sufficiency-and-protection-of-natural-resources-in-the-south-east-region-of-madagascar/**

Activity 4.3.Training intended to environmental and food security stake holders

No activity falls in this heading during the 4th quarter.

Activity 4.4.IEC Materials (brochures, radio, film…) for advocacy

All achievements on TV and radio broadcastings, press release, online publications, links to access to Facebook and YouTube for films and articles are summarized on table 26.

Table 26: Achievements in news media

	Achievement during the 1st 6 months		Achievement during the 3rdQUARTER		Achievement during the 4thQUARTER	
Type	**Type of Events**	**Details**	**Type of events**	**Details**	**Type of events**	**Details**
TV broadcasting	2 Starting workshops in Antsirabe and in Farafangana Field days in Vakinankaratra	TVM (national, public TV station), RTA (private station, capital city), TVPLUS (private station, national), MATV (private station, capital city), DREAM'IN (private station, capital city), RECORD (private station, capital city), KOLO TV (private station, capital city)	Basket compost training and exchange in the Southeast (07 et 08/05/15)	RTFA (Branch of National TV in the Southeast)	Field days in Farafangana	RTFA (national, public TV station)
	NDAO HIASA	26 min broadcasted on national TV (TVM)				
Radio	2 Starting workshops in Antsirabe and in Farafangana Field days in Vakinankaratra	RNM (national, public radio station), RDB (national), ACEEM radio (capital city, private), RTA (national, private), Radio Plus (capital city, private), MaFM (capital city, private), Radio Haja (local Antsirabe, private), Radio Record (capital city, private), Radio Fanambarana (capital city, private). South East: Radio Rakama (local radio)	Basket compost training and exchange in the Southeast (07 and 08/05/15)	Radio RAKAMA (local radio) - Radio SOANALA (local radio) – RNM(National radio)	Field days in Farafangana	RTFA radio (national, public radio station), RAKAMA (private local radio), SOANALA (private local radio)
Emission live radio	Project opening workshop in the South East	Radio Soanala	Basket compost training and exchange in the Southeast (07 et 08/05/15)	Radio Soanala (local radio)		
News papers	2 Starting workshops in Antsirabe and in Farafangana Field days in Vakinankaratra	Press release:MidiMadagasikara and l'Express de Madagascar		La Gazette de la grande ile	Field days in Farafangana	Press release : La Gazette de la Grande Ile
		Midi de Madagascar, L'Express de Madagascar, Malaza, Taratra, La Gazette, Gazetiko…	Field days in the Midwest	L'Express de Madagascar (01/04/15) - L'Express de Madagascar (03/06/15)		
On line WEB	Publications	www.gsdm-mg.org	Développentday of PADR	http://gsdm-mg.org/le-gsdm-a-participe-a-la-matinee-padr-du-29-mai/2015/	http://gsdm-mg.org/echanges-2/	All online publications are available at this site

Type	Achievement during the 1st 6 months		Achievement during the 3rdQUARTER		Achievement during the 4thQUARTER	
	Type of Events	Details	Type of events	Details	Type of events	Details
Facebook	Field days in the Mid West	https://www.facebook.com/profile.php?id=100008271524042	Basket compost training and exchange in the South east (07 et 08/05/15)	https://www.facebook.com/profile.php?id=100008271524042		
	Training on lombricompost	https://www.facebook.com/profile.php?id=100008271524042	Developmentday of PADR	https://www.facebook.com/profile.php?id=100008271524042		
	Training materials on tarpaulin	https://www.facebook.com/profile.php?id=100008271524042				
Film	Training of lead farmers in the Mid West	https://www.youtube.com/watch?v=2t_dYWKBoyY	Basket compost training and exchange in the Southeast (07 et 08/05/15)			
	Project Starting Workshop in the Mid West	https://www.youtube.com/watch?v=Qd0lg4hxvOA	Agroecology for the Midwest development			
	COMESA visit in the Mid West	https://www.youtube.com/watch?v=JgeoFLR9PZE				

Output 5: Monitoring and evaluation

Activity 5.1. Financial auditing

Financial auditing of the FY 2014 (Manitatra accounts October, November and December 2014) by external auditors commissioned by COMESA was done from April 7 to 10, 2015 at GSDM office Antananarivo. The Audit report is not yet received by GSDM.

