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MANITATRA 2 PROJECT

SUBMITTED TO

COMMON MARKET FOR EASTERN AND SOUTHERN AFRICA

BY

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Lot VA 26 Y Ambatoroka, Route d'Ambohipo,
ANTANANARIVO (101)
MADAGASCAR

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Acronyms and Abbreviations

ACP	Africa, Caribbean and Pacific countries
AF	Agroforestry
AFD	Agence Française de Développement (French Agency For Development)
AFRICA Rice	Africa Rice Center
AGRISUD	French NGO
APDRA	Born in 1996, APDRA Pisciculture Paysanne supports fish farming in southern countries and raises awareness among northern stakeholders of the challenges involved in this activity.
asl	above sea level
AU	African Union
AVSF	Agronomes et Vétérinaires sans Frontières (Agronomists and Veterinarians without borders)
BEMC	Bureau de l'Education Environnemental et du Civisme (Environmental Education and Citizenship Office)
BNCC	Bureau National du Changement Climatique (National Climate Change Office)
BVPI	Bassin Versant Périmètre Irrigué (Watershed Perimeter Irrigated)
CA	Conservation Agriculture
CASEF	Appui aux chaînes de valeur et à la sécurisation foncière (Support to value chains and land security)
CC	Climate Change
CD	Compact Disc
CEFFEL	Conseil Expérimentation Formation en Fruit et Légume (Experiment Council Training in Fruit and Vegetables) (association)
CEG	Collège d'Enseignement Général (General Education College)
CIRAD	Centre de Recherche Agronomique pour le Développement (Center for Agronomic Research for Development)
CISCO	Circonscription Scolaire (School district)
CNEAGR	Centre National de l'Eau de l'Assainissement et du Génie Rural (National Center for Water, Sanitation and Rural Engineering)
COMESA	Common Market for East and Southern Africa
CR	Commune Rurale (Rural Commune)
CSA	Climate Smart Agriculture
CSA	Centre de Service Agricole (Agricultural Service Center)
CTD	Collectivités Territoiriales Décentralisées (Decentralized Territorial Communities)
DREMC	Direction Régionale de l'Environnement et du Civisme (Regional Directorate of Environment and Citizenship)
DGE	Directorate General of Environment
DGM	Directorate General of Meteorology
DRAE	Regional Directorate for Agriculture and Livestock
DREEF	Regional Directorate for Ecology, Environment and Forestry
EBa	Ecosystem based Adaptation
ECOAfrica	Ecological intensification pathways for the future of crop-livestock integration in African agriculture project
EU	European Union
FAO	Food and Agricultural Organization
FAW	Fall Army Worm (chenilles légionnaires)
FDA	Fond de Développement Agricole (Agricultural Development Fund)
FDAR	Fond de Développement Agricole Régional (Regional Agricultural Development Fund)
FFS	Farmers Field School or CEP in French
FIA	Foire Internationale de l'Agriculture (International Agriculture Fair)

FIERMADA	Foire internationale de l'économie rurale de Madagascar (International fair of the rural economy of Madagascar)
FIFAMANOR	Centre de recherche et de développement rural en agriculture et en élevage est basé à Antsirabe (The Agricultural Research and Development Center for Agriculture and Livestock
FIFATA	Association pour le Deveoppement des Paysans (Association for the Development of Farmers)
FK	*Fokontany* (the smallest administrative area)
FOFIFA	FOFIFA - CENRADERU - Centre national de Recherche appliquée au développement rural (FOFIFA - CENRADERU - National Center for Research in Rural Development)
FO	Farmers organization
GCCA +	Global Climate Change Alliance plus
GSDM	**GSDM**, *Professionnels de l'Agro-écologie*
IRD	French Institute of Research and Development
LF	Lead Farmer
LRI	Laboratoire de Radio Isotope (Radio Isotope Laboratory)
MAEP	Ministère de l'Agriculture de l'Elevage et de la Pêche (Ministry of Agriculture, Livestock and Fisheries)
M&E	Monitoring and Evaluation
MEDD	Ministère de l'Environnement et du Développement Durable (Minisitry of Environment and sustainable Development
MEEF	Ministère de l'Ecologie, de l'Environnement et des Forêts (Ministry of Ecology, Environment and Forests)
MEN	Ministère de l'Education Nationale (Ministry of Education)
MENETP	Ministère de l'Education Nationale, de l'Enseignement Technique et Professionnel (Ministry of National Education, Technical and Vocational Education)
MS	Member State
NAP	National Adaptation Plan
NGO	Non-Government Organization
OEMC	Office de l'Education de Masse et du Civisme (Office of Environmental Education and Citizenship)
PAPAM	Projet d'Appui à la Productivité Agricole à Madagascar (Support Project for Agricultural Productivity in Madagascar)
PAPRIZ	JICA project on Irrigated Rice in Madagascar
PLAE	Projet de lutte antiérosive: GIZ Erosion project funded by KFW
SPAD	Système de Production d'Altitude Durable (Sustainable Production system in high altitude)
RN7	Route Nationale N°7 (National Road 7)
RN34	Service Régional de la Météorologie (regional service of meteorology)
RNM	Route Nationale N°34 (National Road 34°
RTA	Radio Nationale Malagasy (National Malagasy Radio, public radio)
SRI/SRA	System of Rice Intensifications/System of Rice Improvement (Rice intensification using young plantlets (8 days for SRI and 10 – 15 days for SRA), good seedbed and alterning irrigation and drying of the soil, plus farm manure and fertilizer)
STD	Services Territoriaux Décentralisés (Decentralized Territorial Services)
TFNAC	Task Force National pour l'Agriculture de Conservation
Tanety	Soils of hills or hillsides
TV	Television
TVM	Télévision Malagasy (Malagasy TV : public TV)

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I- EXECUTIVE SUMMARY

Partnership

As part of the agreement established with the SRM Vakinankaratra, on April 14, a workshop on "Ocean, Weather and Climate" was organized in the Meeting Room of the Prefecture of Vakinankaratra as part of the celebration of the "World Meteorological Day". A total of 26 participants from decentralized Territorial Communities and the Decentralized Territorial Services in the Region took part in this event. In addition, 7 training sessions on the valorization of agrometeorological data were carried out in the 02 project areas. Particular emphasis was placed on the method of interpretation of the quarterly bulletin designed within the framework of the agreement established with the Regional Service of Meteorology Vakinankaratra. During these training sessions, 75 participants were registered.

Then, 20 micro-projects set up by groups supervised by the project received funding from the FDA Vakinankaratra:

- 5 projects for the acquisition of inputs and materials for the improvement of dairy farming techniques according to agroecological practices;
- 4 projects for the acquisition of inputs and materials for the improvement of local chicken breeding techniques according to agroecological practices;
- 1 project to improve rice-fish farming techniques with agroecological practices;
- 7 projects to improve rainfed rice production techniques with agroecological practices;
- and, 3 projects for the application of agroecological practices in vegetable production.

In addition, the collaboration with the ATDRM within the framework of the promotion of rice-fish farming, and the FIFAMANOR on the improvement of milk production were pursued during this period. On March 24 and 25, 2021, training on livestock management, fodder conservation, animal health, and breed improvement was carried out at the FIFAMANOR center. The 06 technicians of the project and an Agronomist responsible for Agroecology in the collaboration between GSDM, ProSol and CAFPA Mahitsy.

This year, a review mission was carried out by ATDRM agents. They were able to observe an average fish weight of 200g to 250g at the end of June. It should be noted that the project recorded 316 adopters in rice-fish farming.

Finally, at the end of this year 2021, agents from DREDD and DRAE Vakinankaratra carried out monitoring missions in the 2 areas of the MANITATRA 2 project. The objective being to monitor the activities of the project; with a focus on the reforestation carried out for the DREDD. In addition, these missions also made it possible to carry out an assessment of the capacity of the project service providers: the lead farmers and the nurserymen.

Targets

The project main objective is to support the up scaling of CSA in order to mitigate climate change and to improve food security in Madagascar.

As a specific objective, ecosystem-based adaptation is up scaled for agriculture development and soil and forest smart conservation in the Mid-West and the Highlands of the VAKINANKARATRA Region.

Three project results are expected:

- *Result 1: CSA and Best practices are up scaled in two ecosystems of the VAKINANKARATRA region, covering the Highland and Middle West regions;*
- *Result 2: Capacity on various stakeholders is built in Climate Smart Agriculture (Conservation Agriculture and Agroforestry)*
- *Result 3 Farmer organizations are supported and linked to various stakeholders in Agriculture*

Project Financial performance

From table 1 (details in Appendix 1), it appears that, as of December, 2021, total budget engaged is 92,51% and total disbursed 86,45%. Results 1 and 2 showed the highest budget consumption as expected and Result 3 the lowest due to the delay in FDA implementation and the impossibility of implementing the activity 3.2

(Sharing experiences at the regional level (COMESA and other regions) integrating political actors and development actors due to COVID 19 pandemic.

Detailed progress on project implementation

Result 1: CSA and Best practices are up scaled in two ecosystems of the Vakinankaratra region - Highland and Middle West regions in Madagascar

Despite the health crisis linked to the COVID-19 pandemic, the project was still able to organize numerous intra-communal and extra-communal exchange visits. These visits accentuate the dissemination of agroecological practices promoted by the project. Because, for the peasants, the fact of seeing the realization of other peasants is more convincing.

Then, 1,491 farmers, including 682 women (i.e. 45.7%) were able to benefit from cover crop seeds from the project. It should be noted that this year, we have made available to these farmers:

- 5,950 kg of Mucuna seeds;
- 492 kg of Stylosanthes seeds;
- 2,900 kg of Cajanus seeds;
- And, 1,200kg of Oats.

Afterwards, as part of the support for producers, 609 ha of *tanety* were cultivated according to the different CA systems. That is, **2,058 ha** of rainfed food crops for this third year of the project. This corresponds to 103% of the final objective. In this sense, the project supported 4,378 farmers, including 1,812 women (even 41.4% of adoptive farmers in CA).

In addition, within the framework of tripartite funding (FOs-FDA Vakinankaratra-Manitatra 2), 4 FOs were provided with rollers of stylosanthes. This agricultural equipment specific to the adoption of CA based on Stylosanthes is very important for the relatively large areas in the Middle West of Vakinankaratra.

Then, 728,468 seedlings produced by village nurseries were planted. 1,308 reforesters have been registered having benefited from the seedlings subsidized by the project; including 262 women (i.e. 20% of planters). The forest species planted consist of:

- *Acacia mangium*: 378,262 seedlings;
- *Eucalyptus citriodora*: 317,786 seedlings;
- And, *Liquidambar sp*: 32,420 seedlings.

Finally, the support and accompaniment of farmers on the practice of various composting continued during this period. We noticed that **Vermicompost** still continues to interest many farmers. This is due to the quality of this organic fertilizer, and the high cost of chemical fertilizers.

Result 2: Capacity on various stakeholders is built in Climate Smart Agriculture

At the end of this year, the project team focused a lot on setting up various systems at the application plots of the 12 supervised schools. It should be remembered that for this year 2021, two school years follow one another (2020-2021 and 2021-2022).

Then, each of the 12 schools supervised by the project carried out exchange visits in the project areas. Application plots and family farms adopting agroecological practices have been targeted to serve as a basis for discussions and exchanges between representatives of teachers, students and parents. In the Middle West, the GSDM training site in Ivory is also a preferred destination for these visits. In short, a total of 331 people were registered during these visits.

Then, the reception and animation of the exchange visits on the agroecological sites supervised by the GSDM (on the Antsirabe – Mandoto axis, on the Ivory site and some achievements of the Manitatra 2 project) made it possible to register 1,162 participants in 2021 These participants are made up of technicians, farmer trainers, seed farmers, nursery farmers.

Finally, on April 14, a workshop on "Ocean, Weather and Climate" was organized in the meeting room of the Vakinankaratra Prefecture as part of the celebration of "World Meteorological Day". A total of 26 participants from CTDs and STDs in the Region took part in this event. In addition, 07 training sessions on the valorization of agrometeorological data were carried out in the 02 project areas.

Particular emphasis was placed on the method of interpretation of the quarterly bulletin designed within the framework of the agreement established with the Regional Service of Meteorology Vakinankaratra. During these training sessions, 75 participants were registered.

Result 3: Farmer organizations are supported and linked to various stakeholders in Agriculture

Since the start of the project, 141 requests for funding from FOs supervised by the project have been submitted to the FDA Vakinankaratra. For this year, 20 micro-projects were funded by the FDA.

Finally, on March 24 and 25, 2021, training on livestock management, fodder conservation, animal health, and breed improvement was carried out at the FIFAMANOR center. The 06 technicians of the project and an agronomist of the project were able to benefit from it.

For its part, the ATDRM carried out a last mission in the area, devoted to the assessment of the activities carried out within the framework of the promotion of rice-fish farming. A total of 243 rice growers were mentored by the project team in 2021. And, with an average yield of 200g to 250g per fish, the impact on the income of adopting households is palpable. However, this activity faces various major constraints: **rainfall and theft**.

Communication and visibility

For this year, 4 technical films were produced and broadcast on Malagasy National Television as part of a collaboration with the E-see Magazine team. These technical films, as well as the *Journal of Agroecology* and other articles related to the promotion of agroecology are published online and on social networks by the GSDM communication team.

Project administration (human and equipment)

The delivery of the lead farmers stopped at the end of August 2021; and that of the 6 project technicians in December of the same year. The preparation of a budget reorganization proposal to best mobilize the remaining funding is underway.

Project oversight

For the final evaluation of the project, the GSDM, after taking the necessary steps to comply with the procurement rules, commissioned the "Rivo Rabarijohn" consulting group. This group has already carried out surveys in certain areas of MANITATRA 2. A provisional report has already been submitted for review by the GSDM Board. And, currently, this group of consultants is in the process of finalizing a final report on this study, taking into account the remarks and recommendations made during the previous validation meeting.

Lessons learned in 2021

During this year, we have again seen that **Mucuna** is an excellent precursor to upland rice. Even with an average biomass, the yield of upland rice is still higher than that of conventional systems. But, with a good biomass, the plots are clean; and requires very little overhead for plot preparation and/or weeding. Currently, Mucuna is positioned as the most popular cover crop among farmers in the Region. Adopters rush to harvest the seeds for the next crops. Cases of theft on the field are even observed everywhere. This shows the increased interest shown by growers in this cover crop.

In addition, it should be noted that the Mucuna gives a lot of grains when it can hold on to a stake. Thus, if the producer wants to produce mucuna seeds, the association ***Cajanus cajan* + Mucuna** is very interesting. You can also dress cassava plots with Mucuna.

Then, the Rainfed rice + Cajanus cajan association has significant advantages on poor and compacted soils. When the Cajanus is installed early (during the first weeding), good biomass can be obtained. Thus, just like the plots with good biomasses of Mucuna, the Cajanus also presents plots without weeds. In the second year, the stems of Cajanus are stripped below ground level and we can sow rainfed rice or maize + legumes directly on Cajanus residues. On the other hand, if the Cajanus biomass is still insufficient at the beginning of the second year; we can intercop corn + edible legumes on the interlines of Cajanus. **Note that the Cajanus cajan gives a lot of seeds from the second year.**

Then, in the majority of cases, whether in the Highlands or in the Middle West, the “Farimaso” creeping cowpea gives a lot of biomass, but very little or no grain. In the current state, this system is not suitable in the Region.

In addition, *Cajanus cajan* forests can also be used as green materials when reclaiming the plot with cassava in basket compost. This practice makes it possible to multiply by at least five the yield of cassava. However, the project has not yet released it. Indeed, without sufficient biomass, producers risk stripping the *tanety* with this practice. This will only accentuate the degradation of the plots due to water erosion.

Moreover, as part of reforestation activities in the Vakinankaratra Highlands, it is better to shelter the young plants that have just been planted to protect them from frost. *Liquidambar sp* and *Acacia mangium*, which suffer a lot from frost, show slow growth in the Highlands. In addition, some farmers in the Middle West of Vakinankaratra have started planting *Cassia siamea*, a good tree for timber. It is a tree that grows very well in semi-dry areas. The growth of the tree is fast enough for the production of timber and firewood. It regenerates vigorously by “recépage”.

Finally, the broadcasts of technical films on Malagasy National Television have accentuated awareness-raising actions on agroecological practices. Indeed, since the broadcast of these films, many people have asked for information from the agents of the GSDM and the MANITATRA 2 project (possibilities of technical support, supply of seeds, etc.). Sometimes, those interested come directly to certain peasants who appear in these films to obtain more information.

Challenges

The problem of **erosion** is a good challenge in the Project area. If the contour farming and terracing have been practiced and well known in the Highland of Vakinankaratra, it is not the case in the Mid-West. Combined with Conservation Agriculture, hedgerows and reforestation, it is a big challenge to develop *contour farming* and hedgerows because most of the soils in the Mid-West are on steep slopes and therefore very sensitive to erosion. A lot of awareness risings need to be done in this area. Combined with the use of good quality manure, especially vermicompost, and good biomass, the project impact will be achieved in year 3.
The production of seeds of cover crops is essential to hope for the sustainability of the activities carried out by the project. People are starting to get into the habit of collecting Mucuna grains. Currently, the latter are very little attacked by insects or other pests. On the other hand, treatments are necessary to produce *Cajanus cajan* grains. These must begin as soon as the flower buds appear. At first, *ady gasy* (local practices using biocidal plants) should be prioritized before resorting to chemical treatments. In the Middle West, the FANILO Cooperative brings together farmers who produce, collects and sells Stylosanthes seeds. Other organizations of this kind should also be set up in the other project areas. These farmer organizations present themselves as a relevant alternative to make the seeds of these service plants available in the Regions.

II- PROJECT FINANCIAL PERFORMANCE

The following table presents the project financial performance as of December 2021

Table 1: Project financial performance following the logical framework

Budget acc.	Planned Activities	Budget (€) PROJECT DOC	Budget (€) PROJECT REALLOC	TOTAL ENGAGED € (JULY 18- SEPT 21)	TOTAL DISBURSED € (JULY 18- SEPT 21)	TOTAL DISBURSED EURO (OCT 21 - DEC 21)	TOTAL ENGAGED EURO (OCT 21 - DEC 21)	TOTAL DISBURSED € (JULY 18- DEC 21)	TOTAL ENGAGED EURO (JUL 18 - DEC 21)	% ENGAGED/ Budget Realloc	% DISBURSED / Budget Realloc
1.	RESULT 1 : CSA and best practices are up scaled in two ecosystems of the VAKINANKARATRA region, covering the Highland and Middle West regions in Madagascar	280 039,47	329 552,89	286 528,47	258 358,89	4 393,65	2 819,38	263 230,80	289 826,11	87,95%	79,88%
2.	RESULT 2 : Capacity of various stakeholders is built in Climate smart Agriculture Conservation Agriculture and Agroforestry	103 022,11	88 857,87	86 441,96	77 497,66	1 621,26	644,38	79 118,92	87 086,34	98,01%	89,04%
3.	RESULT 3 : Farmers organisations are supported and linked to various stakeholers in the Agriculture to support sustainability of the project results	32 512,20	25 614,84	12 008,77	7 188,74	-	-	7 188,74	12 008,77	46,88%	28,06%
4.	COMMUNICATION AND VISIBILITY	50 235,86	36 807,93	24 902,08	27 758,89	6 520,85	6 256,53	34 279,74	30 808,79	83,70%	93,13%
5.	PROJECT ADMINISTRATION (HUMAN AND EQUIPEMENTS)	168 093,87	165 057,26	155 683,84	154 763,00	14 011,85	13 225,42	168 774,85	168 909,26	102,33%	102,25%
6.	PROJECT OVERSIGHT	45 789,27	37 583,60	37 391,77	27 031,98	9 923,46	1 982,38	36 955,44	39 374,15	104,76%	98,33%
July 2018 to December 2021		679 692,79	683 474,40	602 956,88	552 599,16	36 471,06	24 928,10	589 548,48	628 013,42	91,89%	86,26%
7.2.1	Adminstrative charges	47 578,49	43 796,88	44 785,84	37 205,94	1 991,08	-	39 197,02	44 785,84	102,26%	89,50%
YEAR 3 TOTAL REALLOC BUDGET (EUROS)		727 271,28	727 271,28	647 742,72	589 805,10	38 462,14	24 928,10	628 745,50	672 799,26	92,51%	86,45%

III- DETAILED PROGRESS ON PROJECT IMPLEMENTATION

Paragraphs below give details on project progress during year 2021 compared to the project targets

III.1 Result 1: CSA and Best practices are up scaled in two ecosystems of the Vakinankaratra region - Highland and Middle West regions in Madagascar

III.1.1 Conduct awareness raising, exchanges visits and field days to facilitate experiences sharing and learning between beneficiaries

Table 2: Inception workshop and awareness raising in 2021

	Planned Activities	Indicator	Project targets	Previous Achievement		Achievement of the Year 2021		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
1.1.1	Inception workshop	Number of workshop	1	1	100%	0	0	1	100%
		Number of participant	120	110	92%	0	0	110	92%
1.1.2	Exchanges visites between & inside communes	Number of participants in exchanges visits inside communes	8 000	6 822	85%	4 293	54%	11 115	139%
		Number of participants exchanges visits between commune	500	1 030	206%	806	161%	1 836	367%
	Awareness, Information and communication about project activities	Number of participants	7 000	7 343	105%	512	7%	7 855	112%
1.1.3	Car hiring and other expenses during awareness raising	Number of car hiring days	100	55	55%	27	27%	82	82%

Despite the Covid-19 pandemic, the project was still able to organize numerous exchange visits during the year 2021. Indeed, one of the lessons learned during the previous years of the project is the importance of these visits on ownership of innovative practices by farms. As every year, we made exchange visits inside and outside the communes but also information meetings and communications on project activities.

V.1.1.1. Exchange visits inside communes

Table 3: Exchange visits inside communes during year 2021

Communes	Number of sessions	Number of participants	Number of women	% women
Highland	96	1 855	1050	56,6%
Ambatolampy	8	117	73	62,4%
Ambohibary	2	17	13	76,5%
Ambohimandroso	11	298	165	55,4%
Ambohipihaonana	9	133	105	78,9%
Ampitatafika	6	116	44	37,9%
Andranomanelatra	16	309	215	69,6%
Andravola	3	42	19	45,2%
Antanifotsy	11	146	65	44,5%
Antsoatany	14	298	196	65,8%
Haute Terre	3	129	19	14,7%
Morarano	9	155	81	52,3%
Soamanandrariny	4	95	55	57,9%
Midwest	150	2438	1005	41,2%
Ambohimasina	11	153	81	52,9%
Ankazomiriotra	15	213	81	38,0%
Antohobe	8	130	68	52,3%
Fidirana	35	660	213	32,3%
Inanantonana	28	430	181	42,1%
Soavina	15	213	115	54,0%
Vinany	38	639	266	41,6%
Overall total	246	4 293	2 055	47,9%

Intra-communal exchange visits are organized by Lead Farmers and/or technicians for farmers within the same communes (or even the same *Fokontany*). As we had already said before, these visits take place at the level of the FFS and/or the plots of the farmers supervised by the project. This type of visit has the advantage of drawing the attention of producers to the performance of agroecological practices compared to conventional practices in the same ecosystem. Indeed, they will be able to observe throughout the year the relevance, accessibility and adaptability of the practices promoted by the project in their area.