Also financial auditing for the FY 2014 of the whole GSDM accounts by external auditor commissioned by GSDM was completed in July and the report was approved by the GSDM general Assembly of October 6, 2015.

Activity 5.2. Final Evaluation

Terms of References of the Final evaluation was prepared and the final evaluation will be done during the next quarter

Output 6: Project management

Activity 6.1. GSDM backstopping

GSDM backstopping is done either at the office for monitoring, administrative and financial activities, report, and data base processing… by the permanent staff of GSDM, or in field by permanent staff and Consultants.

Table 27: GSDM backstopping staff

Position	Names	Responsibility
Permanent staff	RAKOTONDRAMANANA	Director
	RAHARISON Tahina	M & E
	RASOLOMANJAKA Joachin	Agronomist
	RAKOTOMALALA Liva	Chief accountant
	RAZAKA Mireille	Communication specialist
	RANDRIANARIMANANA Ando	Accountant
	RAZAKAHERISOA Nivo	Secretary/Cashier
Consultants	MOUSSA Narcisse	CA specialist charged on permanent demonstration plot and technical support
	ANDRIANASOLO Hasina	Trainer
	RANDRIAMITANTSOA Martin	Trainer
	RANDRIANASOLO Jean Louis	Tender Specialist

Activity 6.2. Project management

Project management is done by the staff in Antananarivo (Director, Chief accountant, M & E expert, Agronomist). Operational management is done by the two Supervisors in each region.

OBSERVED AND EXPECTED IMPACT

The final evaluation should give details on Project impact. This part is done through the internal observation and survey by the GSDM staff.

This pilot project is just for one year, so the expected impact is limited especially for these CSA systems in which intended effects are seen in mid and long term. However, impacts can be observed through some Manitatra activities as a continuing activity for previous projects and initiatives. Impacts can be classified into 3 levels **(National level, regional level and on farm level)** as it is shown in the table below:

Table 28: Observed and expected impact

Impact level	Expected Outcome and impact	Impact indicator	Observed project impact	Remark
National level	Integration of CSA in Public policy	CSA integrated in policy plan, letter or documents	CSA are integrated as a priority in: - PND: Development National Plan - LPA: Agriculture Policy Letter - PSAEP/CAADP: Agriculture, Livestock and Fisheries sector policy	Some sensitizing were already done before by the GSDM and the National Task force (NCATF) during the last 2-3 years but the contribution of the Manitatra project is to show the importance of CSA (through field days, presentation during specific events…) during the validation phase of these documents.
Regional level	Gender issue consideration	Increased role of women in farm level at the two region	Real increased role especially in the Southeast - Midwest : 21% of women and 80% of men - South East : 43% of women and 57% of men	Women were implicated on trainee and on some aspect of activities: cash crop (vegetable) and orange flesh sweet potatoes…
	Regional development	Upland rice developed in the Midwest	The impact of Manitatra is not yet observed. The Manitatra project is implemented to upscale agro ecological systems and upland rice systems and the impact will be noted in mid and long term from now.	According to the DRDA (Agriculture Development Regional Direction), the upland rice acreage in the MW of Vakinankaratra is about 15.000 ha (30% more than last year situation) due to the agro ecological practice especially by the use of adapted variety, using of compost with biological insecticide added-(Neem, Tephrosia, Consoude), but also by the CA practice developed during the previous projects (during the 10 last years)
	Natural resources management	Increased biomass production in the Midwest Increased cooking fuel production	All the data is not yet available	It will be evaluated at the end during project evaluation. The projection of biomass production in 5, 10 years (Trees, wood for energy, other biomass…) in a regional level will be evaluated, comparing with the baseline study
Farm level	Better livelihood	Food security increased	Increased yield for food security crop (rice, maize in the MW, Cassava and yellow flesh sweet potatoes for SE) In the Midwest, for this year, the yield of rice conventional system is about 1T/ha. The yield under CA	All the data are not available but it will be available at the end of the project (in September) We also plan to evaluate farmer perception (notation : 1 to 5 for farmer perception about food security project impact) during the