In short, 246 visits were made for the benefit of the farmers supervised by the project during this year. A total of 4,293 participants benefited from these visits. And, among these participants, there were 2,055 women (or 47.9% of visitors). As announced, the health crisis linked to the COVID-19 pandemic has disrupted the organization of events requiring the gathering of people.

Thus, since the start of the project, 622 intra-communal exchange visits have been organised. A total of 11,115 participants, including 5,224 women (or 47%) were registered. With a 139% achievement rate, the target set in the project document has already been largely exceeded.

V.1.1.2. Exchange visits between communes

Table 4: Exchange visits between communes achieved during year 2021

Communes	Number of sessions	Number of participants	Number of women	% women
Highland	15	406	208	51,2%
Midwest	12	400	169	42,3%
Overall total	***27***	***806***	***377***	***46,8%***

To strengthen intra-commune exchange visits, the project also organized exchange visits requiring participants to travel outside their commune of residence. This type of visit allows participants to broaden their horizons in relation to the dynamics of the practice of agroecology in other municipalities. Thus, there were extra-communal visits, within the same area (highlands or middle west). But also farmers from the middle west of Vakinankaratra who visited farms supervised by the project in the highlands, and vice versa. During these visits, the project covers the travel and catering expenses of the participants.

Remember that MANITATRA 2 covers two different ecosystems: the Middle West (600 to 1000 m altitude) and the Highlands (1200 to 1800 m altitude). And the exchange visits take place on sites supervised by the project in these areas, but also at the level of the GSDM training site in Ivory. During this year, 27 extra-communal exchange visits were carried out. There were 806 participants; including, farmers supervised by the project; Lead Farmers of the project; members of CROA Vakinankaratra; FO representatives; local partners; and, representatives of local authorities. Among these visitors, there were 377 women (46.8% of the participants). These intercommunal exchange visits were mainly organized at the end of March. During this period, rainfed crops are almost maturing. This allows participants to assess the performance of CA systems and other agroecological practices.

During these visits, the project tries to show the different agroecological practices most adopted in the 2 areas. However, some practices come up more often in discussions: rainfed rice after mucuna impresses many farmers. Vermicompost was also widely discussed during these visits. In general, the high cost of fertilizers and the circulation of falsified products in the area are among the reasons, mentioned by the farmers, which pushes them to move towards the practice of vermicompost. Moreover, it can be easily carried out in the area.

In short, since the beginning of the project, we have organized 65 exchange visits outside the participants' commune of residence. A total of 1,836 visitors were registered. Among these visitors, 700 are women (which corresponds to 38.1% of the total participants). This total number of participants in intra-communal exchange visits represents 367% of the final objective of the project.

V.1.1.3. Awareness, information and communication

Table 5: Awareness, Information and communication about project activities in 2021

Communes	Number of sessions	Number of participants	Number of women	% women
Highland	***7***	***344***	***209***	***60,8%***
Ambohimandroso	1	9	4	44,4%
Ambohipihaonana	2	119	84	70,6%
Andranomanelatra	1	7	4	57,1%
Andravola	1	12	5	41,7%
Antsoatany	2	197	112	56,9%
Midwest	***10***	***168***	***66***	***39,3%***
Ankazomiriotra	4	61	33	54,1%
Fidirana	1	20	4	20,0%
Inanantonana	3	41	15	36,6%
Vinany	2	46	14	30,4%
Overall total	***17***	***512***	***275***	***53,7%***

Information, awareness and communication meetings are organized by the project management team so that farmers in the areas can learn about the activities promoted by the project throughout the year. For this year, 17 information and awareness meetings were held as part of the project. In general, this activity is organized by technicians and lead farmers at the beginning of each agricultural campaign. Then, other sessions follow throughout the year in order to educate farmers on agroecological practices to adopt according to the period; and to inform them about the project's intervention methodologies in order to support them on each theme. During these 17 meetings, 512 participants were recorded, including 275 women (i.e. 53.7%).

In summary, 257 information meetings and communications on project activities have been carried out since the start of the project. These saw the participation of 7,855 farmers, including 3,324 women (i.e. 42.3%). On this point, the final objective of the project is 7,000 participants in total. Which gives us an achievement rate of 112%.

Picture 1 : Exchange visit of CROA – FDA Vakinankaratra members to the Antemotra fish farming site

Picture 2 : Exchange visit of borrowers from the NGO Vahatra on a plot with a good biomass of maize + mucuna.

Table 6: Awareness and information meetings achieved since the start of the project

Group session per commune	Previous achievements				Achievement Year 2021				Total achievements			
	Number of sessions	Number of participants	Number of Women	% Women	Number of sessions	Number of participants	Number of Women	% Women	Number of sessions	Number of participants	Number of Women	% Women
Information/ Communication/ Awarerness rising	240	7 343	3 049	41,5%	17	512	275	53,7%	**257**	**7 855**	**3 324**	**42,3%**
Exchange-Visit extra-communal	38	1 030	323	31,4%	27	806	377	0,0%	**65**	**1 836**	**700**	**38,1%**
Exchange-visit intra-communal	376	6 822	3 169	46,5%	246	4 293	2 055	47,9%	**622**	**11 115**	**5 224**	**47,0%**
Total	**654**	**15 195**	**6 541**	**43,0%**	**290**	**5 611**	**2 707**	**48,2%**	**944**	**20 806**	**9 248**	**44,4%**

III.1.2 Upscale Conservation Agriculture to support the growing of upland rice and other crops

Table 7: Conservation Agriculture upscaling

	Planned Activities	Indicator	Project targets	Previous Achievement		Achievement of the Year 2021		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
1.2.1	Provides seeds of cover crops (mucuna, Stylosanthes, cowpea…)	Number of farmers provided seeds of cover crops	5 000	**6 008**	120%	**426**	9%	**6 434**	129%
		Acreage of full Conservation Agriculture (ha of CA)	2 000	**1 449,34**	72%	**609**	30%	**2 059**	103%
1.2.2	Support for Stylosanthes rollers	Number group farmer provided Stylosanthes rollers	5	**0**	0%	**4**	80%	**4**	80%

It should be remembered that the Manitatra 2 project was set up to support the practice of rainfed rice with the practice of Conservation Agriculture. Indeed, this practice is showing significant expansion due to the activities of research organizations that have produced high-performing upland rice varieties. However, the practices currently adopted by farmers very quickly degrade their land capital, leading to a reduction in yield and strong pressure from pests. To face these constraints, conservation agriculture remains the most relevant alternative in order to produce much more and sustainably on the *tanety*. This practice is based on three principles: reduced soil disturbance; permanent soil cover; and, crop association and rotation, using service plants. However, these service plants (mucuna, *Cajanus cajan*, stylosanthès, David cowpea, etc.) were not available in most of the project intervention municipalities. Thus, the project was obliged to introduce them in order to facilitate the adoption of this practice by the supervised farms.

During this year, 426 farmers were able to benefit from cover crop seeds from the project. To add to the previous achievements, we obtain 6,434 peasants benefiting from these types of seeds since the beginning of the project. This represents 129% of the final objective of the project.

Then, at the end of March 2021, as part of the support for producers, 609ha of tanety were cultivated according to the different CA systems. That is, 2058ha of rainfed food crops installed following this practice during the 2020/2021 agricultural campaign. This corresponds to 103% of the final objective of the project. It should be remembered that during year 2 of the project, support for producers led to 1,520.96ha of CA plots. For this year, we continued the supervision on 1,407.766ha of these plots (which gives a sustainability rate of 93% The remaining 537Ha are made up of new plots: extensions of former adopters, or start of adoption for new ones To achieve this, the project supported 4,378 farmers, including 1,812 women (even 41.4% of adoptive farmers in CA).

It should be noted that the end of 2021 also corresponds to the start of the 2021/2022 rainy season. This was marked by the delay of the first useful rain. This constraint has greatly disrupted the agricultural calendars of the farmers, with the installation of crops which really began at the end of 2021. It should be remembered that the service of lead farmers under the project was completed in August 2021. So, the data collected for this agricultural campaign will show us the beginning of an indication of the sustainability of the project's actions. And, for the next quarter, we should have data on the CA area and the number of adopters (old and new) in the two project areas.

Finally, the end of 2021 was also marked by the culmination of activities related to support for the acquisition of the Stylosanthes rollers for groups of farmers supervised by the project. Indeed, 4 FOs in the Middle West of Vakinankaratra were able to take advantage of funding from the Vakinankaratra FDA and the MANITATRA 2 project in order to acquire this specific agricultural equipment for the preparation of plots covered with Stylosanthes. It should be noted that one of the conditions for granting funding from the FDA is that the services are not free. Thus, the FOs thus participated in the financing of this roller with a contribution in cash.

V.1.2.1. Provides seeds of cover crops

t should be recalled that 13 of the 17 communes of current interventions of the project constitute an extension of the intervention zone of MANITATRA 1. Thus, the provision of seeds were among the priorities of the project to scale up the different systems in conservation agriculture. For this agricultural year 2020-2021, the project distributed:

- 5,950 kg of Mucuna seeds;
- 492 kg of Stylosanthes seeds;
- 2.,900 kg of Cajanus seeds;
- and, 1,200kg of Oats

In total, 426 new beneficiaries of cover crop seeds were registered in 2021. Compiling the achievements recorded since the start of the project, we arrive at **6,434 farmers** who have benefited from these cover crop seeds. This represents 129% of the final objective of the project.

In September 2021, it was estimated that 15 tons of mucuna seed were available in the 2 project areas. Thus, a major effort to link this offer with local, regional and national demand is essential. The project has already facilitated the integration of lead farmers, both as “Farmer Trainers” and “Input Suppliers” approved at the FDA Vakinankaratra level. Thus, they will be able to exploit the experiences stored during the practice and dissemination of agroecological techniques to offer their services to various organizations: family farm, group of farmers, NGO, Project / program, ... But, they will also be able to sell seeds, or other agricultural inputs such as vermicompost to increase their income.

In this sense, some Lead Farmers in the District of Antanifotsy, following requests from individual peasants, groups of peasants, or communes not covered by MANITATRA 2, have started to accompany peasants on agroecological practices. At the same time, as they are new adopters, the introduction of cover crop seeds is necessary. So they collect the seeds available in their areas to sell them to these new adopters.

V.1.2.2. Conservation Agricultural (CA) practice

As a reminder, Conservation Agriculture is based on three principles: the reduction of soil disturbance, permanent soil cover, and the association and rotation of crops with auxiliary plants. In short, during the first year, biomass must be produced to enter the systems. Apart from the many advantages of CA systems (improvement of soil fertility, improvement of soil structure, improvement of soil texture, conservation of humidity on the plots, etc.), a good biomass makes it possible to control the weeds on the plots the following year. In the absence of satisfactory coverage during the first year; it will be necessary to plow again in Year 2, and to install systems with high biomass production. The systems adopted during this first year depend on the quality of the starting soil:

- Maize associated with legumes or Rice associated with shrubby legumes for rich soils
- Cassava, groundnut, or associated ground pea on poor soils (low-input systems)
- Improved fallow land for very degraded soils.

At the beginning of the second year, when you see that the cover on the plot is sufficient, direct seeding can be done on the residues of previous crops. Rice occupies an important place in the diet of the Malagasy population. Thus, in general, we take the opportunity to plant rice when we see that the fertility of the plots is improving. At the end of this year, it will be necessary to leave a maximum of crop residues on the plot to serve as a seed bed for the next crops.

Then, it will be necessary to install directly (without plowing) systems allowing to reproduce sufficient biomasses on the plots. Then, to cultivate (usually rice) without plowing on crop residues and so on.

In short, to properly manage the operation of a plot with CA systems, it is necessary to favor systems with high biomass production at least one year out of two. But we can also produce biomass all year round with systems like “Maize + twining legumes” in rotation with “Rice + Shrubby legumes”. In this case there is really a permanent cover on the plots.

Picture 3 : Mucuna seeds must be harvested in time to avoid theft and losses in the fields.

Table 8: Achievements in Conservation Agriculture (CA) at June 2021

CA systèmes	Number of plots	Areas (ha)	Number of adopting farmers	Of which Women	% Women
CA based Mucuna	3289	648,64	2177	946	43,5%
CA based shrub legumes	2776	576,23	1896	839	44,3%
CA based Stylosanthes	1428	456,75	956	277	29,0%
CA based food legumes	1744	370,18	1318	553	42,0%
CA based on Oat	90	6,91	87	35	40,2%
Grand Total	**9327**	**2 058,70**	**4 378**	**1 812**	**41,4%**

From this table, Conservation Agriculture has been practiced at **2,058.7 ha** in the two project areas. This represents 103% of the final objective of the project. A total of 4,378 producers, **41.4% of whom are Women**, were supported in this agroecological practice during this third and final year of the project.

For 2 years, we have noticed that systems based on **Mucuna** are the most adopted by farmers. It is on these systems that we count the number of plots, surface area, and the highest number of adopters.


Picture 4 : Very good coverage of Cajanus and Mucuna on Michel's FFS in Soamanandrariny

Then comes the systems based on shrubby legumes. The project has, above all, used the *Cajanus Cajan* as a cover crop.

Next, systems based on Stylosanthes. This cover crop only fits in the Middle West of Vakinankaratra. In this part of the Region, the area farmed per household is relatively large compared to the average for the Highlands. This explains the high surface area/number of adopters ratio compared to other systems.

Picture 5: Plot of Stylosanthes at the GSDM Training Site in Ivory after grain harvest and first rolling

Picture 6 : The FANILO Cooperative (seed producer) has a production capacity of around 1,500 kg of Stylosanthes seed.

Then, systems based on food Legumes. In these systems, the project mainly brought improvements on the durability of systems with Soya.

Finally, oat-based systems are in last place in terms of adopters. Indeed, these systems were offered only to dairy farmers supervised by the project. The oats were intercropped in plots of soybeans (corn + soybeans; corn + beans + soybeans; pure soybeans, etc.). In concrete terms, oats are sown when the soybean leaves begin to turn yellow. This allows breeders to cut oats to feed cattle. Then, the oats are left to re-grow to ensure coverage of the plots for the next campaign.

In summary, **2,058.70 ha** of *tanety* are cultivated according to the different Conservation Agriculture systems. In terms of distribution in the two project intervention areas: 42% of this area is in the Highlands; and 58% in the Middle West of Vakinankaratra. However, the number of plots in the Highlands is much higher than in the Middle West. Indeed, in general, the farm size on the Highlands of Vakinankaratra is very small compared to that in the Middle West.

Picture 7 Intercropping Mucuna with cassava improves soil fertility for future crops, and offers a high seed yield

Picture 8 : Good biomass of Cajanus cajan after rainfed rice harvest

Picture 9 : Forest of Cajanus Cajan on very degraded soil

In total, we supported 4,378 farmers in the practice of various Conservation Agriculture systems. Among these adopters, **1,812 are made up of Women** (i.e. 41.4%).

Table 9: Distribution of CA achievements in the project intervention areas / communes

Zone/Commune	Number of plots	Area (ha)	Adopters		
			Total	Women	% Women
HIGHLANDS	**5 141**	**862,38**	**2 328**	**1 117**	**48,0%**
Ambatolampy	50	7,03	34	17	50,0%
Ambohibary	177	49,73	142	74	52,1%
Ambohimandroso	902	152,26	382	115	30,1%
Ambohipihaonana	185	28,97	81	43	53,1%
Ampitatafika	502	77,53	223	105	47,1%
Andranomanelatra	1 114	252,87	534	327	61,2%
Andravola	82	8,68	47	16	34,0%
Antanifotsy	751	113,37	313	130	41,5%
Antsoatany	452	71,29	253	115	45,5%
Morarano	602	59,77	315	169	53,7%
Soamanandrariny	324	40,88	80	37	46,3%
MID - WEST	**4 186**	**1 196,32**	**2 050**	**695**	**33,9%**
Ambohimasina	353	85,86	184	102	55,4%
Ankazomiriotra	529	148,91	325	115	35,4%
Antohobe	814	177,08	318	117	36,8%
Fidirana	768	350,29	348	64	18,4%
Inanantonana	577	131,52	263	93	35,4%
Soavina	409	74,02	188	84	44,7%
Vinany	736	228,64	471	123	26,1%
Total achievement	**9 327**	**2 058,70**	**4 378**	**1 812**	**41,4%**

V.1.2.3. Appui à l'acquisition des rouleaux de stylosanthès

Since the start of the project, 141 requests put together with FOs supervised by the project have been submitted to the FDA Vakinankaratra for a request for funding. These requests differ according to the needs of each association. But, as a common thread, various agroecological practices are found in each of these projects. Among them, 4 FOs put together requests for agricultural equipment, including the rollers of stylosanthès. These applications have received FDA approval. Thus, thanks to a tripartite mode of financing FO-FDA-MANITATRA 2, these FOs were able to acquire rollers of stylosanthes.

Table 10: Distribution of funding for the acquisition of the Stylosanthes Rollers by the FOs supervised by the project

FOs	Locations	Fokontany	Commune	Funding			
				Total	FDA Vakinankaratra	Projet MANITATRA 2	Beneficial contribution of the FO
Coopérative FANILO	Amparihy	Mazoto	Vinany	19.565.700	14.986.000	3.000.000	1.579.700
FO FIAVANANTSOA	Ankily	Antampondravola	Fidirana	15.234.250	11.164.000	3.000.000	1.070.250
FO MANDRESY	Matieloana	Matieloana	Antohobe	14.585.700	10.504.000	3.000.000	1.081.700
FO TANJONA	Mandritsara	Antohobe	Antohobe	12.995.700	9.073.000	3.000.000	922.700
TOTAUX				**62.381.350**	**45.727.000**	**12.000.000**	**4.654.350**

III.1.3 Upscale agroforestry and forestation

Table 11: Agroforestry and forestation upscaling

	Planned Activities	Indicator	Project targets	Previous Achievement		Achievement of the Year 2021		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
1.3.1	Support tree nurserymen (potting bags, other materials…)	Number of tree nursery man supported	50	**72**	144%	**47**	94%	**72**	144%
1.3.2	Support adopting farmers in tree plantlets for reforestation (Acacia, Eucalyptus…)	Number of trees plantlets for reforestation	1 500 000	**1 652 402**	110%	**728 468**	49%	**2 380 870**	159%
1.3.3	Support adopting farmers in fruit tree plantlets	Number of fruit plantlets of farmers adopting	50 000	**13 456**	27%	**2 978**	6%	**16 434**	33%
1.3.4	Provide seeds of hedgerows (Cajanus, Tephrosia….)	Number of farmers provided seeds of hedgerows	6 500	**4 724**	73%	**328**	5%	**5 052**	78%
		length of hedgerow (in linear meter)	1 000 000	**1 083 855**	108%	**225 184**	23%	**1 309 039**	131%

As part of reforestation actions, the project promotes local skills in the production of young forest plants. Indeed, for this year, 47 nurserymen/women including 14 Women (i.e. 30%) signed a collaboration agreement with the project in this sense: 29 nurserymen in the Middle West and 18 nurserymen in the Highlands. Among them, there were nurserymen who had already worked with the project during these two years, and other new nurserymen. These nurserymen have already received training from DREDD Vakinankaratra technicians in the production of woody seedlings.

Then, the delay in the rain at the end of 2020 meant that all of the 728,468 young woody plants produced at nursery level were all planted at the beginning of 2021. It should be remembered that the he final objective of the project in terms of reforestation has already been achieved in 2020 (during year 2 of the project). Only, we have seen the importance of this activity in this context of lack of forest cover in Madagascar. Thus, a budget reorganization was proposed with additional additions of tree plantations. This is why MANITATRA 2 was able to achieve **159% of the target** set in the project document, by planting **2,380,870 tree seedlings**. It should also be noted that this number of seedlings was limited by the available budget. Indeed, the needs of the peasants were far above it.

Concerning the support of the project within the framework of the promotion of fruit trees, we resumed the same approach as during the two previous years; by granting a subsidy of 50% of the price of young fruit plants, but capped at 1250Ar per seedling. At the end of this year, the project facilitated the acquisition of 2,978 young fruit plants for supervised farmers. Combined with previous achievements, these are only 16,434 subsidized seedlings planted. This represents 33% of the final objective of the project.

Finally, as part of the development of the *tanety*, the establishment of hedges and living hedges at plot level is one of the practices promoted by the project. It makes it possible both to reduce the harmful effects of water erosion, while producing very interesting legume biomass for the production of various types of compost. But as in the case of CA dissemination, the project had to import hedgerow seeds.

This year 2021, 328 farmers were able to acquire seeds from the project. Add to the other beneficiaries of this type of seed since the beginning of the project, we arrive at 5,052 beneficiaries; i.e. 78% of the final objective of the project. In addition, 1,309,039 linear meters of hedging and living hedges were put in place during the implementation of MANITATRA 2; i.e. 131% of the target set in the project document.

V.1.3.1. Support to nurserymen

During this year 2021, as part of the production of young woody plants, the project collaborated with 47 nurserymen/women. They were trained and supported by technicians from the DREDD Vakinankaratra. These project service providers are scattered throughout the areas of intervention of each lead farmer in order to shorten the journeys to the final beneficiaries as much as possible. Indeed, the remoteness of nurserymen contributes to the demotivation of farmers to take advantage of the endowment of young plants by the project; and the decrease in the survival rate of reforested plants. Remember that the forest seedlings are 100%

subsidized by the project. The unit price was fixed with the nurserymen, at the rate of 19O Ar including tax per young plant. On the other hand, transport, digging and planting are the responsibility of the beneficiaries.