Impact level	Expected Outcome and impact	Impact indicator	Observed project impact	Remark
			systems is about 2.6T/ha. The yield under green manure is about 2T/ha In the Southeast, the yield of cassava is increased 3 times more between conventional system (3-4T/ha) and basket compost system (10-12T/ha). Also, the working time to produce 1T of cassava is reduced from 32 M-d for conventional system to 12 M-d for basket compost. For sweet potatoes, traditional practice yield is about 4 to 6 T/ha (n.d in the baseline but this reference is taken in the agricultural statistic); the orange flesh sweet potatoes yield is about 12 T/ha (GSDM surveys). For this activities, 1188 farmers were concerned (97% women directly concerned) for about 7,25ha. According to the average yield and concerned acreage, each farmer produce 73kg of sweet potatoes (48kg more than with traditional practice) with good quality (rich on A vitamin). Considering all family members, 10692 persons were impacted by this rise of quantity and quality of sweet potatoes and it is a real impact for food security.	project final evaluation For the sweet potatoes, the direct impact (48 kg per family and 10692 persons concerned) is just gotten through the first implementation and demonstration activity. The concerned area is yet small (average of 0.6 are per family). With the cutting plant management, the concerned area per family and number of farmer will increase. In addition, it is a non-photoperiodic and short cycle variety (about 3,5 months to 5 months), so farmers can produce twice or three times a year (one time a year during the dry season for the local variety). So, the impact in short and middle term will be very high for food security.
	Better livelihood	Increased income	Not yet available Increased yield for food cash crop (rice, maize, cassava, groundnut in the MW, vegetable for SE) In the Midwest, for this year, the yield of rice conventional system is about 1T/ha. The yield under CA systems is about 2.6T/ha. The yield under green manure is about 2T/ha For maize, the yield of conventional system is about 0.8T/ha. The yield under CA systems is about 2T/ha	Some aspect of income will be more evaluated because farm income is complex and not restricted on increased yield According the baseline study: - For Midwest, each household enjoys an average agricultural income of US$ 2507.35 per year, resulting with an average of $ 6.87 per household per day. - For Southeast farmer, their main agriculture incomes are from rice and coffee. Each household's income is estimated at US$ 752.6/year, meaning 0.35 US $ par active person.
	Natural	Increased organic	No yet available	For smallholder farmer situation, study in 2014 (T. Raharison), the

Impact level	Expected Outcome and impact	Impact indicator	Observed project impact	Remark
	resources management	matter availability	*Try to give the comparison of the before project situation and after project evaluation.* 1ha of Stylosanthes gives 10T/ha of biomass Many farmer are concerned by the compost process (classic compost, lombricompost, 7 days compost). In the Mid-West, 291 farmers were concerned by composting process with 467 composters installed. Each farmer produced 800 kg of compost. The quantity could be increased but not hugely but the quality of available organic manure (after composting) is largely ameliorated. It is also the impact of first year introduction and we observed during some months of implementation an increasing number of concerned farmer and an increasing quantity per farmer. A big impact will be observed in the middle and long term,	average of the organic matter (especially manure) quantity per farm is less than 2T/ha. However, the minimum to insure the soil entertainment is about 5T/ha (FAO, 2005). To evaluate this indicator, the average of the organic matter per beneficiary is considered and compared with this before project situation. The quantity after composting process could be increased but not hugely because for each compost type, the compost yield is different using farm manure and other organic matter (survey done by GSDM staff) : - Classical compost : 500 kg of farm manure give 900 kg of compost - 7 days compost : 500 kg of farm manure give 800 kg of compost - Lombricompost : 500 kg of farm manure give 300kg of lombricompost (but with a high quality) So, the increased quantity is not yet available. The final evaluation should give the increased quantity per farmer in order to evaluate the impact on this activity.
		Increased use of bio-pesticide to combat pest & diseases	Some impact were observed in field especially the reduces impact of pest and diseases (farmers testimonies)	All types of compost are bio-pesticides added
	Resilience to climate change	Increased climate change resilience for smallholder farmer	No yet available	This indicator is difficult to measure but some evaluation could be done with farmer perception (notation 1 to 5) about some climate change affect : drought or erratic rainfall, flood, high temperature, erosion due to the rainfall

ANNEXES

3.1. Detailed Financial Report

Description	Initial Budget USD	Budget reallocations USD	Budget after reallocation USD	TOTAL END OF JUNE USD	*JULY USD*	*AUGUST USD*	*SEPTEMBER USD*	*TOTAL 4rd QUARTER USD*	TOTAL END OF SEPTEMBER USD	Balance USD	%
Main Outputs/Activies											
1. CA and CSA more widely upscaled in th Mid West of Madagascar											
1.1. Management of stylo based CA system	54 080,00	(365,56)	53 714,44	38 368,16	14 401,51	1 679,78	2 945,98	**19 027,26**	**57 395,42**	(3 680,99)	106,85
1.1.1. Supervisor (1)	11 400,00	(3 670,17)	7 729,83	5 514,33	783,57	586,66	585,71	**1 955,94**	**7 470,27**	259,56	96,64
1.1.2. Technicians (3)	11 880,00	1 440,83	13 320,83	9 027,30	1 536,32	910,55	893,94	**3 340,80**	**12 368,10**	952,73	92,85
1.1.3. Lead farmes (12)	3 840,00	1 225,67	5 065,67	2 355,81	538,21	-	1 046,51	**1 584,72**	**3 940,53**	1 125,13	77,79
1.1.4. Motorcycles (4)	12 000,00	(2 838,27)	9 161,73	9 161,73	-	-	-	**-**	**9 161,73**	-	100,00
1.1.5. Operational cost motorcycles	3 300,00	1 052,72	4 352,72	4 087,13	119,60	-	239,20	**358,80**	**4 445,93**	(93,21)	102,14
1.1.6. GPS (1)	830,00	(219,87)	610,13	610,13	-	-	-	**-**	**610,13**	-	100,00
1.1.7. Bicyclette (12)	1 200,00	861,93	2 061,93	2 061,93	-	-	-	**-**	**2 061,93**	-	100,00
1.1.8. Rollers for biomass of stylosanthes	3 300,00	1 200,00	4 500,00	235,48	10 863,79	-	-	**10 863,79**	**11 099,26**	(6 599,26)	246,65
1.1.9. Laptop (1) printer (1) stabilisateur de courant (1)	1 250,00	1 170,64	2 420,64	2 420,64	-	-	-	**-**	**2 420,64**	-	100,00
1.1.10. Videoprojector (1)	1 000,00	(73,01)	926,99	926,99	-	-	-	**-**	**926,99**	-	100,00
1.1.11. Office renting at Ankazomiriotra	1 440,00	(89,16)	1 350,84	1 020,24	102,99	102,99	102,99	**308,97**	**1 329,21**	21,64	98,40
1.1.12. Communication (internet, téléphone...)	1 440,00	(426,87)	1 013,13	585,79	41,35	79,58	77,63	**198,56**	**784,35**	228,78	77,42
1.1.13. Supervision by DRDR	1 200,00	-	1 200,00	360,68	415,68	-	-	**415,68**	**776,36**	423,64	64,70
1.2. Legume trees for agroforetry or hedgerows available	22 968,00	7 580,75	30 548,75	29 962,50	-	-	-	**-**	**29 962,50**	586,26	98,08
Support to local nurseries (trres, cover corps...)	-	-	-					**-**	**-**	-	
1.2.1. Provision of plastic bags, seeds, plantlets of Acacia, discount voucher	21 425,00	4 999,02	26 424,02	26 420,26	-	-	-	**-**	**26 420,26**	3,75	99,99
1.2.2. Provision for seeds of Stylosanthes	1 417,00	1 828,88	3 245,88	2 615,50	-	-	-	**-**	**2 615,50**	630,38	80,58
1.2.3. Provision for seeds of Tephrosia / Mucuna	42,00	568,86	610,86	641,63	-	-	-	**-**	**641,63**	(30,77)	105,04
1.2.4. Provision for seeds of Crotalaria	42,00	49,00	91,00	104,80	-	-	-	**-**	**104,80**	(13,80)	115,17
1.2.5. Provision for seeds of Cajanus	42,00	135,00	177,00	180,30	-	-	-	**-**	**180,30**	(3,30)	101,86
1.3 New rice varieties from research available	300,00	(150,00)	150,00	-	-	-	-	**-**	**-**	150,00	
1.3.1. Provision for seeds of new varieties of upland rice	300,00	(150,00)	150,00	-				**-**	**-**	150,00	