Table 12: List of Highland nurserymen/women in 2021

N°	Zone	Nurseryman'/womans name	Gender	Commune	Fokontany	Village
1	Highlands	Rasoanandrasana Ina Jocelyny Noro	Woman	Ambatolampy	Ambanimaso I	Antanimarina
2	Highlands	Ramahazomanana Jean Aimé François	Man	Ambatolampy	Ambanimaso I	Antanimarina
3	Highlands	Rajaosafara Harimalala Ida Odette	Woman	Ambohibary	Sambaina	Ampandraofana
4	Highlands	Vololoniaina Linah Herintsoa Safidy	Woman	Ambohimandroso	Antsampandrano	Soavina
5	Highlands	Randriamihajasoa Bruno	Man	Ambohimandroso	Mahaketraka	Mahaketraka
6	Highlands	Rafalimanana Lala Jean	Man	Ambohimandroso	Isody	Analalava
7	Highlands	Ratolojanahary Njaka Mamisoa Aimé	Man	Ampitatafika	Tsarahonenana	Gara
8	Highlands	Razafindravony Laingo Maminirina	Woman	Ampitatafika	Maroandro	Masoandro
9	Highlands	Rakotondramary Roger	Man	Andranomanelatra	Fiadanana	Ambatomainty
10	Highlands	Rasoanandrasana Marie Odette	Woman	Andranomanelatra	Tsaramandroso Gara	Ankofafa
11	Highlands	Rasoanantenaina Theodile	Woman	Andranomanelatra	Antanetibe toavala	Andranotsara
12	Highlands	Ralaimidona Leonard Etienne	Man	Antanifotsy	Antsahamaina	Antsahamaina
13	Highlands	Haingoharitiana Holiniana V.	Woman	Antanifotsy	Antanety	Antemotra
14	Highlands	Rasoamampionona Honorine	Woman	Antanifotsy	Antanety	Antemotra
15	Highlands	Ranivonirina Olga Dauphine	Woman	Antanifotsy	Andriatsilahy	Andriatsilahy
16	Highlands	Randrianarisoa Etienne	Man	Antsoatany	Antsoatany	Antsoatany
17	Highlands	Randriamampiadana Pascal	Man	Morarano	Andriamigodana	Ambodivona
18	Highlands	Andriamiarantsoa Aimé Jean Michel	Man	Soamanandrariny	Antanety 1	Antanety

Table 13: List of Midwest nurserymen/women in 2021

N°	Zone	Nurseryman'/womans name	Gender	Commune	Fokontany	Village
19	Moyen Ouest	Kantonirina Fanoela	Woman	Ambohimasina	Belanitra	Marovitsika
20	Moyen Ouest	Rasoamalala Georgette	Woman	Ankazomiriotra	Ankazomiriotra 2	Avaratsena
21	Moyen Ouest	Randrianasolo Faralahy	Man	Ankazomiriotra	Ankazomiriotra 1	Ambohipoloalina
22	Moyen Ouest	Ravomanana Richard	Man	Ankazomiriotra	Belanitra	Tsaratanàna
23	Moyen Ouest	Rakotondrasoa Fanja Harinaivo	Man	Ankazomiriotra	Ankazomiriotra 2	Avaratsena
24	Moyen Ouest	Rakotoniaina Solomon	Man	Antohobe	Matieloana	Matieloana
25	Moyen Ouest	Ranoavomanana Morasata	Man	Antohobe	Masoandronarivo	Korosovola
26	Moyen Ouest	Rafanjanirina Jeanne Philomène	Woman	Antohobe	Antohobe	Antohobe
27	Moyen Ouest	Narindranjanahary Fitolahy Edmond	Man	Antohobe	Antohobe	Antohobe
28	Moyen Ouest	Andriantsiferana Olivier	Man	Antohobe	Soavina 2	Soavina 2
29	Moyen Ouest	Rasoamampionona Clementine	Woman	Fidirana	Ambohimasikely	Ambohimasikely
30	Moyen Ouest	Rakotomanantsoa Modeste	Man	Fidirana	Ambohibolakely	Ambohibolakely
31	Moyen Ouest	Rasoarimanan Myriame Isabelle	Woman	Fidirana	Fidirana	Fidirana
32	Moyen Ouest	Mahasoa Maxi Lia Liliane	Man	Fidirana	Tsaratanety	
33	Moyen Ouest	Rabemanantsoa Augustin	Man	Fidirana		
34	Moyen Ouest	Rakotomalala Herisoa	Man	Inanantonana	Inanantonana	Inanantonana
35	Moyen Ouest	Razafimahatratra Armand	Man	Inanantonana	Bemasoandro	Bemasoandro
36	Moyen Ouest	Rafamatanantsoa Martin	Man	Inanantonana	Inanantonana	Inanantonana
37	Moyen Ouest	Rakotonjanahary Andriamiandrisoa Jean Guy	Man	Inanantonana	Antanety Sud	Antanety Sud
38	Moyen Ouest	Rasolomanana Justin	Man	Inanantonana	Ambatomainty	Ambohijato
39	Moyen Ouest	Rakoto Philippe	Man	Soavina	Soavina	Tsinjoarivo
40	Moyen Ouest	Randriamanantena Jean Pierre	Man	Soavina	Antanety	Antokofoana
41	Moyen Ouest	Randriamanantena Jules	Man	Soavina	Antanety	Antokofoana
42	Moyen Ouest	Randriamiandrisoa Tokiniaina Ferdinand	Man	Vinany	Andromba	Andromba
43	Moyen Ouest	Rakotonirina Jean Noël	Man	Vinany	Ambatolahy	Ambatolahy
44	Moyen Ouest	Rakotonanahary Edmond	Man	Vinany	Mazoto	Amparihy
45	Moyen Ouest	Koperativa Fanilo (Président : RANDRIAMANANTENA Guy)	Man	Vinany	Mazoto	Amparihy
46	Moyen Ouest	Randrianotahianiaina Mamy Victor	Man	Vinany	Ampasatokana	Ambohitromby
47	Moyen Ouest	Rabenandrasana Joseph	Man	Vinany	Ankamory	Ankamory

V.1.3.2. Support adopting farmers in tree plantlets for reforestation

During this year, 728,468 forest trees were planted with the support of the project. The needs for young plants expressed by the farmers were clearly higher than these. However, the budget line allocated to this activity has limited us for this year. Indeed, currently, the population in the project intervention areas is aware of the need to rebuild forest cover. On the one hand, the lack of lumber is sorely felt. Then, the meteorological data showed that there is not really a significant difference in rainfall over the past 20 years. On the other hand, this rainfall is very poorly distributed throughout the year. There are very heavy rains. But, rain holes are also

becoming more frequent. And, in this case, the absence of forest cover is very favorable to runoff, to the removal of water infiltration to replenish groundwater.

It should be noted that in the space of 4 to 5 years, reforestation can really modify a landscape. The plantations carried out during the MANITATRA 1 project are perfect examples. Indeed, in the Middle West, the difference is notable between the communes of intervention of MANITATRA 1 and the other communes of extensions for MANITATRA 2.

Table 14: forest species used in this year's reforestation

Zone/ Forest species	Number of plants
HIGHLANDS	**348.525**
Eucalyptus Citriodora	316.105
Liquidambar sp	32.420
MID - WEST	**379.943**
Acacia mangium	378.262
Eucalyptus Citriodora	1.681
Overall total	**728.468**

For this year, the project focused much more on *Eucalyptus citriodora* on the Vakinankaratra Highlands. We still wanted to promote other species such as Liquidambar, but in the absence of plant materials available, we stayed on Eucalyptus. This corresponds to the needs expressed by the majority of farmers.

Picture 10 : Very high survival rate of Eucalyptus citriodora plants in the commune of Ambohimandroso

Picture 11 : Liquidambar is of interest to farmers, but suffers on very poor land

In the Middle West of Vakinankaratra, the project continued to prioritize *Acacia mangium*. It is a fast-growing legume that spreads naturally with seeds that can be carried by wind, runoff or other vectors. Indeed, small forests are forming around the old ***Acacia mangium* plantations** (for example a few *Acacia mangium* plants planted on the edge of plots on the GSDM training site in Ivory). Moreover, this species does not acidify the soil, and leaves open the possibility of recultivation later.


Picture 12: New plantation of Acacia mangium and Cassia siamea in the rural commune of Inanantonana

Table 15: Distribution of subsidized seedlings in the project intervention communes

Commune	Number of plants
HIGHLANDS	**334 425**
Ambatolampy	8 250
Ambohibary	20 100
Ambohimandroso	42 050
Ambohipihaonana	32 565
Ampitatafika	26 120
Andranomanelatra	95 300
Andravola	1 320
Antanifotsy	45 550
Antsoatany	13 900
Morarano	51 225
Soamanandrariny	12 145
MID - WEST	**368 093**
Ambohimasina	12 540
Ankazomiriotra	37 516
Antohobe	77 887
Fidirana	82 775
Inanantonana	76 280
Soavina	44 300
Vinany	49 745
Total	**702 518**


Picture 13 : Small forest from the natural regrowth of Acacia mangium seeds from old plantations at the Ivory Site

Picture 14 : The reforestations carried out during MANITATRA 1 (2015) have become forests currently

V.1.3.3. Support adopting farmers in fruit tree plantlets

The project accompanies interested farmers in the acquisition of young fruit plants (partial subsidy, approximately 1,250Ar / seedling) and in the related technical support. This activity allows farmers to have other considerable sources of income. In particular, for producers in the Highlands which are close to the national road N°7.

But, as the purchase of young fruit plants coincides with the rainy season (**lean season**), farmers find it difficult to cover their contribution. During this year 2021, the project has partially subsidized 2,978 fruit trees. Add to the achievements recorded since the beginning of the project, we obtain a total number of 16,434 young fruit plants planted. This represents **33% of the target** set in the project document.

V.1.3.4. Support adopting farmers in seeds of hedgerows

Hedges have several functions:

- They limit water erosion,
- They act as windbreaks,
- And, they produce biomass for the production of quality composts.

In addition, **Tephrosia** is also a repellent plant, which can be valued as ***"Ady gasy***" (use of biocidal plants). Tephrosia and Cajanus cajan are the plants used by the project for this practice. These are two shrub legumes that also improve soil structure, and contribute to water infiltration with their very strong root systems.

During the year 2021, 328 farmers were subsidized with seeds of Tephrosia and *Cajanus cajan*. That is, 5,052 beneficiaries counted since the start of the project. This represents 78% of the final objective of the project.

It should be noted that these shrubby legumes are heavily attacked by **caterpillars** during the formation of their pods. Thus, adequate spraying is required so that the seed can remain available in the area. This is presented as one of the essential conditions for the sustainability of these practices in the Region.

In short, 225,184 linear meters of hedging and living hedges were put in place during the year 2021. That is 1,309,039 meters throughout the project. This corresponds to 131% of the final objective of the project.

Picture 15 : Hedging with Cajanus cajan limits erosion, serves as a windbreak, and produces biomass for composting; but the peasants do not yet spray the plants, and may not produce seeds because of insect attacks

Table 16: Achievements in contour and hedgerows during this year

Plot countour plantings and hedgerows	Number of plants	Achievements during this year (hedge length)
HIGHLANDS	**235**	**108 645**
Ambatolampy	4	235
Ambohimandroso	27	5 590
Ambohipihaonana	11	7 400
Ampitatafika	4	750
Andranomanelatra	146	78 170
Andravola	6	2 900
Antanifotsy	21	9 200
Antsoatany	15	3 400
Morarano	1	1 000
MID - WEST	**278**	**116539**
Ambohimasina	18	7.400
Ankazomiriotra	57	22.000
Antohobe	55	20.260
Fidirana	40	28.199
Inanantonana	24	10.290
Soavina	69	18.390
Vinany	15	10.000
Total	**513**	**225.184**

Like reforestation, this practice also marks the landscape. It is clearly visible during the dry seasons. Indeed, hedging and living hedges are the plants that remain green during this period. For this year, 225,184 linear meters of anti-erosion device (hedge, quickset hedge, and contour line) have been installed in the area. That is, 1,309,039 linear meters since the start of the project. This achievement corresponds to 131% of the final objective of the project.

Table 17: The hedgerows made during this year

Plot countour plantings and hedgerows	Number of plots	Length (linear m)
Contour lines	**107**	**34880**
Contout lines	107	34880
Plot countour plantings and hedgerows	**406**	**190304**
Cajanus	59	23850
Tephrosia	326	158224
Tephrosia + Cajanus	21	8230
OVERALL TOTAL	**513**	**225 184**

In total, 513 plots were developed with the establishment of contour lines and the installation of hedging and/or hedges during this year. In addition, we see that *Cajanus cajan* produce a lot of seed in the second year. Only, in the current state, the absence of sprayings prevent the production of quality seeds.

Picture 16: Landscaping of the plots with contour lines well done

III.1.4 Promote other best practices

Table 18: Best practices disseminated by the project

	Planned Activities	Indicator	Project targets	Previous Achievement		Achievement of the Year 2021		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
1.4.1	Provide seeds of mucuna, crotalaire, others plants used as bio-pesticides/repellent plants (based on the experiences of BVPI, GSDM, CEFFEL)	Number of farmers provided seeds of mucuna, crotalaire, others plants used as bio-pesticides/repellent plants	5 500	**4 764**	87%	**402**	7%	**5 166**	94%
1.4.2	Provide worms for composting	Quantity of provided worms for composting (kg)	10	**10**	100%	**0**	0%	**10**	100%
		Number of swath[1] (for composting)	250	**548**	219%	**160**	64%	**708**	283%
	Compost 7 days	Number of swath	200	**115**	58%	**6**	3%	**121**	61%
	Compost 45 days	Number of swath	200	**187**	94%	**59**	30%	**246**	123%
	Classic compost	Number of swath	600	**775**	129%	**82**	14%	**857**	143%
	Liquid compost	Number of production units	250	**247**	99%	**46**	18%	**293**	117%
1.4.3	Participate to improve cowsheds for quality manure and composting	Number of dairy farmers benefiting improved cowsheds for quality manure, for better of dairy cows and for composting	300	**158**	53%	**0**	0%	**158**	53%
1.4.4	Provide seeds of forage (grasses and legumes and off season forage…) and food safety plants (orange flesh potatoes) based on experiences of FIFAMANOR	Number farmers provided seeds of forage and food safety plants	2 000	**1 053**	53%	**510**	26%	**1 563**	78%
1.4.5	Provide fry and other equipment for farmers for fish raising in the paddy field or in ponds (base on the experiences of APDRA and CIRAD)	Number of farmers provided equipment and fry for fish raising in the paddy field or in ponds	150	**332**	221%	**667**	445%	**999**	666%

During this year, the project distributed seedlings of Comfrey, Wormwood and Tansy. However, it should be remembered that Mucuna (cover plant) and Tephrosia (hedge) are also repellent plants. In 2021, 402

[1] A swath is the habitat where the worms are produced

farmers benefited from the plant materials of biocidal and/or repellent plants by the project. In total, we distributed :

- 5.950 kg of Mucuna seeds,
- 1,000 kg of Tephrosia seeds,
- 1,300 comfrey seedlings,
- 1,300 tansy seedlings
- and, 900 Absinthe seedlings

In short, 5,166 farmers have benefited from these plant materials since the start of the project. This represents 94% of the project objective.

Then, the actions within the framework of support for the management of organic matter also continued during this period. Organic manure production is of great interest to local producers. The reasons for this change in behavior are generally: the good quality of these improved organic manures; and the high cost of chemical fertilizers. Thus, vermicompost, classic and 45-day compost, and liquid compost are the most adopted by farmers in the areas.

Afterwards, the project proposed to participate in the improvement of the stables in order to produce good quality manure. For this year, 82 cattle breeders submitted requests for support in improving stables. Currently, we are in the process of contracting with these breeders. It should be noted that on average, the cash support provided by the project amounts to 150,000 Ar/stable.

Furthermore, as part of support for improving milk production in the Region, the project distributed various varieties of fodder seeds during this semester. In addition, 7,000 kg of orange-fleshed sweet potato vines were made available to supervised farmers in order to fight against food insecurity. In total, 510 farmers have benefited from these plant materials distributed by the project. In total, 1,563 beneficiaries of these different plant materials have been counted since the start of the project. This represents 78% of the final objective.

Finally, as part of the promotion of rice-fish farming, the project offered a subsidy of half the price of fingerlings. During this period, 243 farmers took the opportunity to acquire fingerlings. The survey carried out by the project team revealed an average weight of fish varying between **200 g to 250 g**. This constitutes a considerable increase in income at the scale of the family farm.

III.1.4.1 Provide seeds of plants used as bio-pesticides and repellent plants

During 2021, 402 farmers supervised by the project were able to benefit from various plant materials for the manufacture of biopesticides. It should be remembered that for this year, the project has made plant materials, biocidal and/or repellent plants available to farmers:

- 5.950 kg of **Mucun**a seeds,
- 1.000kg of **Tephrosia** seeds,
- 1,300 **comfrey** seedlings,
- 1,300 **tansy** seedlings
- and 900 **Absinthe** seedlings

In summary, the project team relied on the experiences of the CEFFEL center. The project technicians were trained by CEFFEL agents on the virtues of each useful plant; and the mode of use (slurry, mulching, burying in the ground during the preparation of the flowerbeds, etc.). These species are used as liquid manure or mixed in the liquid compost in order to reduce the use of chemical treatments as much as possible. Comfrey manure is used in prevention and treatment against late blight on potato or tomato plots. Absinthe manure helps fight against aphids. Tansy manure is very effective against red mites.

In addition, it should be remembered that Mucuna (used as cover plants) and Tephrosia (live hedge) are also used as repellent plants. Indeed, **tephrosia manure** gives good results against **cabbage Plutella**.

In short, since the beginning of the project, 5,166 peasants have been beneficiaries of plant materials of biocidal and/or repellent plants from the project. This represents 94% of the final objective.

III.1.4.2 Organic matters management

As already mentioned above, actions within the framework of support for the management of organic matter also continued during this period. The production of organic manure is of great interest to local producers because of the good quality of these improved organic manures; and the high cost of chemical fertilizers. Furthermore, the authenticity of certain chemical products from distributors in rural areas is not guaranteed.

We see, currently, a very clear interest of the peasants, in particular on the Highlands of Vakinankaratra, on the practice of **Vermicompos**t. Indeed, we totaled **160 new farmers** initiated on this practice this year.


Picture 17 : Vermicompost continues to attract many adopters to the Vakinankaratra Highlands

a) Vermicomposting

Vermicompost is one of the practices that interests many farmers in the area. The quality of the organic matter produced and the reduction of expenses related to the cost of chemical fertilizers are the main motivations of farmers for this practice. Indeed, at the end of March 2019, the project introduced 10 kg of decomposing worms (***Eisenia foetida***) to 13 farmers. Then the decomposer worms are transmitted from farmer to farmer.

From January to December 2021, the project supervised 160 new vermicompost adopters. This gives a total of 708 adopters since the start of the project; i.e. 283% of the final target set.

The 7day compost, as its name suggests, makes it possible to produce very good quality organic manure for seven (07) days only. Generally, it is farmers who do a lot of market gardening who adopt this technique. Indeed, the availability of **rumen juice**, being the essential component of the activator, limits the adoption of this technique in all project areas. In addition, this rumen juice can be used in the manufacture of the activator a few minutes after the slaughter of the zebu. This explains the fact that there are more farmers producing 7-day compost in the Highlands (presence of killings and frequent slaughter of zebus) than in the Middle West. However, the activator can be stored and multiplied as needed. Thus, farmers in remote areas can try to acquire it to produce 7d compost. For this year, the project has registered 6 new adopters in 7d Compost; i.e. 121 producers supervised by the project since the beginning of the project.

Table 19: Achievement on compost 7 days since the beginning of the project

Communes	2019			2020			2021	Total général
	Quarter 4	Quarter 5	Quarter 6	Quarter 7	Quarter 8	Quarter 10	Quarter 13	
Highlands	**58**		**21**	**1**	**29**			**109**
Ambohimandroso	6		1		9			16
Ambohipihaonana			3					3
Ampitatafika	33				7			40
Andravola			1					1
Antanifotsy	15		1	1	13			30
Morarano			15					15
Soamanandrariny	4							4
Midwest	**2**	**1**				**3**	**6**	**12**
Ambohimasina						3		3
Ankazomiriotra	1						6	7
Vinany	1	1						2
Total	**60**	**1**	**21**	**1**	**29**	**3**	**6**	**121**

b) Compost 45 days

The manufacturing process of Compost 45 days is very similar to that of classic compost, but with more frequent turning. In 2021, the project initiated 59 new adopters. Since the start of the project, 246 farms have been supported in the implementation of 45-day compost.

Table 20: Achievement on compost 45 days since the start on the project

Communes	2018	2019				2020				2021			Total
	Quarter 1 et 2	Quarter 3	Quarter 4	Quarter 5	Quarter 6	Quarter 7	Quarter 8	Quarter 9	Quarter 10	Quarter 12	Quarter 13	Quarter 14	
Highlands			**3**		**4**	**3**	**11**	**2**		**14**			**37**
Ambohibary			3										3
Ambohimandroso					2	3	11						16
Andranomanelatra								2		12			14
Morarano					2								2
Vinany										2			2
Midwest	**6**	**2**	**52**	**57**	**12**	**12**	**16**	**4**	**4**	**19**	**31**		**215**
Ambohimasina			7	13		8	4						32
Ankazomiriotra	5		17	3				3		3	9		40
Antohobe										2			2
Fidirana									2				2
Inanantonana	1		10	33	11	2	7	1					65
Soavina			1										1
Vinany		2	17	8	1	2	5		2	14	22		73
Total	**6**	**2**	**55**	**57**	**16**	**15**	**27**	**6**	**4**	**33**	**31**		**252**

c) *Classic compost*

Compared to other types of compost, classic compost is much easier to make. However, the decomposition time of the constituent materials is longer (about 3 months). The materials needed to make them are available everywhere: dry, green materials mixed with cattle manure. This is why it is the most adopted organic manure improvement practice in the area. During this year, the project team supported 82 new adopters this year. And, since the beginning of the project, 857 farmers have adopted this practice under the supervision of the leading farmers.

Table 21: Achievement on classic compost since the start of the project

Communes	2018	2019				2020				2021				Total
	Quarter 1 et 2	Quarter 3	Quarter 4	Quarter 5	Quarter 6	Quarter 7	Quarter 8	Quarter 9	Quarter 10	Quarter 11	Quarter 12	Quarter 13	Quarter 14	
Highlands		**3**	**104**	**7**	**64**	**7**	**91**	**63**	**12**	**6**	**2**	**1**		**360**
Ambatolampy			2			1					2			5
Ambohibary			1		10		9	10						30
Ambohimandroso			7			2								9
Ambohipihaonana			5		4	2	1							12
Ampitatafika		2	31				16							49
Andranomanelatra			7		18		28	39		6				98
Andravola			1		5									6
Antanifotsy		1	24				29	7						61
Antsoatany			8	7	13		8	2				1		39
Morarano			14		14	2								30
Soamanandrariny			4					5	12					21
Midwest	**12**	**4**	**79**	**62**	**95**	**12**	**100**	**31**	**29**		**46**	**27**	**4**	**501**
Ambohimasina			1		6	1	1							9
Ankazomiriotra	1	4	3	4	5	1	6	17				26	4	71
Antohobe	8		34	39	42	3	48	4	9		21			208
Fidirana			23		33		18	3	20		23			120
Inanantonana	2				4	1	11	1						19
Soavina	1		18	17	5	6	15				2			64
Vinany				2			1	6				1		10
Total général	**12**	**7**	**183**	**69**	**159**	**19**	**191**	**94**	**41**	**6**	**48**	**28**	**4**	**861**

d) *Liquid compost*

As part of this practice, the project has valued the experiences of the CEFFEL center in Andranobe/Antsirabe. It allows both to bring fertilizing elements to the plots, and to repel harmful insects. Liquid compost is a mixture of 10 kg green leaves (with biocidal and/or repellent plants), 5 kg of farmyard manure in 100 liters of water. The whole will be stirred every two (02) days. Liquid compost will be ready after 15 or 21 days. Generally, the

various liquid compost products are intended for market gardening, food legumes such as cowpea, and shrubby legumes such as Cajanus.

During 2021, 56 new farmers were introduced to this technique by the project team. Which gives us a total of 303 adopters since the beginning of the project.

Table 22: achievement on liquid compost since the beginning of the project

Communes	2019			2020			2021			Total
	Quarter 4	Quarter 5	Quarter 6	Quarter 7	Quarter 8	Quarter 9	Quarter 12	Quarter 13	Quarter 14	
Highlands	**32**	**2**	**13**	**3**	**59**	**1**	**1**	**1**		**112**
Ambatolampy				1	1		1			3
Ambohibary					2					2
Ambohimandroso	2		1		13					16
Ambohipihaonana	1				4					5
Ampitatafika	11	2			14					27
Andranomanelatra					1	1				2
Andravola	1				2					3
Antanifotsy	6				13					19
Antsoatany	6									6
Morarano	4		12	2	9			1		28
Soamanandrariny	1									1
Midwest	**33**	**44**	**12**	**3**	**17**	**28**	**18**	**26**	**10**	**191**
Ambohimasina		1								1
Ankazomiriotra	8	23	2		4	12	3	19	8	79
Antohobe	8	1	1		4		1			15
Fidirana	6		1			2				9
Inanantonana	3	6	3	3	1					16
Soavina		2	1		3					6
Vinany	8	11	4		5	14	14	7	2	65
Total	**65**	**46**	**25**	**6**	**76**	**29**	**19**	**27**	**10**	**303**

Picture 18: Dadakoto vermicompost drying unit in Antemotra

Picture 19: Extension of a Vermicomposter at the Lead Farmer DANIEL in Antemotra

III.1.4.3 Participate to improve cowsheds for quality manure and composting

The MANITATRA 2 project proposed, among its activities, the improvement of stables. The principles of improving a barn consist of installing a roof over part or all of the zebu pen, ensuring that the floor is solid, making a manure collector and a manure pit.

The project provided support in cash around 150,000 Ar per barn for the benefit of interested cattle breeders. In general, this project contribution is intended for the purchase of cement for the floor and the sewage collector. The other necessary materials are the responsibility of the beneficiaries. They can promote local materials.

The objective of this activity is to improve the health of cattle, while producing quality manure for the manufacture of various types of composting (including vermicompost). In this sense, 82 breeders expressed a need for technical and financial support in this area. And, currently, the project is in the process of contracting with these breeders.

Table 23: Request for support in improving cowsheds being contracted with the project in 2021

N°	Name of cattle breeders	Gender	Locations	Fokontany	Commune	Budget Total	Beneficial contribution	GSDM grant
1	RAZANAMALALA Perline	Woman	Antsahamaina	Antsahamaina	Antanifotsy	671 000	551 000	120 000
2	RANDRIAMAMPIONONA	Man	Antsahamaina	Antsahamaina	Antanifotsy	464 500	339 500	125 000
3	RANAIVOMANANA	Man	Antanety Nord	Antanety Nord	Antanifotsy	514 000	369 000	145 000
4	RAVAOARISOLO Helene	Woman	Tetezambato Sud	Antsampandrano	Ambohimandroso	670 000	530 000	140 000
5	RANANTENAINA Tsiferana	Man	Tetezambato Sud	Antsampandrano	Ambohimandroso	724 000	584 000	140 000
6	RAMANAMPAMONJY Daniel	Man	Tetezambato Sud	Antsampandrano	Ambohimandroso	690 000	550 000	140 000
7	FANANTENANA Tolojanahary	Man	lot 234 B Ambohimandroso	Ambohimandroso	Ambohimandroso	649 000	519 000	130 000
8	RAZAFIMAHATRATRA	Man	lot 450 E Tsararano	Ambohimandroso B	Ambohimandroso	594 000	464 000	130 000
9	RATELOFERA Andriamanantiana	Man	Tetezambato Sud	Antsampandrano	Ambohimandroso	555 000	425 000	130 000
10	RABEARISOA Florenté	Man	Avaratsena	Ambohimandroso A	Ambohimandroso	1 070 000	930 000	140 000
11	MARIE Rasoloarisoa	Woman	EKAR Ambohimandroso Gara	Ambohimandroso B	Ambohimandroso	1 446 000	1 296 000	150 000
12	ANDRIAMIARANTSOA Aimé Jean Michel	Man	Antanety I	Antanety I	Soamanandrariny	1 606 800	1 456 800	150 000
13	RAKOTOASIMBOLA Andrianantenaina Desiré	Man	Mahatsinjo	Andriatsilahy	Antanifotsy	1 061 000	911 000	150 000
14	HASIMBOLAMANANA Fenoherimahefa Valisoa	Man	Mahatsinjo	Andriatsilahy	Antanifotsy	1 666 750	1 516 750	150 000
15	RANDRIAMIARINTSOA Benjamin	Man	Ambatondrenarivo	Andriatsilahy	Antanifotsy	901 750	761 750	140 000
16	RANDRIANASOLO Rakotozafy	Man	Mahatsinjo	Andriatsilahy	Antanifotsy	1 752 500	1 602 500	150 000
17	RANDRIARIMALALA Fanomezantsoa Georges	Man	Mahatsinjo	Andriatsilahy	Antanifotsy	1 360 500	1 220 500	140 000
18	RANAIVO André	Man	Antambohomena	Andriatsilahy	Antanifotsy	916 500	776 500	140 000
19	RANAIVOMANANA Desiré	Man	Ambohibary	Andriatsilahy	Antanifotsy	940 000	800 000	140 000
20	RAZANADRAIBE Paul	Man	Ampitatafika	Ampitatafika	Ampitatafika	1 106 000	956 000	150 000
21	RAFAMANTANANTSOA Lantoson Desiré	Man	Tsarafara	Tsarafara	Antanifotsy	914 000	774 000	140 000
22	RAZAFINDRAIBE Paulin Joeel Patrick	Man	Ampitatafika	Ampitatafika	Ampitatafika	818 000	678 000	140 000
23	HERINANTENAINA Felantsoa Fraçois Xanvier	Man	Tsaratanety	Antampondravola	Fidina	707 000	557 000	150 000
24	RAFANOMEZANTSOA Jean Claude Rolland	Man	Ankily	Antampondravola	Fidina	407 000	257 000	150 000
25	RANDRIAMANANTENA Olivier	Man	Ankily	Antampondravola	Fidina	407 000	257 000	150 000
26	RAVAONIRINA Jeannine	Woman	Ankily	Antampondravola	Fidina	407 000	257 000	150 000
27	RANDRIAMANANTENA Jules	Man	Ambohimanandroso	Antanety	Soavina	733 000	583 000	150 000
28	RAZAFINDRAVAO Emilienne	Woman	Ampano	Matielona	Antohobe	370 000	222 000	148 000
29	RAZAFIMANANTSOA Justin	Man	Ambatolahy I	Matielona	Antohobe	936 000	786 000	150 000
30	RAKOTONOELA Jean Dieu Donné Noël	Man	Ambohimandroso	Antanety	Soavina	700 000	550 000	150 000
31	RAKOTONDRANAIVO Henri	Man	Ihazolava Sud	Ihazolava Sud	Ambohimpihaonana	431 000	284 000	147 000
32	RAMANAMPISOA Desiré	Man	Ihazolava Sud	Ihazolava Sud	Ambohimpihaonana	829 000	679 000	150 000
33	RANIVOHARIMALALA Julie Françoise	Woman	Maroandriana	Morarano	Morarano	865 000	721 000	144 000
34	ONY HERINIAINA Honorine	Woman	Ambodivona	Andriamingodona	Morarano	1 085 000	941 000	144 000
35	RAKOTONDRANAIVO Edmond	Man	Maroandriana	Morarano	Morarano	991 600	844 600	147 000
36	TOLOJANAHARY Andoniaina Samueline	Woman	Ambodivona	Andriamingodona	Morarano	1 086 000	939 000	147 000
37	RAJAONARIVELOMANAMPISOA Bien Aimé	Man	Maroandriana	Morarano	Morarano	1 199 000	1 049 000	150 000
38	ANDRIAMORASATA Nampinasoa	Man	Antsoantany	Antsoantany	Antsoantany	930 000	780 000	150 000
39	RANDRIANJAKA Jean de Dieu	Man	Bemasoandro	Andranomanelatra	Andranomanelatra	1 046 000	896 000	150 000
40	RAFIDIMANANTSOA Solo	Man	Ambohimarina Est	Fandrindrano	Andranomanelatra	1 014 000	864 000	150 000
41	RAKOTOMALALA Jules	Man	Ambohimarina Est	Fandrindrano	Andranomanelatra	858 000	708 000	150 000
42	RAVONIHERIMANANTSOA	Woman	Ambohimarina Est	Fandrindrano	Andranomanelatra	878 000	728 000	150 000
43	RAZAFINDRABE Adolphe	Man	Ambohimarina Est	Fandrindrano	Andranomanelatra	1 090 000	940 000	150 000
44	RAKOTOARISOA Jean Baptiste	Man	Fiadanana	Fiadanana	Andranomanelatra	764 000	614 000	150 000
45	LALA Hariette Blandine	Woman	Fiadanana	Fiadanana	Andranomanelatra	596 000	446 000	150 000
46	RASOLONIAINA Noël	Man	Fiadanana	Fiadanana	Andranomanelatra	556 000	406 000	150 000

N°	Name of cattle breeders	Gender	Locations	Fokontany	Commune	Budget Total	Beneficial contribution	GSDM grant
47	RAZAFIARISOA Odetta	Woman	Fiadanana	Fiadanana	Andranomanelatra	632 000	482 000	150 000
48	RAZANANDRASOA Mariette	Woman	Fiadanana	Fiadanana	Andranomanelatra	930 000	780 000	150 000
49	RANAIVOARISOA Fidel	Man	Fiadanana	Fiadanana	Andranomanelatra	936 000	786 000	150 000
50	RAHARINJANAHARY Olivia	Woman	Ampandraofana	Sambaina Gara	Ambohibary	490 000	340 000	150 000
51	ROBSON Tinasoa	Woman	Ampandraofana	Sambaina Gara	Ambohibary	869 000	719 000	150 000
52	RANDRIAMANDROSO Ernest	Man	Ampandraofana	Sambaina Gara	Ambohibary	719 000	569 000	150 000
53	RAHARIMALALA Marie Honorine	Woman	Ampandraofana	Sambaina Gara	Ambohibary	488 000	368 000	120 000
54	NJAKATIANA Marcellin	Man	Ambodiala	Ambatomainty	Ambohibary	665 000	515 000	150 000
55	RAJAOSAFARA Jacqueline	Woman	Ampandraofana	Sambaina Gara	Ambohibary	720 000	570 000	150 000
56	RAJAOSAFARA Haribaovola Dorette	Woman	Tetezana	Sahabe	Ambohibary	1 025 000	875 000	150 000
57	FANIRISOA Jacqueline	Woman	Ampandraofana	Sambaina Gara	Ambohibary	668 000	518 000	150 000
58	RASOANAMBININA Sandra	Woman	Ampandraofana	Sambaina Gara	Ambohibary	762 000	612 000	150 000
59	RAELIARISOA Hriette	Woman	Merimitatra	Tsaramasondro Gara	Andranomanelatra	910 000	760 000	150 000
60	RAKOTOARISOA Gerant	Man	Tsaramanadroso Gara	Tsaramandroso Gara	Andranomanelatra	1 035 000	885 000	150 000
61	RASOANANDRASANA Marie Odette	Woman	Akofafa	Tsaramandroso Gara	Andranomanelatra	868 000	718 000	150 000
62	DOMOINA Oliviette	Woman	Atsimondalana	Tsaramandroso Gara	Andranomanelatra	526 000	376 000	150 000
63	TSARAOINA Mahafaly M C	Man	Merimitatra	Tsaramandroso Gara	Andranomanelatra	940 000	790 000	150 000
64	RANDRIAMBOAVONJY Jean Guy	Man	Merimitatra	Tsaramandroso Gara	Andranomanelatra	958 000	808 000	150 000
65	RANDRIATSITOHAINA Lahatra	Man	Merimitatra	Tsaramandroso Gara	Andranomanelatra	947 000	797 000	150 000
66	RAHERIMANDIMBY Rinasoa Yvan	Man	Merimandroso	Tsaramandroso Soamahavoky	Andranomanelatra	880 000	730 000	150 000
67	FANJANIRINA Harilalao	Woman	Merimitatra	Tsaramandroso Gara	Andranomanelatra	888 000	738 000	150 000
68	RAFALIMANANA	Man	Soamahavoky	Tsaramandroso Gara	Andranomanelatra	830 000	680 000	150 000
69	MALALAHARIVONY Nadia Julie	Woman	Merimitatra	Tsaramandroso Gara	Andranomanelatra	590 000	440 000	150 000
70	RAHANDRIMAMONJY Tojonirina	Man	Bemololo	Bemololo	Andranomanelatra	1 290 000	1 140 000	150 000
71	RAVALOSON Tokiniaina	Man	tsaramandroso gara	Tsaramandroso Gara	Andranomanelatra	750 000	600 000	150 000
72	RAFIDISON Jean Maherson	Man	Merimitatra	Tsaramandroso Gara	Andranomanelatra	776 000	626 000	150 000
73	RASOLONOMENJANAHARY S	Woman	Merimitatra	Tsaramandroso Gara	Andranomanelatra	736 000	586 000	150 000
74	RATIASOA Handimby Rolland	Man	Soamahavoky	Tsaramandroso Gara	Andranomanelatra	639 000	489 000	150 000
75	RANIVOARIMALALA Fara	Woman	Akofafa	Tsaramandroso Gara	Andranomanelatra	1 046 000	896 000	150 000
76	HAINGOTIANA Solonandrasana	Man	Fiadanana	Atsimondalana	Tsaramandroso Gara	700 000	550 000	150 000
77	ANDRIANARISATA Lalatiana	Woman	Bemasoandro	Andranomanelatra	Andranomanelatra	950 000	800 000	150 000
78	FENOHERY Zarasoa	Man	Antsahamarolahy	Tsarazazamandimby	Andranomanelatra	700 000	550 000	150 000
79	RATOVONJANAHARY Vonjiniaina	Man	Antsararano lot 117 RP	Tsarazazamandimby	Andranomanelatra	440 000	290 000	150 000
80	RANDRIANANDRASANA Heriniaina Todisoa	Man	Antsahamarolahy	Tsarazazamandimby	Andranomanelatra	1 046 000	896 000	150 000
81	RASOANASOLONOMENJANAHARY Parany	Man	Soamahavoky	Tsaramandroso Gara	Andranomanelatra	622 000	472 000	150 000
82	RASOAVOLOLONA Voahangy Irene	Woman	Amberobe	Amberobe	Andranomanelatra	728 000	578 000	150 000
TOTAL						**68 675 900**	**56 648 900**	**12 027 000**

Picture 20 : Improvement of a stable with a grant from the project in Tsinjoarivo

Picture 21 : Improvement of a stable with the project grant to Inanantonana

III.1.4.4 Provide seeds of forage and food safety crop

As part of support for improving milk production in the Region, the project distributed fodder seeds during this year:

- 150 kg of oats seeds,
- 30,000 cuttings of Brachiaria sp.,
- 15,000 pennisetum kizozi cuttings,
- 15,000 pennisetum relaza cuttings,
- 6,250 cuttings of *Pennisetum giganteum* (jin cao),
- and 150kg of Ray Grass

In addition, 7,000 kg of **orange-fleshed sweet potato** vines were made available to supervised farmers in order to fight against food insecurity. These are short cycle varieties (production from 3 months), non-photoperiodic, with tubers rich in **vitamin A**. They are presented as one of the solutions to alleviate the problem of food insecurity in the area.

In short, the project recorded 510 farmers benefiting from fodder seeds and/or orange-fleshed sweet potato vines in 2021. end goal).

III.1.4.5 Provide fry and other equipment for farmers for fish raising in the paddy field or in ponds

In this activity, the project requested the support of specialized organizations such as APDRA. In the end, a collaboration agreement was signed with the ATDRM/APDRA in order to strengthen the project team in the promotion of rice-fish farming. This agreement resulted in a diagnosis of the current situation of fish farming activities in the area; training sessions on rearing and growing fish (with the establishment of demonstration sites); and finally, monitoring and supervision missions carried out regularly.

At the end of 2021, the project supervised **16 fish fry**, in order to make **fingerlings** more accessible in the area. It should be remembered that these breeders benefited from project subsidies in order to acquire parents from the Analamanga Region (in the Ankazobe Zone) in order to gradually reduce the problem of **inbreeding** noted during the diagnosis. Indeed, 93 spawners including 60 males and 33 females were introduced into the 2 project areas in 2020. The ATDRM coordinated this operation from fishing to delivery of the carp spawners.

The majority of these breeders were surprised by the difference in production compared to the extensive breeding they practiced before. However, the problem of rain holes at the beginning of the agricultural year causes a lot of problems for these fish breeders. Indeed, the fry are ready in time; while the rice fields are still dry. And in 2021, 10 breeders among these 16 were able to produce in a good period; and ensure the supply of fingerlings to the farmers supervised by the project.

Table 24: Fry subsidy in 2021

Breeders	location	Fokontany	Commune	Number of fingerlings dispatched	Number of beneficiaries
Andriamihaja Davida	Isody	Isody	Ambohimandroso	600	2
Razafindrakoto Emilson	Antemotra	Antemotra	Antanifotsy	6 700	19
Raharilalao Marie Odette	Ankazomiriotra II	Ankazomiriotra II	Ankazomiriotra	14 239	40
Rakotonarivo Jean de Dieu Manampisoa	Antanety Sud	Antanety Sud	Inanantonana	7 090	42
OP Lavadia Fikirizana	Antanety	Antokofoana	Soavina	1 200	3
Rakotomalala Bernardin	Antohobe	Antohobe	Antohobe	5 400	12
Ranoavomanana Morasata	Korosovola	Korosovola	Antohobe	2 300	6
Njakatiana Marcellin	Ambaniala	Ambatomainty	Ambohibary	10 040	33
Andrianaivo Miharisoa Rijamalala	Andranotsara	Tsaramandroso Gara	Andranomanelatra	5 000	5
Rabemanantsoa Gilbert	Ankily	Antampondravola	Fidirana	16 900	81
TOTAL				**69 469**	**243**

A total of 243 rice growers were supervised by the project team in 2021. This brings the total number of farmers supported in the field of rice-fish farming to 559. In general, many farmers are beginning to take an interest in growing fish in rice fields. With an average yield of 200g to 250g per fish, the impact on the income of adopting households is palpable. However, this activity faces various major constraints: rainfall and theft.

Picture 22 : Delivery of carp broodstock to a hatchery in Ambodiala - Ambohibary

Picture 23 : Growing fish in the rice field at Dadazily in Ankily - Fidirana

III.1.5 Collect data on CSA in some strategic area at National level in a view to update data on upscaling of CSA and best practices in the Country

Table 25: collection and management of national data in agroecology

	Planned Activities	Indicator	Targets of Year 3	Previous Achievement		Achievement in 2021		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
1.5.1	Contratc with a firm to conduct National survey in some strategic agro-écological areas	Number of national survey (with national data in CSA)	1	**0**	0%	**0**	0%	**0**	0%
1.5.2	Integrate data in MANAMORA database - and include database improvement by contratcing with CIRAD	Number of contract with CIRAD expertise to integrate data in MANAMORA database	1	**0**	0%	**0**	0%	**0**	0%

	Planned Activities	Indicator	Targets of Year 3	Previous Achievement		Achievement in 2021		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
1.5.3	Train regional directorates of MAEP (DRAEP) in the use of the data base MANAMORA	Number of DRAE trained in the use of the data base MANAMORA	5	**0**	0%	**0**	0%	**0**	0%
1.5.4	National database transfert to DRAE (Ministry regional branch)	One database transfered	1	**0**	0%	**0**	0%	**0**	0%

For the collection of data on the national situation of agroecology, after taking the necessary steps to comply with the rules of procurement, the project commissioned the consulting group "Rivo Rabarijohn". This group has already carried out field surveys in certain areas of Madagascar. A provisional report has already been presented to the Board of directors of the GSDM. Various comments and recommendations were made during this validation meeting. And, currently, this group of consultants is in the process of finalizing the report of this study, while taking into account the reactions of the participants in this validation meeting.

Then, once the data on the national situation of agroecology had been synthesized, MANITATRA 2 proposed in its project document to introduce them into the MANAMORA database with the support of CIRAD. This database would then be transferred to the Regional Directorates of Agriculture and Livestock for periodic updating. And, to make this transfer more fluid, training sessions for DRAE agents on the functionality of this database are planned. It should be noted that these activities are among those which would require an extension of the project compared to its duration initially planned in the project document (extension without additional cost)

III.1.6 Purchase principal mean for upscaling activity

Table 26: Principal mean purchased or repaired for upscaling activity

	Planned Activities	Indicator	Targets of Year 3	Previous Achievement		Achievement in 2021		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
1.6.1	**Purchase of Equipments**								
1.6.1.1	Purchase of motorcycles	Number of motorcycle	8	**8**	100%	**0**	0%	**8**	100%
1.6.1.2	Purchase of bicycles	Number of bicycles	50	**50**	100%	**0**	0%	**50**	100%
1.6.2	**Fuel and repairs**								
1.6.2.1	Fuel and repairs (spare parts) for motorcycle	Number of Motorcycle use month	297	**216**	73%	**75**	25%	**291**	98%
1.6.2.2	Car hiring for field backstopping and monitoring (all CSA: CA, Agroforestry and best practices)	Number of car hiring days	90	**73**	81%	**41**	46%	**114**	127%

III.2 Result 2 : Capacity on various stakeholders is built in Climate Smart Agriculture

III.2.1 Train nurserymen in the technology of tree nurseries and in the choice of the appropriate tree species

Table 27: Trained nurserymen/women

	Planned Activities	Indicator	Targets of Year 3	Previous Achievement		Achievement in 2021		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
2.1.1	Train Nurserymen/ women	Number of Nursery men/women trained	50	72	144%	47	94%	72	144%

As a reminder, for this reforestation campaign, the project is working with 47 nurseries (service providers) to produce young forest tree seedlings. The training of these nurserymen has already been carried out previously by the agents of the DREDD Vakinankaratra.

In summary, 72 nurserymen have already collaborated with GSDM since the start of the project. And, at the end of this year, we organized a mission of DREDD agents in the 2 project areas. The objective of this mission is to monitor some samples of the reforestation carried out by the project; and at the same time, to carry out an assessment of the capacity of each of the nurserymen. Deserving nurserymen will be sanctioned by a certificate; and will be offered to the various stakeholders in the Region (in particular, the FDA Vakinankaratra).