Description	Initial Budget USD	Budget reallocations USD	Budget after reallocation USD	TOTAL END OF JUNE USD	*JULY USD*	*AUGUST USD*	*SEPTEMBER USD*	*TOTAL 4rd QUARTER USD*	TOTAL END OF SEPTEMBER USD	Balance USD	%
1.4. Long term demonstration plot	15 000,00	(5 344,84)	9 655,16	9 347,68	-	-	-	**-**	**9 347,68**	307,48	96,82
1.4.1. Demonstration plot at Ivory (for exchange visit and training)	15 000,00	(5 344,84)	9 655,16	9 347,68	-	-	-	**-**	**9 347,68**	307,48	96,82
1.5. Livestock and farm manure management and use	4 040,00	-	4 040,00	2 281,63	-	-	-	**-**	**2 281,63**	1 758,37	56,48
1.5.1. Training (Forages vs biomass for CA, Farm manure management, Compost "7 days compos", Lombricompost)	4 040,00	-	4 040,00	2 281,63	-	-	-	**-**	**2 281,63**	1 758,37	56,48
Sub-total 1	96 388,00	1 720,35	98 108,35	**79 959,97**	14 401,51	1 679,78	2 945,98	**19 027,26**	**98 987,23**	(878,88)	100,90
2. CSA more widely upscaled in the South East of Madagascar (region Atsimo Atsinanana)											
2.1. CSA up scaled with 1400 farmers including	41 380,00	(810,07)	40 569,93	31 291,84	2 538,61	1 410,53	2 410,09	**6 359,23**	**37 651,07**	2 918,86	92,81
2.1.1. Supervisor (1)	11 400,00	(3 670,17)	7 729,83	5 214,90	842,94	584,31	583,31	**2 010,56**	**7 225,46**	504,37	93,48
2.1.2. Technicians (2)	7 920,00	710,39	8 630,39	5 977,69	1 037,67	687,79	692,44	**2 417,91**	**8 395,59**	234,80	97,28
2.1.3. Lead farmers (10)	2 400,00	2 177,86	4 577,86	2 283,69	382,06	-	794,02	**1 176,08**	**3 459,77**	1 118,09	75,58
2.1.4. Motorcycles (3)	9 000,00	(2 061,73)	6 938,27	6 937,71	-	-	-	**-**	**6 937,71**	0,56	99,99
2.1.5. Operational cost motorcycles	2 500,00	1 539,56	4 039,56	3 626,13	99,67	-	199,34	**299,00**	**3 925,13**	114,42	97,17
2.1.6. GPS (1)	830,00	(219,87)	610,13	610,13	-	-	-	**-**	**610,13**	-	100,00
2.1.7. Bicyclette (10)	1 000,00	758,91	1 758,91	1 758,91	-	-	-	**-**	**1 758,91**	-	100,00
2.1.8. Laptop (1) printer (1) stabilisateur de courant (1)	1 250,00	1 170,64	2 420,64	2 420,64	-	-	-	**-**	**2 420,64**	-	100,00
2.1.9. Videoprojector (1)	1 000,00	(73,01)	926,99	926,99	-	-	-	**-**	**926,99**	-	100,00
2.1.10. Office renting (1)	1 440,00	(126,68)	1 313,32	987,33	99,67	99,67	99,67	**299,00**	**1 286,33**	26,99	97,94
2.1.11. Communication (internet, téléphone...)	1 440,00	(1 015,98)	424,02	237,29	76,60	38,76	41,31	**156,67**	**393,96**	30,05	92,91
2.1.12. Supervision by DRDR	1 200,00	-	1 200,00	310,43	-	-	-	**-**	**310,43**	889,57	25,87
2.2 Training of farmers and exchange visits	1 980,00	958,84	2 938,84	2 780,34	-	-	340,53	**340,53**	**3 120,87**	(182,03)	106,19
2.2.1. FFS Vohimasy (1)	1 660,00	1 278,84	2 938,84	2 780,34		-	340,53	**340,53**	**3 120,87**	(182,03)	106,19
2.2.2. Hosting and training of farmers	320,00	(320,00)	-	-	-	-	-	**-**	**-**	-	
2.3. Seeds and tree plantlets available locally	21 718,00	(7 238,75)	14 479,25	1 354,60	5 306,28	-	-	**5 306,28**	**6 660,88**	7 818,37	46,00
Tree nursery (on per commune)	-	-	-					**-**	**-**	-	
2.3.1. Provision of plastic bags, seeds, plantlets of Acacia, discount voucher	21 265,00	(8 248,02)	13 016,98	641,65	5 301,00	-	-	**5 301,00**	**5 942,65**	7 074,34	45,65
2.3.2. Provision for seeds of Stylosanthes	167,00	691,12	858,12	187,62	5,28	-	-	**5,28**	**192,90**	665,22	22,48
2.3.3. Provision for seeds of Brachiaria	80,00	219,00	299,00	300,19				**-**	**300,19**	(1,19)	100,40
2.3.4. Provision for seeds of Arachis	80,00	-	80,00	-				**-**	**-**	80,00	
2.3.5. Provision for seeds of Tephrosia / Mucuna	42,00	183,14	225,14	225,14				**-**	**225,14**	-	100,00
2.3.6. Provision for seeds of Crotalaria	42,00	(42,00)	-	-				**-**	**-**	-	
2.3.7. Provision for seeds of Cajanus	42,00	(42,00)	-	-				**-**	**-**	-	