Picture 24 : Reseal of pots by members of the Fanilo Cooperative in Amparihy

Picture 25 : Nursery monitoring by the central GSDM team

III.2.2 Train lead farmers and farmers in CSA

Table 28: Achievements on lead farmers and farmers training

	Planned Activities	Indicator	Project targets	Previous Achievement		Achievement in 2021		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
2.2.1	Train Lead farmers (by project Technicians and other stakeholders)	Number of Lead farmers	50	**84**	168%	**51**	102%	**84**	168%
2.2.2	Support cost of farmers training by Lead farmers (Farmer to farmer approach, based on man-day spent on training of their peer farmers)	Intervention of Lead farmers (man-day)	12 600	**9 098**	72%	**2 751**	22%	**11 849**	94%
	Training of adopters	Number of participants	5 000	**4 463**	89%	**1 028**	21%	**5 491**	110%

In 2021, apart from the refresher courses carried out daily and individually by the technicians, no training session for the benefit of the Lead farmers has been organised. Indeed, it should be remembered that the lead farmers of the project received training from agronomists trainers from the GSDM, agents from the DRAE, technicians from CEFFEL and ATDRM. But in general, it is the technicians of the project who facilitate their interventions by carrying out retraining and individualized reorientations. These Lead farmers receive a daily compensation of 10,000Ar for their interventions within the framework of the implementation of the project. And, in order not to handicap them in their farm (because, above all, they are farmers), they only intervenes in the project for 7 days a month.

It should be noted that in April 2021, 03 peasant leaders resigned for family reasons. Thus, from this period, the project continued the collaboration with 48 peasant leaders.

Since the start of the project, 84 farmers have been counted as MANITATRA 2 farmer leaders. These 84 farmer leaders have already received various training from the project. This corresponds to 168% of the final objective of the project.

The services of the lead farmers were stopped at the end of August 2021 as planned in the AWPB year 3 of the project. But, in order to ensure the collection of some very important data, the project granted an additional month's service for the 48 lead farmers between December 2021 and January 2022.

Table 29 List of lead farmers in the end of 2021

N°	Area	Lead Farmers	Gender	Location	Fokontany	Commune
1	MID - WEST	RAVAKINIAINA Valisoa Josephine Stephanson	Women	Ambohimasina	Ambohimasina	Ambohimasina
2	MID - WEST	RAMINOARIRINDRA Daniella	Women	Amboanjobe	Amboanjobe	Ambohimasina
3	MID - WEST	KANTONIRINA Fanoela	Women	Marovitsika	Belanitra	Ambohimasina
4	MID - WEST	RASOARILALAO Marie Louise Justine	Women	Antanety Sud	Antanety Sud	Inanantonana
5	MID - WEST	RAMAROKOTO André	Men	Bemasoandro	Bemasoandro	Inanantonana
6	MID - WEST	RAZAFINDRAKOTO Jean Michel	Men	Inanantonana Centre	Inanantonana	Inanantonana
7	MID - WEST	RAVOLATIANA Rivo Nicole	Women	Ambatomainty	Ambatomainty	Inanantonana
8	HIGHLAND	RANDRIANARISON Etienne	Men	Ihazolava	Ihazolava	Ambohipihaonana
9	HIGHLAND	RAMAMONJISOA Pierre	Men	Isody	Isody	Ambohimandroso
10	HIGHLAND	RAFALIMANANA Augustin	Men	Moraranokely	Ankidondona II	Ambatolampy
11	HIGHLAND	RANDRIAMAMPIADANA Pascal	Men	Ambodivona	Andriamigodana	Morarano
12	HIGHLAND	RAJAOSAFARA Lantosoa Nirina Arlette	Women	Ampandraofana	Sambaina Gara	Ambohibary
13	HIGHLAND	RAFANOMEZANTSOA Jean de Dieu	Men	Ambondrona	Andranomanelatra	Andranomanelatra
14	HIGHLAND	RAIVOARISOA Marie Monique	Women	Merimitatra	Tsaramandroso gara	Andranomanelatra
15	HIGHLAND	RAZAFIARISOA Odette	Women	Fiadanana	Fiadanana	Andranomanelatra
16	HIGHLAND	RASOLONIAINA Marie Oméga	Women	Fiantsonana	Fiadanana	Andranomanelatra
17	HIGHLAND	VONIALA Saholintsoa Paulette Alice	Women	Antsoatany	Antsoatany	Antsoatany
18	HIGHLAND	RANDRIANARISOA Étienne	Men	Ampangabe	Antsoatany	Antsoatany
19	HIGHLAND	VONJISOA Lalaina Eric Arthur (Lalaina)	Men	Avaratsena	Ambohimandroso	Ambohimandroso
20	HIGHLAND	RAFIDIMANANTSOA Jaona (Rafidy)	Men	Soavina	Antsampandrano	Ambohimandroso
21	HIGHLAND	RAZAFINDRAVONY Laingo Maminirina	Women	Masoandro	Masoandro	Ampitatafika
22	HIGHLAND	TOJOARINAIVO Ambininjanahary Eric)	Men	Ampitatafika	Ampitatafika	Ampitatafika
23	HIGHLAND	RAFENOMAMPIONONA Falimihoby Bien Aimé	Men	Antsapanimahazo	Andriantsilahy	Antanifotsy
24	HIGHLAND	RAHARIMALALA Berthe Clémence	Women	Fenoarivo Sud	Antsahamaina	Antanifotsy
25	HIGHLAND	RAZAFIARIJAONA Daniel	Men	Antemotra	Antemotra	Antanifotsy
26	HIGHLAND	ANDRIAMIARANTSOA Aimé Jean Michel	Men	Antanety I	Antanety I	Soamanandrainy
27	MID - WEST	RAMANAMILANTO Richard Florent	Men	Mazoto	Mazoto	Vinany
28	MID - WEST	NIRINARIVELO Fanilo Tanteraka Hanitriniaina	Men	Ambohipoloalina	Ankazomiriotra	Ankazomiriotra
29	MID - WEST	RAHARIMANANA Marie Lucienne	Women	Beronono	Ankazomiriotra II	Ankazomiriotra
30	MID - WEST	ANDRIAMANJATO Philippe	Men	Bemasoandro	Ankazomiriotra II	Ankazomiriotra
31	MID - WEST	ANDRIANDRAINA Todisoa Omega	Men	Atsimotsena, Ankazomiriotra	Ankazomiriotra I	Ankazomiriotra
32	MID - WEST	RANDRIATRINA Jean Richard	Men	Soamiafara	Belanitra	Ankazomiriotra
33	MID - WEST	RAZANAMARO Milantosoa Félistine	Women	Ivory Ambany	Ivory	Vinany
34	MID - WEST	RAKOTOARIMANANA Edmond	Men	Vinany	Vinany	Vinany
35	MID - WEST	RANDRIAMIHAJA Jean Clément	Men	Ankamory	Ankamory	Vinany
36	MID - WEST	RAKOTONIAINA Solomon	Men	Morafeno	Matieloana	Antohobe
37	MID - WEST	RANOAVOMANANA Morasata	Men	Tsaramasoandro	Korosovola	Antohobe

N°	Area	Lead Farmers	Gender	Location	Fokontany	Commune
38	MID - WEST	RAKOTOMALALA Bernardin Emile	Men	Ambohidray	Antohobe	Antohobe
39	MID - WEST	RANDRIAMANANTENA Jules	Men	Antokofoana	Antanety	Soavina
40	MID - WEST	RAKOTO Philippe	Men	Tsianjoarivo	Soavina	Soavina
41	MID - WEST	ANDRIATSIFERANA Olivier	Men	Soavina 2	Soavina 2	Antohobe
42	MID - WEST	RAKOTOARIJAONINA Alfred	Men	Fidirana	Fidirana	Fidirana
43	MID - WEST	ANDRIANIRINA William	Men	Soamananety	Soamananety	Fidirana
44	MID - WEST	RAKOTOMANANTSOA Modeste	Men	Ambohibolakely	Ambohibolakely	Fidirana
45	MID - WEST	RABEMANATSOA Augustin	Men	Ankily	Antampondravola	Fidirana
46	MID - WEST	RAVELOMANANJAFY Hanta Jeannot	Men	Mamoriomby	Mamoriomby	Fidirana
47	MID - WEST	RATOLOJANAHARY Simon André	Men	Andrefantrafo	Morafeno	Fidirana
48	MID - WEST	RABEBINIRINA Minompamonjy David	Women	Ambohitrinibe	Belanitra	Ankazomiriotra

Table 30: List of former project Lead Farmers

N°	Area	Lead Farmers	Gender	Location	Fokontany	Commune
1	HIGHLAND	RANDRIAMIHARIMBOLATSOA Norbert	Man	Andriamingodana	Andriamingodana	Morarano
2	HIGHLAND	RABARISON Dauphin Ludovic	Man	Sahabe Tetezana	Sahabe Tetezana	Ambohibary
3	HIGHLAND	RAKOTONIRAINY Leonard Jean Pierre (Léonard)	Man	Fiadanana	Fiadanana	Andranomanelatra
4	HIGHLAND	RANAIVONJANAHARY Mana Tantely (Tantely)	Man	Soafianarana	Mandritsarakely	Antsoatany
5	HIGHLAND	RAKOTOARIMANANA	Man	Tsarazafy	Ambohimena	Antsoatany
6	HIGHLAND	RANDRIAMPARANY Jean Armand (Mparany)	Man	Masoandro	Masoandro	Ampitatafika
7	MID - WEST	FANIRISOA Théodorette Marie Bienvenue	Woman	Amboniandrefana	Ankazomiriotra I	Ankazomiriotra
8	MID - WEST	RAKOTONDRAMANANA Thierry Johnson	Man	Antanety	Antanety	Soavina
9	MID - WEST	MBOLATINA Tsilavina	Woman	Ambohimasikely	Ambohimasikely	Fidirana
10	HIGHLAND	RANDRIARIMANANA Jean Léon	Man	Ambodivona	Ambanimaso II	Ambatolampy
11	HIGHLAND	RANDRIAMAHEFA Falimanana	Man	Ihazolava sud	Ihazolava	Ambohimandroso
12	HIGHLAND	RAZAFINARIVO Fenosoa François	Man	Ambondrona	Ambondrona	Ambohimpihaonana
13	HIGHLAND	HERIMANITRA Marie Rosette	Woman	Sahamadio	Sahamadio,	Ambohimpihaonana
14	HIGHLAND	RAKOTOZAFINDRASON Edmond	Man	Antsimombary	Morarano III	Ambohibary
15	HIGHLAND	RAKOTOARISOA Jean Marie	Man	Ambondrona	Andranomanelatra	Andranomanelatra
16	HIGHLAND	RAIVONJANAHARY Perline Yvette	Woman	Tsararano	Tsarazazamandimby	Andranomanelatra
17	MID - WEST	RAZAFINDRAVONY Lala Christine	Woman	Ankazomanefa	Ankazomiriotra I	Ankazomiriotra
18	MID - WEST	RAMAMONJIVOKATSOA Fortunat	Man	Ambohitrinibe	Belanitra	Ankazomiriotra
19	MID - WEST	RAKOTOMALALA Claude Jean Denis	Man	Mazoto Ambany	Mazoto	Vinany
20	MID - WEST	RAKOTOARISOA Georges Albert	Man	Fidirana	Fidirana	Fidirana
21	MID - WEST	ANDRIANARY Fikirizantsoa Mahefarilanto	Woman	Ambohimasina	Ambohimasina	Ambohimasina
22	MID - WEST	RAKOTONIRINA Heritiana	Man	Bemasoandro	Belanitra	Inanantonana
23	MID - WEST	RAZAFIMAHAFALY Anthime Dominique	Man	Tsaratanety	Antampondravola	Fidirana
24	HIGHLAND	RANDRIAMAMPIANINA Jean Victor	Man	Marohisana	Marohisana	Ambohipihaonana
25	HIGHLAND	RANDRIATSITOHAINA Jean Jeremia	Man	Ambinanibe	Ambinanibe	Andravola
26	HIGHLAND	RAHARIMALALA Marcelline	Woman	Ambohimandroso kely	Andriamigodana	Morarano
27	HIGHLAND	RAZANAMASY Yvonne	Woman	Ambonindrina	Antsapanimahazo	Antsoatany
28	MID - WEST	RAKOTONDRAFARA	Man	Antanety Sud	Antanety Sud	Inanantonana
29	MID - WEST	TOJONIRINA Rindrasoa Charlotte	Woman	Belanitra	Belanitra	Ambohimasina
30	HIGHLAND	RAMANANJATOVO Nirina Nambinina	Man	Ambilona I	Ambilona I	Soamanandrainy
31	MID - WEST	IARIMALALA Marie Véronique	Woman	Bemasoandro	Ankazomiriotra II	Ankazomiriotra
32	HIGHLAND	RATOVONJANAHARY Vonjiniaina	Man	Antsapana	Soamahavoky	Andranomanelatra
33	HIGHLAND	RAHERITIANA Lovasoa Yasine	Woman	Antsoatany	Antsoatany	Antsoatany
34	MID - WEST	RAKOTOMALALA Herisoa	Man	Inanantonana Est	Inanantonana	Inanantonana
35	HIGHLAND	RANDRIAMAHEFA Roger	Man	Ambinanibe	Ambinanibe	Andravola
36	HIGHLAND	RANDRIAMITANTSOA Heritiana Victor	Man	Fierenana	Fierenana	Morarano

Table 31: training of farmers in 2021

Communes	Number of sessions	Number of participants	Women	% Women
HIGHLANDS	***52***	***775***	***473***	***61,03%***
Ambatolampy	2	29	13	44,83%
Ambohibary	4	50	33	66,00%
Ambohipihaonana	1	6	3	50,00%
Ampitatafika	4	65	31	47,69%
Andranomanelatra	11	165	136	82,42%
Antanifotsy	10	101	44	43,56%
Antsoatany	12	214	120	56,07%
Morarano	1	12	6	50,00%
Sambaina	1	28	22	78,57%
Soamanandrariny	6	105	65	61,90%
MID - WEST	**21**	**253**	**122**	**48,22%**
Ambohimasina	10	140	80	57,14%
Ankazomiriotra	2	23	8	34,78%
Antohobe	1	30	11	36,67%
Fidirana	6	45	15	33,33%
Inanantonana	2	15	8	53,33%
Total of adopters	**73**	**1028**	**595**	**57,88%**

As part of the "**farmer to farmer**" approach adopted by the project, 73 training sessions were organized by the lead farmers in their respective areas of intervention. These trainings saw the participation of 1,028 farmers, including 595 women (57.9% of participants).

In short, 375 training sessions have been carried out by the leading farmers for the benefit of their peers since the start of the project. These made it possible to register the participation of 5,491 farmers; i.e. 110% the final objective of the project.

Table 32: Training of farmers carried since the start of the project

Training sessions	Previous achievements				Achievement in 2021				Cumulative achievements since the start of the project			
	Number of sessions	Number of participant	Number of Women	% Women	Number of sessions	Number of participant	Number of Women	% Women	Number of sessions	Number of participant	Number of Women	% Women
Training of adopters	302	4463	2007	44,97%	73	1 028	595	57,9%	**375**	**5 491**	**2 602**	**47,4%**

III.2.3 Train secondary school students in CSA

Table 33: Achievement on CSA training activity for secondary school students

	Planned Activities	Indicator	Project targets	Previous Achievement		Achievement in 2021		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
2.3.1	Make Diagnosis to select beneficiary schools	Number of diagnosis to select beneficiary schools	1	**1**	100%	**0**	0%	**1**	100%
		Number of selected schools	12	**12**	100%	**0**	0%	**12**	100%
2.3.2	Organize Events (Commitment charte event, Tools delivery)	Number of Event	2	**2**	100%	**0**	0%	**2**	100%
2.3.3	Organize Training for Ministry Branch (OEMC/DREMC/BEMC)	Number of session organized for training for Ministry Branch	1	**1**	100%	**0**	0%	**1**	100%
2.3.4	Organize Training for teachers (3 sessions of training in Vakinankaratra)	Number of session organized for training for teachers	3	**4**	133%	**0**	0%	**4**	133%
2.3.5	Training Tools (tarpauling, booklet, teacher guideline, langage-photo) - 6 new schools	Number of training tools pack	1	**3**	300%	**0**	0%	**3**	300%
2.3.6	Produce and edit Communication tools (tarpaulin, Roll up)	Number of communication tools pack	2	**1**	50%	**0**	0%	**1**	50%
2.3.7	Produce Film for communication	Number of film for communication produced	1	**0**	0%	**0**	0%	**0**	0%
2.3.8	Produce Cartoon strips for school children	Number of cartoon strips produced for school children	1	**1**	100%	**0**	0%	**1**	100%
2.3.9	Provide some kits and inputs for demonstration plot (Materials and tools, Teaching Tools, inputs) for 6 new school	Number of demonstration plot	12	**12**	100%	**12**	100%	**12**	100%
2.3.10	Accompany students in the implementation	Number of school children trained	6 000	**8 147**	136%	**3 234**	54%	**11 381**	190%
2.3.11	Organise competition of best school (demonstration plot and student knowledge)	Number of competition organized of best school	1	**0**	0%	**0**	0%	**0**	0%
2.3.12	Exchange visits between School	Number exchange visits between School	3	**18**	600%	**12**	400%	**30**	1000%
		Number of participants to the exchange visits between school	300	**506**	169%	**331**	110%	**837**	279%
2.3.13	Organize annual workshop (capitalisation, experiences exchange)	Number annual workshop days	3	**3**	100%	**0**	0%	**3**	100%
2.3.14	Car hiring for training, monitoring and other actions for secondary school	Number of car hiring days	60	**45**	75%	**18,0**	30%	**63**	105%

V.2.3.1. Accompany students in the implementation

The pupils in the 6th and 5th grade (and 4th for the CEG Ihazolava) are the targets of this approach. These students receive both theoretical classroom training and practical training on application plots. The teachers trained by GSDM and the OEMC are primarily responsible for these trainings. However, they receive support from the project technicians on activities at the level of the application plots.

Several CA systems have been installed on the application plots of the 12 schools supervised by the project. These application plots serve:

- First, as a place of practical training for students;
- demonstration plots for parents of students who meet regularly at school level; and visit these plots (they can thus assess the performance of the agroecological practices encountered by their children);

- dissemination tools for farmers around schools; and who were able to observe the systems developed there throughout the year.

Note that two school years follow one another during the year 2021: the school year 2020/2021 and 2021/2022. The following table summarizes the number of students who have benefited from the transfer of knowledge on the environment and agroecology since the start of the project

Table 34: Number of students trained

Etablissement	College Status	Cisco	Number of teachers trained in AE	Number of beneficiary students				
				2017/18	2018/19	2019/20	2020/21	2021/22
CEG Ihazolava	Public	Ambatolampy	4		160	212	323	348
CEG Ambohimandroso	Public	Antanifotsy	4		291	319	366	363
CEG Ampitatafika	Public	Antanifotsy	4		146	168	179	190
Lycée Privée Loterana - Antanifotsy	Privée	Antanifotsy	4		63	60	50	48
CEG Antsoatany	Public	Antsirabe II	4		122	172	223	171
CEG Tsaramasoandro - Antokofoana	Public	Betafo	4		176	169	247	247
Sub-total SCHOOLS MANITATRA			***24***	***0***	***958***	***1100***	***1388***	***1367***
CEG Vinany	Public	Mandoto	6	253	200	165	226	280
CEG Ankazomiriotra	Public	Mandoto	5	160	179	179	259	247
CEG Betafo	Public	Betafo	25	200	126	1181	879	879
CEG Annexe Alakamisy Anativato	Public	Betafo	3	164	177	174	238	238
Collège Privé AINA	Privée	Antsirabe II	3	60	57	58	49	60
CEG Vinaninkarena	Public	Antsirabe II	3	170	198	190	166	163
Sub-total SCHOOLS PAPAM			***45***	***1007***	***937***	***1947***	***1817***	***1867***
TOTAUX			**69**	**1007**	**1895**	**3047**	**3205**	**3234**

Thus, since the beginning of the project, **11,381 students** have benefited from this project to introduce agroecology in schools. This represents **190%** of the final objective of the project.

V.2.3.2. Organise competition of best school

This activity has been programmed during this year. Only the Covid-19 pandemic blocked the organization of this event.

V.2.3.3. Exchange visits between School

In 2021, each of the 12 schools supervised by the project carried out exchange visits in the project areas. Application plots and family farms adopting agroecological practices have been targeted to serve as a basis for discussions and exchanges between representatives of teachers, students and parents. In the Middle West, the GSDM training site in Ivory is also a preferred destination for these visits.

A total of 331 people including 193 Women (58.31%) were registered this year. That is, 837 visitors since the start of the project. This corresponds to 279% of the final objective. The participants in these visits are made up of students, parents of students, and teachers at the school level. These visits were an opportunity for students to observe the realities of farmers in the Region. They were thus able to appreciate the relevance of the agro-ecological practices that they are taught within the framework of this project.

Table 35: Exchange visits between schools carried out in 2021

Supervised schools	Number of sessions	Number of participants	Number of Women	% Women
HIGHLANDS	**7**	**190**	**122**	**64,21%**
CEG Ambohimandroso	1	27	19	70,37%
CEG Ampitatafika	1	27	13	48,15%
CEG Antsoatany	1	27	19	70,37%
CEG Ihazolava/Ambohipihaonana	1	27	22	81,48%
CEG Vinaninkarena	1	27	17	62,96%
Collège Privé AINA Vinaninkarena	1	25	14	56,00%
Lycée Privé Loterana Antanifotsy	1	30	18	60,00%
MID - WEST	**5**	**141**	**71**	**50,35%**
CEG Ankazomiriotra	1	25	11	44,00%
CEG Annexe Alakamisy Anativato	1	30	16	53,33%
CEG Betafo	1	28	17	60,71%

Supervised schools	Number of sessions	Number of participants	Number of Women	% Women
CEG Tsaramasoandro/Antokofoana	1	28	16	57,14%
CEG Vinany	1	30	11	36,67%
Overall total	**12**	**331**	**193**	**58,31%**

V.2.3.4. Evaluation des acquis et à la mise en place d'un axe de stratégie de pérennisation des activités entreprises au niveau des écoles encadrées

From October 11 to 16, 2021, a mission organized with a team from GSDM headquarters provided a small overview of the achievements at the level of the 12 schools supervised by the project. Indeed, we consulted with representatives of each school (teachers, students, parents of students) on :

- the changes observed at the level of each school following the completion of this project,
- the motivation of the schools to continue the actions related to the transfer of knowledge in environment and agroecology after the start of the project,
- any difficulties in sustaining these actions after the project

In general, each of the 12 supervised schools has seen a huge change brought about by this project.

For teachers:

- we found an extracurricular activity that really interests the students,
- the experiences acquired during this project will be very useful to enrich the discussions with the students,
- as they are also peasants. Notions on agroecology allow them to improve their farms; and to multiply points of reference in terms of agroecology for other farmers.
- …

For the students :

- This project opened their eyes to the continual degradation of the environment due to the actions of Man,
- the practices carried out at the level of the application plots at the school allowed them to assess the performance of agroecological practices despite climate change and the current strong degradation of the soil,
- agroecology is a very relevant solution to increase agricultural production and income. They tried, each in their own way, to educate their parents.
- …

For parents of students :

- at the beginning, it was difficult to take their children's word for various agroecological practices. Indeed, cultivating without plowing on crop residues goes completely against farming habits.
- the trigger was above all the visits to the crops at the level of the school's application plots.
- the adoption of these innovations in their farms caused mockery from neighbors at first. But once they saw a significant difference in crop fields (during the vegetative phase, adaptation to rain holes, resistance to pest pressures, and especially in terms of agricultural yield), they started to be taken seriously. They thus became leaders for their peers.
- …

For the establishment :

- with reforestation activities and the establishment of application plots, the school has become a green space.
- the application plots have become reference sites for the parents of pupils and the surrounding farmers.
- Products at the application plot level generate income to maintain the school, and set up other infrastructure.
- …

However, each of the supervised schools requested continued collaboration with GSDM on this subject. But, they remain motivated to continue activities related to the transfer of knowledge in agroecology and

environment to students if the project withdraws. Indeed, these activities have become good habits at school level, which should be continued. Moreover, they are of great interest to the pupils; and vocabularies specific to agroecology have become common language at school, especially during recess. The testimonies that follow make it possible to appreciate these motivations of everyone at the level of the establishments supervised by the project.

THE INTEREST BROUGHT BY THE STUDENTS IN THIS PROJECT HAS GREATLY EXCEEDED EXPECTATIONS

NOMENJANAHARY Mickaël

14 years old

Grade 8 at CEG Antsoatany

District Antsirabe II

VAKINANKARATRA Region

"Previously, our ancestors and even the generations of my parents, did agriculture with conventional practices with strong pressures on the environment, and in particular the soil; such as slash and burn crops, monocultures on ploughing, etc. And, Agroecology makes it possible to gradually restore the fertility of the soil. It makes it possible to increase production to aim, in addition to food self-sufficiency, the sale of agricultural products in order to improve our quality of life.

… I really enjoyed studying Agroecology at school. We also practiced it, for the first time, here at school. We immediately noticed that the yield is much higher. On a plot of one are, we obtained 57.5 kg of paddy. I convinced my parents of the relevance of these techniques. And, since I started studying agroecology in 5th grade, we hadn't plowed our tanetys. With my parents, we started by installing the Mucuna. And, this year, we put rainfed rice in it.

… Currently, the environment is very badly degraded. There is no more forest. And we continue to deforest. However, these remaining lots of forests should no longer be exploited; on the contrary, we must reforest! The rainfall is very random. The rain comes very early or too late. We also see heavy rain for a short time; and rain holes very harmful to agriculture. The solution to these problems is to practice agroecology and to insist much more on reforestation. If we really have to cut down a few feet of trees; they must be replaced.

So, for all Malagasy people, we can clearly see the degradation of the environment. We must organize ourselves and mobilize our forces to carry out reforestation and opt for agroecology for all our agricultural activities for more than substantial advantages"

RIANTSOA Pierrot Jean Gael

15 years old

Grade 9 CEG Ankazomiriotra

District Mandoto

VAKINANKARATRA Region

"I started studying agroecology in grade 6. At first, I told my parents what we do in class. They didn't believe me at all...! But one day, my father accompanied me to school; and asked me to show it our application plots. He was amazed by the good vegetation of rainfed rice, maize and other crops that we put in place. And he said it's really interesting... Since then, we've been practicing agroecology at home. We started with the production of compost and conservation agriculture (voly rakotra). We have extended the practice to other plots, and our rainfed rice yield is around 4T/ha each year. And, we have even developed other practices such as agroforestry.

Even though I am still small, with soil degradation, climate change, and other major constraints, I am convinced that the training on agroecology that I received would be useful to me. She helps me a lot so that I can direct my future. »

AGROECOLOGY HAS BEEN WELL IMPLEMENTED AT THE LEVEL OF PILOT SCHOOLS THROUGH ITS MULTIPLE POSITIVE IMPACTS

RINDRA Harimino Farasoa

Director of CEG Vinany

District Mandoto

VAKINANKARATRA Region

"This project has had many positive impacts for the schools. This has brought many clearly visible changes, especially for those who have seen and known the school before this collaboration with the project and GSDM.

Even if there will be no more project to accompany us, we have already agreed to continue. Whether it is the students, the teachers, and especially the parents of students who represent in a way the purpose of the project, we have all gained a few things with this project. Even if the project in its current form ends here, we will continue, because agroecology has become a full-fledged activity of the school. We will continue, both the transfer of knowledge with new students; and the establishment of application plots each year. Our goal is to train all students from this college on the notion of agroecology... this will make us stand out from other CEGs. It's too important! Currently, the soils here are very degraded. We must continue environmental education for the future generation... so that there will still be some things to inherit!"

AGROECOLOGY HAS BEEN WELL IMPLEMENTED AT THE LEVEL OF PILOT SCHOOLS THROUGH ITS MULTIPLE POSITIVE IMPACTS

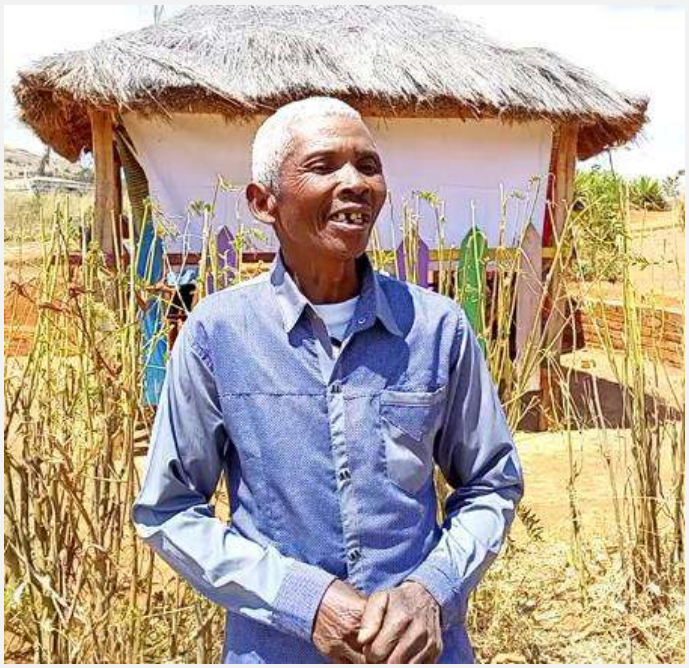
RAKOTONDRAVONY Jean Pierre

58 years old

Parent of student at CEG Antokofoana

District Betafo

VAKINANKARATRA Region



"I have a child in grade 7 here where he is studying agroecology. Arrived at home, the little one told me about this new activity in their school. He also showed me a small booklet summarizing these new agricultural practices.

…At first, I was very reluctant. I told him that even with deep plowing, the addition of organic elements, and several passages of Womans for weeding, it is difficult to produce these days. Cultivate without tillage; and in addition, by inserting other plants that will compete with rice, corn, and other food crops... it's a joke!

Immediately, the little one cries when I didn't follow him. To avoid this inconvenience, I granted him a small piece of land for his nonsense! Then I came to his school for a parent-teacher meeting. At the entrance to the establishment, he immediately pulled me towards a small, very green plot surrounded by quickset hedges. He looked at me; and told me to take good care of my crops in my own way… but that I would never have such good yields as the work of schoolchildren. I was left speechless by his audacity; but also by the quality of their plots.

…once I got home, I offered to work with me in the fields; and to bring me all these new practices that he studies at school. We have a plot that is on the edge of a busy little road. She was already very degraded. Last year, we installed Mucuna. This year, we plowed it more; and rainfed rice was put on vegetation residues. All passers-by are amazed by the quality of my upland rice. No passer-by passes by without asking questions: "but what is Ra-Jean Pierre doing with you"? I don't even have time to work! Moreover, this parcel, I had already left it for a few years for lack of fertility. And, there are many who know it. It's still normal if people are surprised by the vegetation of my rice! But I always tell them that conservation agriculture (voly rakotra), and agroecology in general, can restore soil fertility; and to produce despite the current random rainfall. So, ***I also raise awareness for the people around. And, I became a leader in agroecology in the village. »***

III.2.4 Organize training sessions targeting development actors such as farmer's organizations, NGO and services providers

Table 36: Achievement for training sessions on CSA for development actors

	Planned Activities	Indicator	Project targets	Previous Achievement		Achievement in 2021		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
2.4.1	Organize training sessions targeting development actors as farmers organizations, NGO, local service provider	Number of participants from development actor trained	60	**0**	0%	**20**	33%	**20**	33%
2.4.2	Organize exchange visit in the training sites of GSDM	Number of participants to exchange visit in the training sites of GSDM	2 400	**2 138**	89%	**1 162**	48%	**3 300**	138%
2.4.3	Car hiring during training sessions (6 days per session)	Number of car hiring days	18	**0**	0%	**6**	33%	**6**	33%

The organization of training sessions targeting development actors such as NGOs, local service providers was carried out from July 21 to 24, 2021 in the Vakinankaratra Region Meeting Room. Agents from the Vakinankaratra Region (14 people), Cœur de forêt (02), APDRA (02), and representatives of farmers' organizations members of FIFATA (02) are invited to take part in this training session. The first three days took place indoors with exchanges and sharing of experiences between each participant around agroecology. The last day was devoted to a visit to the farms supervised by the project on the RN 7 axis. This visit made it possible to reinforce the various themes developed during the classroom training.

In addition, the reception and facilitation of exchange visits to the agroecological sites supervised by GSDM (on the Antsirabe – Mandoto axis, on the Ivory site and some achievements of the Manitatra 2 project) made it possible to register 1,162 participants in 2021. These participants are made up of technicians, farmer trainers, seed farmers, nursery farmers, etc. Thus, since the start of the project, 3,300 visitors have passed through the GSDM training site in Ivory and plots supervised by MANITATRA 2 around the site. These represent 138% of the final objective of the project.

Picture 26 : Exchange visit of TFNAC members to the GSDM training site in Ivory

III.2.5 Involve regional Directorate of Meteorology in Climate Smart Agriculture Conservation Agriculture and Agroforestry

Table 37: Achievements for DGM involvement

	Planned Activities	Indicator	Project targets	Previous Achievement		Achievement in 2021		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
2.5.1	Organize Information/sensitization of local stakeholders	Number of local stakeholders sensitized on Climate change by regional Meteorology officer	3	**2**	67%	**1**	33%	**3**	100%
2.5.2	Organize Training workshop for local stakeholders	Number of training workshop session	3	**0**	0%	**7**	233%	**7**	233%
		Number of participants trained on Climate Change and information bulletins	75	**0**	0%	**75**	100%	**75**	100%
2.5.3	Provide regional Meteorological information bulletins (quarterly)	Number of information bulletins provided	800	**473**	59%	**280**	35%	**753**	94%
2.5.4	Provide per-diem for meteorological officer	Number of METEO officer man-day intervention	12	**20**	167%	**28**	233%	**48**	400%

In this context of climate change, the valorization of agrometeorological information is very important in order to adapt interventions in agricultural development. As a reminder, a collaboration agreement has been signed between the GSDM and the Regional Meteorological Service (branch of the Inter-Regional Direction of Transport, Tourism and Meteorology) in this direction. Thus, on April 14, a workshop on "Ocean, Weather and Climate" was organized in the meeting room of the Vakinankaratra Prefecture as part of the celebration of "World Meteorological Day". A total of 26 participants from CTDs and STDs in the Region took part in this event. Five presentations were made:

- Meteorology in Madagascar;
- The Water Cycle and the climate;
- The MANITATRA 2 Project in response to climate change and food insecurity;
- Climate variability and change in Madagascar;
- Malagasy topoclimatology declined at District level

Combined with the two workshops carried out during the first two years, we can say that the final objective of the project on this point has been achieved.

Then, during this year, 7 training courses on the use of agrometeorological data were carried out in the 2 project areas. Particular emphasis was placed on the method of interpretation of the quarterly bulletin designed within the framework of the agreement established with the Regional Meteorological Service Vakinankaratra. During these training sessions, 75 participants were registered.

Finally, the design and distribution of quarterly agro-meteorological bulletins is done regularly. During 2021, **280 newsletters** were distributed to individuals/rural development organizations. Which leads us to 753 newsletters designed and dispatched for this year; i.e. 94% of the objective for this year.

III.2.6 Involve the Ministry of Agriculture and livestock (MAEP) and Ministry of Environment and Forestry (MEDD) or regional directorates

Table 38: Achievements by involving MAEP and MEDD

	Planned Activities	Indicator	Project targets	Previous Achievement		Achievement of the Year 2021		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
2.6.1	Organize field collaboration and exchange by MPAE + MEDD	Number of mission	3	0,0	0%	0	0%	-	0%
2.6.2	Organize field collaboration and exchange by regional directorates (DRAEP + DREDD)	number of signed agreements	2	0,0	0%	2	100%	2	100%

At the end of this year 2021, agents from the DREDD and DRAE Vakinankaratra carried out monitoring missions in the 2 areas of the MANITATRA 2 project. For the DREDD, the mission consists of visiting a sample of reforested plots as part of the project. It lasted 7 days in total; i.e. a day's visit to each technician area of the project. The objective of this mission is to show DREDD agents an overview of the reforestation achievements of the project. It should be recalled that the village nurserymen, project service providers in the supply of young woody plants, were trained by DREDD agents. Thus, these field visits allow them to appreciate the quality of work of each nurseryman in the production of young forest plants.

For the DRAE, the objective of the mission as described in the project document being to monitor all the activities promoted by MANITATRA 2. This mission was very difficult to carry out. Indeed, in order to be able to appreciate in addition the capacities of the peasant leaders of the project, these field visits were organized as follows:

- Travel by car: fuel at the expense of the MANITATRA 2 project
- 2 agents from the central DRAE, a driver, and an agent in the District visited (or Circumscription) carry out these monitoring missions. The 2 agents of the central DRAE should carry out the entire mission in order to be able to assess with their personal criteria the capacity of the leading farmers of the project. For their part, agents at the District level also participate so that they can control the progress of the dissemination of agroecological practices in their area of intervention.

But, very often caught up in other activities, during this period of setting up seasonal crops, the availability of DRAE personnel greatly lengthened the completion of the mission. Field visits were very often postponed. Thus, DRAE agents were unable to follow up in the municipality of Fidirana. Indeed, by dint of postponing the mission each time, we arrive right in the middle of the rainy season. However, the road leading to the town of Fidirana being very degraded is no longer passable.

In short, following these field visits, it was planned to issue certificates for the deserving leading farmers and nurserymen according to the evaluation of the agents of the DREDD and DRAE Vakinankaratra. Then, an official presentation of these local service providers at the municipal and fokontany level would be organized at the beginning of 2022. The idea being:

- Make producers aware of the fact that these service providers have significant capacities (knowledge and experience) in the adoption of agroecological practices; and that they can ask them for help in the form of a benefit.
- To specify that the MANITATRA 2 project will withdraw. Thus, the GSDM will no longer be able to take charge of the provision of these resource persons. And that in the future, it would be up to the farmers who would need the expertise of the service providers to take care of it.

III.2.7 Participate to CSA integration into public policies

Table 39: Achievements on advocacy through workshop participation

	Planned Activities	Indicator	Project targets	Previous Achievement		Achievement of the Year 2021		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
2.7.1	Participate to workshops or meeting to advocate CSA (no cost)	Number of workshop on CSA in which the GSDM take part	3	**3**	100%	**0**	0%	**3**	100%
2.7.2	Participate to workshops or meeting on climate change to advocate CSA (no cost)	Number of workshop on climate change in which the GSDM take part	3	**1**	33%	**2**	67%	**3**	100%

During the 3rd Quarter of this year, the project participated in a regional fair "Showcase of Vakinankaratra", organized by FIOVA. A stand was set up to present the different agroecological practices promoted by the project. Two beneficiary farmers provided the presentation and some testimonials on the positive impacts of each practice. Moreover, as the questions that often come up are the availability of seeds and post-project technical support, we took advantage of this opportunity to promote the Leader Farmers. Indeed, the latter already have significant baggage, theoretical and practical, on the various agro-ecological practices adapted in the Region. In addition, as they supervised many farmers who benefited from the project; so they have important information about the different seeds available in their areas.

In addition, from August 04 to 08, 2021, the GSDM participated in the international rural economy fair ("Proud Mada"). A farmer supervised by MANITATRA 2, member of the FANILO Cooperative, represented the project.

III.3 Result 3: Farmer organizations are supported and linked to various stakeholders in Agriculture

III.3.1 Participate to sharing experiences at the regional level (COMESA and other regions) integrating political actors and development actors

Table 40: Awareness raising realized at the regional level

	Planned Activities	Indicator	Project targets	Previous Achievement		Achievement of the Year 2020		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
3.2.1	Organize exchange visits targeting policy makers, development actors (technicians) and farmers in COMESA and other regions	Number of exchange visits in COMESA and other regions	1	0,0	0%	0	0%	0	0%
		Number of exchange visits participants	5	0,0	0%	0	0%	0	0%

The organization of this exchange visit will depend on the evolution of the health crisis linked to Covid-19. But, being continually in doubt about the realization of this activity since the beginning of this crisis, we think that the related budget line would be better valued by supporting certain local actions, such as interventions at school level.

III.3.2 Support FOs to maintain continuous exchange with FDA and FDAR in order to make a link between farmers and agricultural services

Table 41: Activity for permanent link with FDA and FDAR

	Planned Activities	Indicator	Project targets	Previous Achievement		Achievement of the Year 2021		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
3.3.1	Ensure Permanent exchange with FDA (state promoted development device in national level) in order to make a link with government development orientations	Number of concerned FDA	1	**1**	100%	**0**	0%	**1**	100%
3.3.2	Ensure Permanent exchange with FDAR (state promoted development device in regional level) in order to make a link with government development orientation	Number of concerned FDAR	1	**1**	100%	**0**	0%	**1**	100%
		Number FOs benefiting finance from FDAR	90	**5**	6%	**20**	22%	**25**	28%

In result 1, the project adopts individualized support for farmers adopting agroecological practices. And, in terms of sustainability of its actions, the project proposed to put these farmers in contact with other technical and financial operators. The most appropriate approach is to group farmers according to their needs. The FDA is a device promoted by the State as a financial tool for the development of agricultural activities in the Region. Thus, with a view to this sustainability of the actions already implemented, the project has supported farmers' groups to set up and submit funding requests to the FDA. Since the beginning of the project, 141 applications integrating agroecology in each micro-project have been submitted to the FDA for funding. Among them, 83 requests were put together and submitted to the FDA during this year 2021. As a result, 5 and 20 micro-projects were funded by the FDA successively in 2020 and 2021.

Table 42: Microprojects funded by the FDA Vakinankaratra

N°	Name of project leader	District	Project title	Total project amount (Ar)	FDA Grant (Ar)	MANITATRA 2 grant (Ar)	Beneficial contribution (Ar)
1	NARINDRA	BETAFO	Sustainable rice-fish farming (in agroecology)	8 892 400	8 075 400		817 000
2	MITSIRY	BETAFO	Rainfed rice cultivation following agroecological practices	10 495 600	9 512 600		983 000
3	MAMIRATRA	BETAFO	Rainfed rice cultivation following agroecological practices	6 954 400	6 275 400		679 000
4	TANTSAHA MIAVOTRA	ANTSIRABE II	Sustainable rice-fish farming (in agroecology)	5 026 800	4 572 800		454 000

N°	Name of project leader	District	Project title	Total project amount (Ar)	FDA Grant (Ar)	MANITATRA 2 grant (Ar)	Beneficial contribution (Ar)
5	FITIA	ANTSIRABE II	Application of agroecology in dairy farming	16 318 100	15 428 600		889 500
Sub-total 2020				***47 687 300***	***43 864 800***	-	***3 822 500***
6	VEHIVAVY MIHARY	ANTSIRABE II	Acquisition of inputs and materials for the improvement of dairy farming techniques according to agroecological practices	11 770 600	11 124 000		646 600
7	MANANTENASOA	ANTSIRABE II	Acquisition of inputs and materials for the improvement of dairy farming techniques according to agroecological practices	11 770 600	11 124 000		646 600
8	SANDRATRA	ANTSIRABE II	Acquisition of inputs and materials for the improvement of "gasy" chicken breeding techniques according to agroecological practices	11 325 600	10 661 000		664 600
9	MIRINDRA	ANTSIRABE II	Acquisition of inputs and materials for the improvement of "gasy" chicken breeding techniques according to agroecological practices	11 888 600	10 661 000		1 227 600
10	FIOMBONANA	ANTSIRABE II	Acquisition of inputs and materials for the improvement of dairy farming techniques according to agroecological practices	11 770 600	11 124 000		646 600
11	FIAVOTANA	BETAFO	Acquisition of inputs and materials for the improvement of dairy farming techniques according to agroecological practices	18 663 100	17 729 000		934 100
12	AVOTRA MIRAY	BETAFO	Acquisition of inputs and materials for the improvement of dairy farming techniques according to agroecological practices	18 663 100	17 729 000		934 100
13	LOVASOA	BETAFO	Acquisition of inputs and materials for the improvement of fish fattening techniques in rice fields	11 496 400	10 411 400		1 085 000
14	COOPERATIVE FANILO	MANDOTO	Acquisition of materials (including the Stylosanthes roller) to improve rainfed rice techniques in CA	19 565 700	14 986 000	3 000 000	1 579 700
15	FANOITRA	ANTANIFOTSY	Acquisition of equipment and training for the improvement of production techniques in market gardening according to agroecological practices	14 239 600	12 970 000		1 269 600
16	FIAVANANTSOA	MANDOTO	Acquisition of materials (including the Stylosanthes roller) to improve rainfed rice techniques in CA	15 234 250	11 164 000	3 000 000	1 070 250
17	MANDRESY	BETAFO	Acquisition of materials (including the Stylosanthes roller) to improve rainfed rice techniques in CA	14 585 700	10 504 000	3 000 000	1 081 700
18	TANJONA	BETAFO	Acquisition of materials (including the Stylosanthes roller) to improve rainfed rice techniques in CA	12 995 700	9 073 000	3 000 000	922 700
19	FANEVA	BETAFO	Acquisition of equipment for the improvement of rainfed rice techniques in CA	5 313 100	4 826 000		487 100
20	FANILO	MANDOTO	Acquisition of materials and training in CA for the improvement of rainfed rice techniques in CA	15 182 950	13 817 000		1 365 950
21	FANIRY	MANDOTO	Acquisition of materials and training in CA for the improvement of rainfed rice techniques in CA	14 998 100	13 625 000		1 373 100
22	FANOITRA	ANTANIFOTSY	Acquisition of materials and training for the improvement of "gasy" chicken breeding techniques according to agroecological practices	14 082 600	12 827 000		1 255 600
23	FVOARANA	ANTANIFOTSY	Acquisition of equipment and training for the improvement of production techniques in market gardening according to agroecological practices	12 749 600	11 629 000		1 120 600
24	FIVOY	MANDOTO	Acquisition of materials and training for the improvement of "gasy" chicken breeding techniques according to agroecological practices	13 082 600	11 927 000		1 155 600
25	MIRAY	ANTANIFOTSY	Acquisition of equipment and training for the improvement of production techniques in market gardening according to agroecological practices	13 569 600	12 367 000		1 202 600
Sub-total 2021				***272 948 100***	***240 278 400***	***12 000 000***	***20 669 700***
TOTAL (en Ar)				**320 635 400**	**284 143 200**	**12 000 000**	**24 492 200**
TOTAL in € (conversion rate listed in the project document: 1€ = 3800Ar)				**84 378**	**74 775**	**3 158**	**6 445**

As a reminder, the main objective of these activities is to ensure that POs can benefit from the services of local service providers and agricultural services in general through the establishment of permanent links with the CSAs of the five (5) districts affected. by the project namely Antsirabe II, Antanifotsy, Ambatolampy, Betafo and Mandoto. This year, FDA Vakinankaratra, through funding from the European Union (FANDROSO project) and AFD (PAPAM project), funded 20 micro-projects set up by groups supervised by the project:

- 5 projects for the acquisition of inputs and materials for the improvement of dairy farming techniques according to agroecological practices;
- 4 projects for the acquisition of inputs and materials for the improvement of "gasy" chicken breeding techniques according to agroecological practices

- 1 project to improve rice-fish farming techniques with agroecological practices;
- 7 projects to improve rainfed rice production techniques with agroecological practices;
- and, 3 projects for the application of agroecological practices in the production market gardening.