Description	Initial Budget USD	Budget reallocations USD	Budget after reallocation USD	TOTAL END OF JUNE USD	*JULY USD*	*AUGUST USD*	*SEPTEMBER USD*	*TOTAL 4rd QUARTER USD*	TOTAL END OF SEPTEMBER USD	Balance USD	%
2.4. New rice varieties available for farmers	300,00	(150,00)	150,00	-	-	-	-	-	-	150,00	
2.4.1. Provision for seeds of new irrigated rice varieties	300,00	(150,00)	150,00	-				-	-	150,00	
2.5. Improvemen of food security and nutrition	16 000,00	-	16 000,00	9 302,94	-	-	-	-	**9 302,94**	6 697,06	58,14
2.5.1. Introduction of yellow flesh sweet potatoes from research (150 women farmers)	2 500,00	-	2 500,00	2 500,00	-	-	-	-	**2 500,00**	-	100,00
2.5.2. Training of yellow flesh sweet potatoes from research	12 500,00	-	12 500,00	6 802,94	-	-	-	-	**6 802,94**	5 697,06	54,42
2.5.3. Introduction of vegetable crops targetting women (250 women farmers)	1 000,00	-	1 000,00	-				-	-	1 000,00	
Sub-total 2	81 378,00	(7 239,98)	74 138,02	44 729,72	7 844,89	1 410,53	2 750,62	**12 006,04**	**56 735,76**	17 402,26	76,53
3. Farmers organizations and other local stake holders trained in CA and CSA and new farmers supported for seeds and specific equipements											
3.1. Exchanges visits in the Mid West	2 520,00	(1 020,00)	1 500,00	376,43	-	-	-	-	**376,43**	1 123,57	25,10
3.2. Exchanges visits in th Souh East at the Vohimasy site	3 360,00	(1 360,00)	2 000,00	453,14	428,24	-	-	**428,24**	**881,38**	1 118,62	44,07
3.3. IEC Materials (documents, radio, film...) for training purposes	2 500,00	1 224,19	3 724,19	3 724,19	-	-	-	-	**3 724,19**	-	100,00
Sub-total 3	8 380,00	(1 155,81)	7 224,19	4 553,75	428,24	-	-	**428,24**	**4 981,99**	2 242,20	68,96
4. CA and CSA is widely advocated for within Government and stake holders at both local and regional level											
4.1. Organize field daysz for authorities (1 per region)	8 300,00	1 960,00	10 260,00	6 359,94	-	-	3 360,37	**3 360,37**	**9 720,31**	539,69	94,74
4.2. Training intended to environnemental and food security stake holders	2 100,00	-	2 100,00	886,95	140,86	232,56	-	**373,42**	**1 260,37**	839,63	60,02
4.3. IEC Materials (brochures, radio, film...) for advocacy	3 100,00	512,81	3 612,81	1 744,84	98,79	74,75	-	**173,54**	**1 918,38**	1 694,43	53,10
Sub-total 4	13 500,00	2 472,81	15 972,81	8 991,73	239,65	307,31	3 360,37	**3 907,33**	**12 899,06**	3 073,75	80,76
5. Monitoring and evaluation											
5.1. Commissionning of consultant (base line study)	8 400,00	4 200,00	12 600,00	9 484,61	1 076,17	35,38	-	**1 111,55**	**10 596,16**	2 003,84	84,10