Currently, the majority of donors no longer want to finance agricultural inputs. However, some service plants are not yet available in quantity in the Region. This further limits the scaling up of agroecology in this mechanism.

In short, the total cost of implementing these 25 micro-projects is €84,378, divided into:

- Vakinankaratra FDA funding: €74,775
- contribution of beneficiary FOs: €6,445

Thus, in relation to the financing scheme of the MANITATRA 2 project included in the project document; currently, we are successively at 150% of the funding planned for the FDA and 129% of the contribution of the beneficiaries.

Table 43: Financing scheme included in the MANITATRA 2 project document

Financing Plan	TOTAL funds (€)	COMESA/EU funding (€)	TAXES (€)	FDAR (€)	Contribution of beneficiaries in kind (€)
Forecast	821 090.01	727 271.27	38 816.52	50 000.00	5 000.00
Current situation	847 307,63	727 271,27	38 816,52	74 774,53	6 445,32
Completion rate	**103%**	**100%**	**100%**	**150%**	**129%**

NOTA BENE: Contribution of benefiaries are in cash instead of in kind

III.3.3 Ensure that the FOs obtain permanent utilization of the Agricultural Service Provider to make a link between the farmers and the agricultural services

Table 44: Number of concertation with CSA[2] realized during 2020

	Planned Activities	Indicator	Project targets	Previous Achievement		Achievement in 2021		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
3.4.1	Ensure Permanent utilization of CSA or Agricultural Service Center (state promoted development mechanism in District level) to make a link between farmers and agricultural service	Number of concerned CSA (Agricultural Service Center)	6	5,0	83%	0	0%	5	83%

The CSAs are no longer interfaces between FOs and their requests, to technical and financial partners. Currently, have become agricultural service providers, particularly at the level of FDA Vakinankaratra. Thus, the CSA/FDA development mechanism as described in the project document has changed.

[2] CSA : Agricultural Service Center

III.3.4 Support FOs on their collaborative contracting with various partners

Table 45: Activities for supporting collaborative contract with various partners

	Planned Activities	Indicator	Project targets	Previous Achievement		Achievement of the Year 2021		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
3.5.1	Built capacity of FOs on rice/fish ecosystem by contracting with APDRA	Support from APDRA (2 Years of support for technicians an lead farmers)	2	2	100%	0	0%	2	100%
3.5.2	Built capacity of FOs on dairy cattle and forages by contracting with FIFAMANOR	Support from FIFAMANOR (2 Years of support for technicians an lead farmers)	2	2	100%	0	0%	2	100%
3.5.5	Built capacity of FOs on Best practices, bio-pesticides and fruit trees by contracting with CEFFEL	Support from CEFFEL (2 Years of support for technicians an lead farmers	2	1	50%	0	0%	1	50%

The collaboration with the ATDRM within the framework of the promotion of rice-fish farming, and the FIFAMANOR on the improvement of milk production continued during this period. A last mission devoted to the realization of an assessment of the actions carried out was carried out by the ATDRM this year. In summary, 16 hatcheries have been set up; including 10 fish farmers who participated in the supply of fish to the rice growers supervised by the project. This year, there were 316 adopters in rice-fish farming. And, during this assessment mission, the ATDRM agents were able to observe an average weight of fish of 200g to 250g at the end of June.

In addition, on March 24 and 25, 2021, training on livestock management, fodder conservation, animal health, and breed improvement was carried out at the FIFAMANOR center. The 06 Technicians of the project and an Agronomist responsible for Agro-ecology in the collaboration between the GSDM.

Picture 27 : The Vakinankaratra FDA-funded Dairy Farming Improvement Micro-Project is progressing well in the Village of Ankofafa/CR Andranomanelatra

III.4 Communication and visibility

III.4.1 Visibility and communication events organization

Table 46: Achievements on visibility and communication events organization

	Planned Activities	Indicator	Project targets	Previous Achievement		Achievement in 2021		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
4.1.1	Organization of regional field days targeting government authorities and development actors	Number of regional field days	1	**1**	100%	**0**	0%	**1**	100%
		Number of participants (Authorities, donors, local stakeholders, lead farmers, researchers, development actors, unions farmer and journalist)	150	**167**	111%	**0**	0%	**167**	111%
4.1.2	Conception of other Communication tools as streamers, roll up and mass communication	Number of streamer	6	**3**	50%	**0**	0%	**3**	50%
		Number of roll up	6	**4**	67%	**0**	0%	**4**	67%
4.1.3	Car hiring for all communication and visibility action	Number of car hiring days	60	**32**	53%	**8**	13%	**40**	67%

Ces activités ont été réalisées durant la première année du projet.

III.4.2 Publications and broadcasting

Table 47: Communication activities related to publications and broadcasting

	Planned Activities	Indicator	Project targets	Previous Achievement		Achievement of the Year 2021		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
4.2.1	Broadcasting on national TV	Number of TV broadcasting	2	**7**	350%	**4**	200%	**11**	550%
4.2.2	Broadcasting on national Radio	Number of Radio broadcasting	30	**28**	93%	**12**	40%	**40**	133%
4.2.3	Expenses related to attendance of journalists or reporters in events for publication on TV or newspapers	Man-day of reporters (20 reporters x 5events)	120	**65**	54%	**0**	0%	**65**	54%
		Number of newspapers' publication	8	**15**	188%	**0**	0%	**15**	188%
		Number of publication type (online & social media)	2	**28**	1400%	**36**	1800%	**64**	3200 %
		Number of TV events broadcasting	6	**16**	267%	**0**	0%	**16**	267%
		Number of Radio events broadcasting	6	**11**	183%	**0**	0%	**11**	183%

This year, 4 technical films were produced as part of a collaboration with the E-see Magazine (TVM) team. Each film develops different agroecological practices:

- Conservation agriculture,
- Ricefish farming,
- Dairy farming,
- And, reforestationChacun de ces films ont été déjà diffusés l'émission E-see Magazine de la Télévision Nationale Malagasy (TVM).

Then, the FIVOHY program on the Malagasy National Radio (RNM) also participates in mass awareness on Agroecology, through reports and testimonies from various stakeholders. This program is broadcast monthly.

Afterwards, publications online and on social networks are carried out continuously by the GSDM communication team. Many publications are thus made on the Facebook Page and Account of the GSDM; among others:

- "Interregional exchange visit of parents of students and teachers of Boeny in Vakinankaratra" on the GSDM website
- Publication of the 4 films mentioned above, a film on the "days of agro-ecology in the South-East of Madagascar" and the cut-outs of the 3D animated film and three parts on the YouTube address of GSDM

The other publications are presented in the appendix. Note that the health crisis linked to the COVID-19 pandemic has limited the organization of various communication events during this period.

III.4.3 Documentaries conception and edition

Table 48: Activities of documentaries conception and edition

	Planned Activities	Indicator	Project targets	Previous Achievement		Achievement of the Year 2021		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
4.3.1	Edition documents and tools for technicians and farmers	Number of document and tools pack edited	1	2	200%	0	0%	2	200%
4.3.2	Editing of films for each project events	Number of films	5	6	120%	4	80%	10	200%
4.3.3	Capitalization leaflets	Number of capitalization leaflets	1	1	100%	1	100%	2	200%

As mentioned before, a film on "conservation agriculture", "rice-fish farming", dairy farming and "reforestation" was produced as part of a collaboration with the E-see team.

In addition, the project has developed, with GSDM partners, a specific journal on agroecology n°12. The link to this journal and the other editions are listed in the appendix.

III.5 Project administration (human and equipment)

III.5.1 PMU officials recruited

Table 49: PMU staff recruited

	Planned Activities	Indicator	Project targets	Previous Achievement		Achievement of the Year 2021		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
5.1.1	National Technical Assistant (Project Leader)	Months	33	**28**	83%	**12**	36%	**40**	120%
5.1.2	Assistant of project leader	Months	33	**27**	82%	**7**	21%	**34**	103%
5.1.3	Technician Agroecology (Highlands + Middle West) (6 technicians)	Months	198	**165**	83%	**72**	36%	**237**	120%

If we refer to the project document, the project management team should have stopped in August 2021. But, in order to ensure the proper implementation of certain activities at the end of the project, the 6 project technicians continued their services until December 2021.

In addition, this year was also marked by the death of SANDRATRINIAINA Rakotoasitera Rindra, Assistant to the MANITATRA 2 Project Manager. This was a very painful period for the GSDM, and in particular the MANITATRA 2 project team.

III.5.2 GSDM Backstopping fully implemented by his key staff

Table 50: GSDM backstopping

	Planned Activities	Indicator	Project targets	Previous Achievement		Achievement in 2021		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
5.2.1	Director (2 months per year)	Months	6	**5**	83%	**2,0**	33,3%	**7**	116,67%
5.2.2	Agronomist (2 months per year)	Months	6	**5**	83%	**2,0**	33,3%	**7**	116,67%
5.2.3	Trainers agronomists (2 months per year per trainer): 2 trainers (Martin and Hasina)	Months	12	**10**	83%	**4,0**	33,3%	**14**	116,67%
5.2.4	Agro economist (2 months per year)	Months	6	**5**	83%	**2,0**	33,3%	**7**	116,67%
5.2.5	Communication Officer (2 months per year)	Months	6	**5**	83%	**2,0**	33,3%	**7**	116,67%
5.2.6	Agronomist Vakinankaratra (2 months per year)	Months	6	**5**	83%	**2,0**	33,3%	**7**	116,67%

This year, backstopping was very disrupted by the Covid-19 crisis. For a while, it was impossible for the central GSDM team to come to Antsirabe. However, videoconference meetings have been multiplied in order to properly coordinate the actions carried out on the ground.

III.5.3 Local missions

Table 51: Per-diem for GSDM and project staff

	Planned Activities	Indicator	Project targets	Previous Achievement		Achievement in 2021		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
5.3.1	Per-diem for GSDM national staff	Days	600	**350**	58%	**103**	17%	**453**	76%
5.3.2	Per-diem for local staff	Days	300	**155**	52%	**26**	9%	**181**	60%

III.5.4 Mean and equipment implementation

Table 52: Mean and equipment

	Planned Activities	Indicator	Project targets	Previous Achievement		Achievement of the Year 2020		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
5.4.3	**Offices renting and communication**							-	
5.4.3.1	Regional office renting	month	36	**29**	81%	**12**	33%	**41**	114%
5.4.4	**Equipments**								
5.4.4.1	PC/laptop	Unit	4	**5**	125%	**0**	0%	**5**	125%
5.4.4.2	Printers/scanner/photocopiers	Unit	2	**2**	100%	**0**	0%	**2**	100%
5.4.4.3	Digital camera	Unit	2	**2**	100%	**0**	0%	**2**	100%
5.4.4.4	Video-projectors + screens	Unit	2	**2**	100%	**0**	0%	**2**	100%
5.4.4.5	Hard disks	Unit	1	**1**	100%	**0**	0%	**1**	100%
5.4.4.6	Other equipments (flat rate per technician)	Per technician	6	**6**	100%	**0**	0%	**6**	100%
5.4.4.7	Communication/courier and other coordination expenses	Unit	3	**4**	117%	**1**	33%	**5**	150%
5.4.5	**Spare parts for hard ware and other office machineries**							-	
5.4.5.1	Spares (hard ware, photocopiers etc.)	year	3	**3**	83%	**1**	33%	**4**	117%

III.6 Project oversight

III.6.1 Steering committee

Table 53: Steering committee planning

	Planned Activities	Indicator	Project targets	Previous Achievement		Achievement of the Year 2021		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
6.1.1	Steering committee establishment	Steering committee established	0	0	0%	0	0%	0	0%
6.1.2	Steering committee meetings to give strategic orientation and advice during all phases of the project	Number of steering committee meetings	1	1	100%	0	0%	1	100%

III.6.2 Monitoring and Evaluation of the project

Table 54: Monitoring and evaluation program

	Planned Activities	Indicator	Project targets	Previous Achievement		Achievement in 2021		Cumulative achievements	
				Achievement	%	Achievement	%	Achievement	%
6.2.1	Base line study through external expertise	One base line study	1	**1**	100%	**0**	0%	**1**	100%
6.2.2	Financial auditing	Financial auditing (one per year by COMESA)	3	**1**	33%	**0**	0%	**1**	33%
6.2.3	Bi-annual reportings	Semestrial report (1st : 1 per year)	3	**2**	67%	**1**	33%	**3**	100%
6.2.4	Annual reportings	Annual report (including semestrial 2 report)	3	**3**	100%	**0**	0%	**3**	100%
6.2.5	Mid-term evaluation through external expertise	One Mid-term evaluation	1	**1**	100%	**0**	0%	**1**	100%
6.2.6	Final evaluation through external expertise	One Final evaluation	1	**0**	0%	**0**	0%	**0**	0%
6.2.7	Car hiring for monitoring and evaluation	Number of car hiring days	90	**11**	12%	**21**	23%	**32**	36%

For the final evaluation of the project, the GSDM, after taking the necessary steps to comply with the procurement rules, commissioned the "Rivo Rabarijohn" consulting group. This group has already carried out surveys in certain areas of MANITATRA 2. A provisional report has already been submitted for review by GSDM Board. And, currently, this group of consultants is in the process of finalizing a final report on this study, taking into account the remarks and recommendations made during the previous validation meeting.

IV- LESSONS AND CHALLENGES

IV.1 Lessons learned from this year

Picture 28: With relatively low Cajanus biomasses, it is proposed to insert corn + food legumes for the next agricultural campaign

Then, in the majority of cases, whether in the Highlands or in the Middle West, “Farimaso” creeping cowpea gives a lot of biomass, but very little or no seeds. In the current state, this system is not suitable in the Region.

Picture 29: Good biomass of “Farimaso” cowpeas on the CEG Tsaramasoandro/Antokofoana application plots; but there was almost no seed production

Then, the forests of Cajanus cajan can also be used as green materials when taking over the plot with cassava in basket compost. This practice makes it possible to multiply by at least five the yield of cassava. However, the project has not yet released it. Indeed, without sufficient biomass, producers risk stripping the Tanety with this practice. This will only accentuate the degradation of the plots due to water erosion.

Moreover, as part of reforestation activities in the Vakinankaratra Highlands, it is better to shelter the young plants that have just been planted to protect them from frost. Liquidambar and Acacia mangium, which suffer a lot from frost, show slow growth in the Highlands. In addition, some farmers in the Middle West of Vakinankaratra have started planting Cassia siamea. It is a tree that grows very well in semi-dry areas. The growth of the tree is fast enough for the production of timber and firewood. It regenerates vigorously by “recépage”.

Finally, the broadcasts of technical films on Malagasy National Television have accentuated awareness-raising actions on agroecological practices. Indeed, since the broadcast of these films, many people have asked for information from the agents of GSDM and the MANITATRA 2 project (possibilities of technical support, supply of seeds, etc.). Sometimes, those interested come directly to certain peasants who appear in these films to obtain more information..

IV.2 Challenges

The problem of erosion is a good challenge in the Project area. If the contour farming and terracing have been practiced and well known in the Highland of Vakinankaratra, it is not the case in the Mid-West. Combined with Conservation Agriculture, hedgerow and reforestation, it is a big challenge to develop contour farming and hedgerows because most of the soils in the Mid-West are on steep slopes and therefore very sensitive to erosion. A lot of awareness risings need to be done in this area. Combined with the use of good quality manure, especially vermicompost, and good biomass, the project impact will be achieved in year 3.

Coaching farmers on the production of seeds for specific plants (cover crops and living hedges) is also a huge challenge for the project. Indeed, for the sustainability of the actions, the availability of these seeds on the spot constitutes a preponderant criterion. In addition, we observed many economic operators who came to prospect in the area to find seeds.

Thus, apart from its interests in the sustainability of project activities, seed production can also present itself as new sources of income for farmers.

Currently, people are beginning to have the habit of collecting Mucuna grains. Currently, the latter are very little attacked by insects or other pests. On the other hand, treatments are necessary to produce Cajanus cajan grains. These must begin as soon as the flower buds appear. At first, "*ady gasy"* (use of biocidal plants to spray against insects) should be prioritized; before resorting to chemical treatments. In the Middle West, the FANILO Cooperative brings together farmers who produce; collects and sells Stylosanthes seeds. Other organizations of this kind should also be set up in the other project areas. These farmer organizations present themselves as a relevant alternative to make the seeds of these service plants available in the Regions.

Picture 30: High seed production of Cajanus cajan from the second year

IV.3 Recommendations

Priority activities, but not carried out so far, require an extension of the project:

- Collection of data on CSA in strategic areas at the national level with a view to updating data on scaling up CSA and Good Agricultural Practices (GAPs) in the country;
- Training of DRAEs for updating this database
- Transfer of the MANAMORA database to the DRAEs
- The final evaluation of the project

Furthermore, the implementation of certain activities described in the project document may no longer be possible. Among them, there is the exchange visit outside Madagascar. The organization of this exchange visit will depend on the evolution of the health crisis linked to Covid-19. But, being continually in doubt about the possibility of carrying out this activity since the beginning of this crisis, we think that the related budget line would be better valued by supporting certain local actions, such as the strengthening of interventions at school level.

V- CONCLUSIONS

This report describes the activities implemented, the results obtained and the possible impacts within the framework of the MANITATRA 2 project in 2021. However, it also offers some overviews of the current situation in relation to the final objectives defined in the project document.

First of all, with a view to achieving **result 1** described in the project document, exchange visits were organized during this year. These contribute enormously to the scaling up of agroecological practices. Thus, at the end of this period, 2,058.7 ha of *tanety* are cultivated according to Conservation Agriculture systems. This represents 103% of the project objective. The farmers supported by the project on this theme are numbered at 4,378; including 1,812 Women (i.e. **41.4%).**

It should be noted that as part of a collaboration with the FDA Vakinankaratra, 4 FOs supervised by the project were able to acquire rollers of stylosanthes. This was made possible thanks to tripartite funding between the FOs, the FDA Vakinankaratra and MANITATRA 2. The contribution of the project is 3,000,000Ar per farmer organization.

Then, 728,468 seedlings produced by village nurseries were planted. 1,308 reforestation workers have been registered having benefited from the seedlings subsidized by the project; including 262 women (i.e. 20% of planters).

Afterwards, a total of 225,184 meters of anti-erosion devices were installed in the project intervention areas. This brings the anti-erosion devices installed since the start of the project to 1,309,039 linear meters; i.e. 131% of the final target set.

Then, the support and accompaniment of farmers on the practice of various composting continued during this period. We noticed that Vermicompost still continues to interest many farmers. This is due: to the quality of this organic fertilizer, and to the high cost of chemical fertilizers.

In addition, to fight against food insecurity, the project also offered support in improving milk production in the Region, and scaling up rice-fish farming. Thus, plant materials from fodder plants were made available to breeders supervised by the project. In addition, fish growers in rice fields have also benefited from subsidized fingerlings half caught by the project. In June 2021, after 5 months of breeding, we obtained an average weight of fish between 200g to 250g.

Finally, the collection of national data on agroecology is one of the project activities that will require an extension of the project implementation period compared to its duration initially planned in the project document (extension without additional cost).

Secondly, concerning **result 2** of the project, this period was marked by the organization of exchange visits for the benefit of pupils, parents of pupils and teachers at the level of the schools supervised by the project. Then, within the framework of the agreement established with the SRM Vakinankaratra, on April 14, a workshop on "the Ocean, the Weather and the Climate" was organized in the Meeting Room of the Prefecture of Vakinankaratra within the framework of the celebration of the "World Meteorological Day". In addition, 7 training sessions on the valorization of agrometeorological data were carried out in the 02 project areas. Particular emphasis was placed on the method of interpretation of the quarterly bulletin designed within the framework of the agreement established with the Regional Meteorological Service Vakinankaratra.

It should also be noted that the DREDD and the DRAE Vakinankaratra carried out field visits in the two project areas. DREDD agents monitored the project's reforestation plots. But they also evaluated the performance of nurseries in the production of woody seedlings. Similarly, the DRAE monitored the overall activities of MANITATRA 2. The DRAE agents responsible for this mission also assessed the capacity of the leading farmers of the project.

Thirdly, **on result 3** of the project, 141 FOs have been supported in order to put together requests for funding from the FDA Vakinankaratra since the start of the project. Among them, 25 micro-projects were funded by the FDA.

Then, on March 24 and 25, 2021, training on livestock management, fodder conservation, animal health, and breed improvement was carried out at the FIFAMANOR center. The 06 Technicians of the project and an Agronomist responsible for Agro-ecology in the collaboration between GSDM, ProSol and Cafpa Mahitsy. It should be noted that currently, the ATDRM and FIFAMANOR are in the process of monitoring and collecting data on their respective performance. Their final report consolidating their interventions and the achievements within the framework of our collaboration should be finalized at the start of the next Quarter.

Fourthly, during this year, 4 technical films were produced this year. These were produced as part of the collaboration with the E-see Magazine. These films were already broadcast on television Nationale Malagasy (TVM) et publiés en ligne sur le Compte Facebook, Page Facebook, et Compte YouTube du GSDM.