5.2. Financial auditing	4 200,00	-	4 200,00	-	1 325,58	767,44	714,29	**2 807,31**	**2 807,31**	1 392,69	66,84
5.3. Final Evaluation	13 000,00	-	13 000,00	-				-	-	13 000,00	
Sub-total 5	25 600,00	4 200,00	29 800,00	9 484,61	2 401,75	802,82	714,29	**3 918,86**	**13 403,47**	16 396,53	44,98
TOTAL PROJECT COST (Total 1-5)	225 246,00	(2,63)	225 243,37	147 719,78	25 316,05	4 200,44	9 771,25	**39 287,74**	**187 007,51**	38 235,85	83,02
6. Project Management											
6.1.1. Director (2 months)	3 600,00	-	3 600,00	1 268,29	900,00	-	-	**900,00**	**2 168,29**	1 431,71	60,23
6.1.2. CA economist (2 months)	1 800,00	-	1 800,00	633,58	450,00	-	-	**450,00**	**1 083,58**	716,42	60,20
6.1.3. CA agronomist (4 months)	3 600,00	-	3 600,00	1 505,47	900,00	-	-	**900,00**	**2 405,47**	1 194,53	66,82
6.1.4. Off-road vehicles (2)	9 000,00	-	9 000,00	3 955,48	2 250,00	-	-	**2 250,00**	**6 205,48**	2 794,52	68,95
6.2. Project Management Free by the Implementing Entity = 3%	6 757,00	-	6 757,00	2 840,79	1 515,09	114,29	-	**1 629,37**	**4 470,16**	2 286,84	66,16
Bank charges	-	-	-	4 475,07	154,51	46,84	125,58	**326,92**	**4 801,99**	(4 801,99)	
Sub-total 6	24 757,00	-	24 757,00	14 678,68	6 169,59	161,12	125,58	**6 456,29**	**21 134,98**	3 622,02	85,37
TOTAL EXPENDITURE	**250 003,00**	**(2,63)**	**250 000,37**	**162 398,46**	**31 485,64**	**4 361,56**	**9 896,83**	**45 744,03**	**208 142,49**	**41 857,88**	**83,26**

3.2. Plan of action for the next quarter (October-December 2015)

Mid-west: limited backstopping by Supervisor and technicians:

- Support to composting (lombricompost, …)
- Stylosanthes biomass rolling
- Preparation of rainfed crops under CA
- SRI/SRA
- database

Southeast: limited backstopping by Supervisor and technicians:

- Support to composting (lombricompost, …)
- Preparation of rainfed crops under CA
- SRI/SRA
- Vegetable crops
- Cowshed
- Basket compost (cassava)
- Database

Cross cutting activities: GSDM Staff

- **Final evaluation of MANITATRA Project pilot Phase.**
- **Final Report MANITATRA Project pilot Phase**.

3.3. Success story and/or testimonies

Link You Tube GSDM:

https://www.youtube.com/channel/UC0O-S80cSqOe7PGrUpH7WAg

3.4. Any other documents such as minutes

- Minute of Field Days, South East, September 17, 18, 2015: http://gsdm-mg.org/climate-smart-agriculture-for-food-self-sufficiency-and-protection-of-natural-resources-in-the-south-east-region-of-madagascar/