VI- APPENDIX

Appendix 1: Technical achievements compared to the project targets

Budget acc.	Expected Result / Planned Activities	Indicator	Project target	Previous achievements		Achievement of the Year 2021		Cumulative achievements		Remarks / Challenges
				Ach.	%	Ach.	%	Ach.	%	
1.	RESULT 1 : CSA and best practices are up scaled in two ecosystems of the VAKINANKARATRA region, covering the Highland and Middle West regions in Madagascar									
Activity 1.1	Conduct awareness raising, advocacy, exchanges visits and field days to facilitate experiences sharing and learning between beneficiaries									
1.1.1	Inception workshop	Number of workshop	1	**1**	100%	**0**	0	**1**	100%	
		Number of participant	120	**110**	92%	**0**	0	**110**	92%	
1.1.2	Exchanges visites between & inside communes	Number of participants in exchanges visits inside communes	8 000	**6 822**	85%	**4 293**	54%	**11 115**	139%	This year, 246 intra-communall exchange visits were carried out. A total of 4,293 participants benefited from these visits. And, among these participants, there were 2,055 women (or 47.9% of visitors). Thus, since the start of the project, 622 intra-communal exchange visits have been organised. A total of 11,115 participants, including 5,224 women (or 47%) were registered. With a 139% achievement rate, the target set in the project document has already been largely exceeded.
		Number of participants exchanges visits between commune	500	**1 030**	206%	**806**	161%	**1 836**	367%	During this year, 27 extra-communal exchange visits were carried out. There were 806 participants; including, farmers supervised by the project; farmer leaders of the project; members of CROA Vakinankaratra; FO representatives; local partners; and, representatives of local authorities. Among these visitors, there were 377 women (46.8% of the participants). In short, since the beginning of the project, we have organized 65 intercommunal exchange visits. A total of 1,836 visitors were registered, including 700 women (38.1% of total participants). This represents 367% of the final objective of the project.
	Awareness, Information and communication about project activities	Number of participants	7 000	**7 343**	105%	**512**	7%	**7 855**	112%	For this year, during the 17 meetings, 512 participants were registered, including 275 women (i.e. 53.7%). In summary, 257 information meetings and communications on project activities have been held since the start of the project. A total of 7,855 farmers, including 3,324 women (42.3%) took part. This gives us the achievement rate of 112% compared to the final objective of the project.
1.1.3	Car hiring and other expenses during awareness raising	Number of car hiring days	100	**55**	55%	**27**	27%	**82**	82%	

Budget acc.	Expected Result / Planned Activities	Indicator	Project target	Previous achievements		Achievement of the Year 2021		Cumulative achievements		Remarks / Challenges
				Ach.	%	Ach.	%	Ach.	%	
Activity 1.2	Upscale Conservation Agriculture to support the growing of up land rice and other crops									
1.2.1	Provides seeds of cover crops (mucuna, Stylosanthes, cowpea…)	Number of farmers provided seeds of cover crops	5 000	**6 008**	120%	**426**	9%	**6 434**	129%	In total, 426 new beneficiaries of cover crop seeds were registered in 2021. Compiling the achievements recorded since the start of the project, we arrive at 6,434 beneficiary farmers. This represents 129% of the final objective of the project.
		Acreage of full Conservation Agriculture (ha of CA)	2 000	**1 449,34**	72%	**609**	30%	**2 059**	103%	For the 2020/2021 agricultural campaign, Conservation Agriculture was practiced at the level of 2,058.7 ha in the two project areas. This represents 103% of the final objective of the project. In total, 4,378 producers, 41.4% of whom are women, were supported by the project on this practice.
1.2.2	Support for Stylosanthes rollers	Number group farmer provided Stylosanthes rollers	5	**0**	0%	**4**	80%	**4**	80%	As part of a collaboration with the FDA Vakinankaratra, 4 FOs supervised by the project received funding for the purchase of various agricultural materials, including the rollers of Stylosanthes.
Activity 1.3	Upscale agroforestry and forestation (equipment and seed support to nurseryman and adopting farmers)									
1.3.1	Support tree nurserimen (potting bags, other materials…)	Number of tree nursery man supported	50	**72**	144%	**47**	94%	**72**	144%	For this year, 47 nurserymen including 14 women (i.e. 30%) signed a collaboration agreement with the project for the production of woody seedlings: 29 nurserymen in the Middle West and 18 nurserymen in the Highlands.
1.3.2	Support adopting farmers in tree plantlets for reforestation (Acacia, Eucalyptus…)	Number of trees plantlets for reforestation	1 500 000	**1 652 402**	110%	**728 468**	49%	**2 380 870**	159%	This year, 728,468 forest seedlings have all been planted. It should be recalled that the final objective of the project in terms of reforestation has already been achieved in 2020 (during year 2 of the project). Only, we have seen the importance of this activity in this context of lack of forest cover in Madagascar. Thus, a budget reorganization was proposed with additional additions of tree plantations. This is why MANITATRA 2 was able to achieve 159% of the target set in the project document, by planting 2,380,870 tree seedlings. It should also be noted that this number of seedlings was limited by the available budget. Indeed, the needs of the peasants were far above it.
1.3.3	Support adopting farmers in fruit tree plantlets	Number of fruit plantlets of farmers adopting	50 000	**13 456**	27%	**2 978**	6%	**16 434**	33%	At the end of this year, the project facilitated the acquisition of 2,978 young fruit plants for supervised farmers. Combined with previous achievements, these only amount to 16,434 subsidized seedlings planted. This represents 33% of the final objective of the project.
1.3.4	Provide seeds of hedgerows (live hedge) (Cajanus, Tephrosia….)	Number of farmers provided seeds of hedgerows	6 500	**4 724**	73%	**328**	5%	**5 052**	78%	In 2021, 328 farmers were able to acquire live hedge seeds from the project. Add to the other beneficiaries of this type of seed since the beginning of the project, we arrive at 5,052 beneficiaries; i.e. 78% of the final objective of the project.

Budget acc.	Expected Result / Planned Activities	Indicator	Project target	Previous achievements		Achievement of the Year 2021		Cumulative achievements		Remarks / Challenges
				Ach.	%	Ach.	%	Ach.	%	
		length of hedgerow (linear meter)	1 000 000	**1 083 855**	108%	**225 184**	23%	**1 309 039**	131%	Since the start of the project, 1,309,039 linear meters of hedging and hedgerows have been put in place. This corresponds to 131% of the target set in the project document
Activity 1.4	**Promote other best practices (bio-pesticides and repellent plants, technology of composting, improved organic fertilizers, forages, species for food safety as orange flesh sweet potatoes..., regenerative income activity as vegetables...)**									
1.4.1	Provide seeds of mucuna, crotalaire, others plants used as bio-pesticides/repellent plants (based on the experiences of BVPI, GSDM, CEFFEL)	Number of farmers provided seeds of mucuna, crotalaire, others plants used as bio-pesticides/repellent plants	5 500	**4 764**	87%	**402**	7%	**5 166**	94%	In 2021, 402 farmers benefited from the plant materials of biocidal and/or repellent plants by the project. That is, 5,166 beneficiary farmers since the start of the project. This represents 94% of the project objective.
1.4.2	Provide worms for composting	Quantity of provided worms for composting (kg)	10	**10**	100%	**0**	0%	**10**	100%	Activity achieved in 2019.
		Number of swath (for composting)	250	**548**	219%	**160**	64%	**708**	283%	From January to December 2021, the project supervised 160 new vermicompost adopters. This gives a total of 708 adopters since the beginning of the project; i.e. 283% of the final target set.
	Compost 7 days	Number of swath	200	**115**	58%	**6**	3%	**121**	61%	For this year, the project has registered 6 new adopters in 7 days Compost; i.e. 121 producers supervised by the project since the start of the project.
	Compost 45 days	Number of swath	200	**187**	94%	**65**	33%	**252**	126%	In 2021, the project initiated 59 new adopters. Since the start of the project, 246 farms have been supported in the implementation of 45-day compost.
	Classic compost	Number of swath	600	**775**	129%	**86**	14%	**861**	144%	During this year, the project team supported 82 new adopters this year. And, since the beginning of the project, 857 farmers have adopted this practice under the supervision of the leading farmers.
	Liquid compost	Number of production units	250	**247**	99%	**56**	22%	**303**	121%	In 2021, 56 new farmers were introduced to this technique by the project team. Which gives us a total of 303 adopters since the beginning of the project.
1.4.3	Participate to improve cowsheds for quality manure and composting	Number of dairy farmers benefiting improved cowsheds for quality manure, for better of dairy cows and for composting	300	**158**	53%	**0**	0%	**158**	53%	At the end of this year, 82 breeders expressed a need for technical and financial support. And, currently, the project is in the process of contracting with these breeders.
1.4.4	Provide seeds of forage (grasses and legumes and off season forage...) and food safety plants (orange flesh potatoes) based on experiences of FIFAMANOR	Number farmers provided seeds of forage and food safety plants	2 000	**1 053**	53%	**510**	26%	**1 563**	78%	For this year, 510 farmers benefited from fodder seeds and/or orange-fleshed sweet potato vines. This brings the number of farmers who have benefited from these plant materials to 1,563 since the start of the project (i.e. 78% of the final objective).

Budget acc.	Expected Result / Planned Activities	Indicator	Project target	Previous achievements		Achievement of the Year 2021		Cumulative achievements		Remarks / Challenges
				Ach.	%	Ach.	%	Ach.	%	
1.4.5	Provide fry and other equipment for farmers for fish raising in the paddy field or in ponds (base on the experiences of APDRA and CIRAD)	Number of farmers provided equipment and fry for fish raising in the paddy field or in ponds	150	**316**	211%	**243**	162%	**559**	373%	A total of 243 rice growers were supervised by the project team in 2021. This brings the total number of farmers supported in the field of rice-fish farming during the implementation of the project to 559. With an average yield of 200g to 250g per fish, the impact on the income of adopting households is palpable. However, this activity faces various major constraints: rainfall and theft.
Activity 1.5	**Collect data on CSA in some strategic area at National level in a view to update data on upscaling of CSA and best practices in the Country**									
1.5.1	Contratc with a firm to conduct National survey in some strategic agro-écological areas	Number of national survey (with national data in CSA)	1	**0**	0%	**0**	0%	**0**	0%	For this activity, after taking the necessary steps to comply with the procurement rules, the project commissioned the "Rivo Rabarijohn" consulting group. This group has already carried out the surveys in certain areas of MANITATRA 2. It has already presented a provisional report to the Board od Directors GSDM. Various comments and recommendations were made during this validation meeting. And, currently, this group of consultants is in the process of finalizing the report of this study.
1.5.2	Integrate data in MANAMORA database - and include database improvement by contratcing with CIRAD	Number of contract with CIRAD expertise to integrate data in MANAMORA database	1	**0**	0%	**0**	0%	**0**	0%	These activities are among those that would require an extension of the project compared to its duration initially planned in the project document (extension without additional cost)
1.5.3	Train regional directorates of MAEP (DRAEP) in the use of the data base MANAMORA	Number of DRAE trained in the use of the data base MANAMORA	5	**0**	0%	**0**	0%	**0**	0%	
1.5.4	National database transfert to DRAE (Ministry regional branch)	One database transfered	1	**0**	0%	**0**	0%	**0**	0%	
Activity 1.6	**Purchase principal mean for upscaling activity**									
1.6.1	**Purchase of Equipments**									
1.6.1.1	Purchase of motorcycles	Number of motorcycle	8	**8**	100%	**0**	0%	**8**	100%	Activity already completed
1.6.1.2	Purchase of bicycles	Number of bicycles	50	**50**	100%	**0**	0%	**50**	100%	
1.6.2	**Fuel and repairs**									
1.6.2.1	Fuel and repairs (spare parts) for motorcycle	Number of Motorcycle use month	297	**216**	73%	**75**	25%	**291**	98%	activity carried out
1.6.2.2	Car hiring for field backstopping and monitoring (all CSA: CA, Agroforestry and best practices)	Number of car hiring days	90	**73**	81%	**41**	46%	**114**	127%	activity carried out

Budget acc.	Expected Result / Planned Activities	Indicator	Project target	Previous achievements		Achievement of the Year 2021		Cumulative achievements		Remarks / Challenges
				Ach.	%	Ach.	%	Ach.	%	
2.	RESULT 2 : Capacity of various stakeholders is built in Climate smart Agriculture Conservation Agriculture and Agroforestry									
Activity 2.1	Train nursymen in the technology of tree nurseries and in the choice of the appropriate tree species									
2.1.1	Train Nurserymen/women	Number of Nursery men/women trained	50	**72**	144%	**47**	94%	**72**	144%	As a reminder, for this reforestation campaign, the project worked with 47 nurseries (service providers) to produce young forest tree seedlings. The training of these nurserymen has already been carried out previously by the agents of the DREDD Vakinankaratra. In summary, 72 nurserymen have already collaborated with GSDM since the start of the project. That is 144% of the objective listed in the project document.
Activity 2.2	Train lead farmers and farmers in CSA (CA, agroforestry and forestation, other good practices)									
2.2.1	Train Lead farmers (by project Technicians and other stakeholders)	Number of Lead farmers	50	**84**	168%	**51**	102%	**84**	168%	It should be remembered that the lead farmers of the project received training from agronomists trainers from the GSDM, agents from the DRAE, technicians from CEFFEL and ATDRM. But in general, it is the technicians of the project who facilitate their interventions by carrying out retraining and individualized reorientations.
2.2.2	Support cost of farmers training by Lead farmers (Farmer to farmer approach, based on man-day spent on training of their peer farmers)	Intervention of Lead farmers (man-day)	12 600	**9 098**	72%	**2 751**	22%	**11 849**	94%	activity carried out
	Training of adopters	Number of participants	5 000	**4 463**	89%	**1 028**	21%	**5 491**	110%	As part of the "farmer to farmer" approach adopted by the project, 73 training sessions were organized by the lead farmers in their respective areas of intervention. These trainings saw the participation of 1,028 farmers, including 595 women (57.9% of participants). In short, 375 training sessions have been carried out by the lead farmers for the benefit of their peers since the start of the project. These made it possible to register the participation of 5,491 farmers; i.e. 110% the final objective of the project.
Activity 2.3	Train secondary school students in CSA (CA, Agroforestry and forestation, other good practices)									
2.3.1	Make Diagnosis to select beneficiary schools	Number of diagnosis to select beneficiary schools	1	**1**	100%	**0**	0%	**1**	100%	activity carried out
		Number of selected schools	12	**12**	100%	**0**	0%	**12**	100%	
2.3.2	Organize Events (Commitment charte event, Tools delivery)	Number of Event	2	**2**	100%	**0**	0%	**2**	100%	

Budget acc.	Expected Result / Planned Activities	Indicator	Project target	Previous achievements		Achievement of the Year 2021		Cumulative achievements		Remarks / Challenges
				Ach.	%	Ach.	%	Ach.	%	
2.3.3	Organize Training for Ministry Branch (OEMC/DREMC/BEMC)	Number of session organized for training for Ministry Branch	1	**1**	100%	**0**	0%	**1**	100%	
2.3.4	Organize Training for teachers (3 sessions of training in Vakinankaratra)	Number of session organized for training for teachers	3	**4**	133%	**0**	0%	**4**	133%	activity carried out
2.3.5	Training Tools (tarpauling, booklet, teacher guideline, langage-photo) - 6 new schools	Number of training tools pack	1	**3**	300%	**0**	0%	**3**	300%	activity carried out
2.3.6	Produce and edit Communication tools (tarpaulin, Roll up)	Number of communication tools pack	2	**1**	50%	**0**	0%	**1**	50%	activity carried out
2.3.7	Produce Film for communication	Number of film for communication produced	1	**0**	0%	**0**	0%	**0**	0%	activity carried out
2.3.8	Produce Cartoon strips for school children	Number of cartoon strips produced for school children	1	**1**	100%	**0**	0%	**1**	100%	activity carried out
2.3.9	Provide some kits and inputs for demonstration plot (Materials and tools, Teaching Tools, inputs) for 6 new school	Number of demostration plot	12	**12**	100%	**12**	100%	**12**	100%	For the 2021/2022 agricultural campaign, several CA systems have been installed on the application plots of the 12 schools supervised by the project. The students themselves carry out the work in the fields, under the supervision of the responsible teachers and project technicians.
2.3.10	Accompany students in the implementation	Number of school children trained	6 000	**8 147**	136%	**3 234**	54%	**11 381**	190%	It should be noted that two school years follow one another during the year 2021: the school year 2020/2021 and 2021/2022. The number of pupils benefiting from this project is therefore: * in 2020/2021 : 3205 students, * in 2021/2022: 3,234 students
2.3.11	Organise competition of best school (demonstration plot and student knowledge)	Number of competition organized of best school	1	**0**	0%	**0**	0%	**0**	0%	This activity has been programmed during this year. However, the Covid-19 pandemic blocked the organization of this event.
2.3.12	Exchange visits between School	Number exchange visits between School	3	**18**	600%	**12**	400%	**30**	1000%	Each of the 12 schools supervised by the project carried out exchange visits in the project areas. A total of 331 people including 193 women (58.31%) were registered this year. That is, 837 visitors since the start of the project. This corresponds to 279% of the final objective. The participants in these visits are made up of students, parents of students, and teachers at the school level.
		Number of participants to the exchange visits between school	300	**506**	169%	**331**	110%	**837**	279%	
2.3.13	Organize annual workshop (capitalisation, experiences exchange)	Number annual workshop days	3	**3**	100%	**0**	0%	**3**	100%	activity carried out

Budget acc.	Expected Result / Planned Activities	Indicator	Project target	Previous achievements		Achievement of the Year 2021		Cumulative achievements		Remarks / Challenges
				Ach.	%	Ach.	%	Ach.	%	
2.3.14	Car hiring for training, monitoring and other actions for secondary school	Number of car hiring days	60	**45**	75%	**18,0**	30%	**63**	105%	
Acivity 2.4.	**Organise training sessions targeting development actors such as farmers organisations, NGO and services providers**									
2.4.1	Organize training sessions targeting development actors as farmers organizations, NGO, local service provider	Number of participants from development actor trained	60	**0**	0%	**20**	33%	**20**	33%	The organization of training sessions targeting development actors such as NGOs, local service providers was carried out from July 21 to 24, 2021 in the Vakinankaratra Region Meeting Room. Agents from the Vakinankaratra Region (14 people), Cœur de forêt (02), APDRA (02), and representatives of farmers' organizations members of FIFATA (02) are invited to take part in this training session.
2.4.2	Organize exchange visit in the training sites of GSDM	Number of participants to exchange visit in the training sites of GSDM	2 400	**2 138**	89%	**1 162**	48%	**3 300**	138%	In addition, the reception and facilitation of exchange visits to the agroecological sites supervised by the GSDM (on the Antsirabe – Mandoto axis, on the Ivory site and some achievements of the Manitatra 2 project) made it possible to register 1162 participants in 2021. These participants are made up of technicians, farmer trainers, seed farmers, nursery farmers, etc. Thus, since the start of the project, 3,300 visitors have passed through the GSDM training site in Ivory and plots supervised by MANITATRA 2 around the site. These represent 138% of the final objective of the project.
2.4.3	Car hiring during training sessions (6 days per session)	Number of car hiring days	18	**0**	0%	**6**	33%	**6**	33%	
Activity 2.5	**Involve regional Directorate of Meteorology in Climate smart Agriculture Conservation Agriculture and Agroforestry**									
2.5.1	Organize Information/sensitization of local stakeholders	Number of local stakeholders sensitized on Climate change by regional Meteorology officer	3	**2**	67%	**1**	33%	**3**	100%	On April 14, a workshop on "Ocean, Weather and Climate" was organized in the Meeting Hall of Vakinankaratra Prefecture as part of the celebration of "World Meteorological Day". A total of 26 participants from CTDs and STDs in the Region took part in this event.
2.5.2	Organize Training workshop for local stakeholders	Number of training workshop session	3	**0**	0%	**7**	233%	**7**	233%	Then, during this year, 7 training courses on the use of agrometeorological data were carried out in the 2 project areas. Particular emphasis was placed on the method of interpretation of the quarterly bulletin designed within the framework of the agreement established with the Regional Service of Meteorology Vakinankaratra. During these training sessions, 75 participants were registered.
		Number of participants trained on Climate Change and information bulletins	75	**0**	0%	**75**	100%	**75**	100%	
2.5.3	Provide regional Meteorological information bulletins (quarterly)	Number of information bulletins provided	800	**473**	59%	**280**	35%	**753**	94%	Finally, the design and distribution of quarterly agro-meteorological bulletins is done regularly. During 2021, 280 newsletters were distributed to individuals/rural development organizations. Which leads us to 753 newsletters designed and dispatched for this year; i.e. 94% of the objective for this year.
2.5.4	Provide perdiem for meteorological officer	Number of METEO officer man-day intervention	12	**20**	167%	**28**	233%	**48**	400%	

Budget acc.	Expected Result / Planned Activities	Indicator	Project target	Previous achievements		Achievement of the Year 2021		Cumulative achievements		Remarks / Challenges
				Ach.	%	Ach.	%	Ach.	%	
Activity 2.6	Involve the Ministry of Agriculture and livestock (MPAE) and Ministry of Environment and Forestry (MEEF) or regional directorates									
2.6.1	Organize field collaboration and exchange by MPAE + MEEF	Number of mission	3	0	0%	0	0%	0	0%	
2.6.2	Organize field collaboration and exchange by regional directorates (DRAEP + DREDD)	number of signed agreements	2	2	100%	2	100%	2	100%	At the end of this year 2021, agents from the DREDD and DRAE Vakinankaratra carried out monitoring missions in the 2 areas of the MANITATRA 2 project.
Activity 2.7	Participate to CSA integration into public policies									
2.7.1	Participate to workshops or meeting to advocate CSA (no cost)	Number of worskshop on CSA in which the GSDM take part	3	3	100%	0	0%	3	100%	
2.7.2	Participate to workshops or meeting on climate change to advocate CSA (no cost)	Number of worskshopon climate change in which the GSDM take part	3	1	33%	2	67%	3	100%	This year, the project participated in a regional fair "Vitrine de Vakinankaratra", organized by FIVOY. A stand was set up to present the different agroecological practices promoted by the project. Two beneficiary farmers provided the presentation and some testimonials on the positive impacts of each practice. In addition, from August 04 to 08, 2021, the GSDM participated in the international rural economy fair ("FIER MADA"). A farmer supervised by MANITATRA 2, member of the FANILO Cooperative, represented the project.
3.	RESULT 3 : Farmers organisations are supported and linked to various stakeholers in the Agriculture to support sustainability of the project results									
Acivity 3.1.	Support FOs to participate in the development of National Action Plan for Climate Change as well as other Climate Change Frameworks									
3.1.1	Organize awareness raising on Climate Change targeting development actors as farmers organizations, NGO, local service provider	Number of session for awareness risins on climate change	3	0	0%	0	0%	0	0%	these activities have already been carried out by the GSDM, but within the framework of the PAPAM project
		Number of participants informed on Climate Change framework	90	0	0%	0	0%	0	0%	
3.1.2	Car hiring during training sessions (2 days per session)	Number of car hiring days	6	0	0%	0	0%	0	0%	
Activity 3.2	Participate to sharing experiences at the regional level (COMESA and other regions) integrating political actors and development actors									
3.2.1	Organize exchange visits targeting policy makers, development actors (technicians) and farmers in COMESA and other regions	Number of exchange visits in COMESA and other regions	1	0	0%	0	0%	0	0%	The organization of this exchange visit will depend on the evolution of the health crisis linked to Covid-19. But, being continually in doubt about the realization of this activity since the beginning of this crisis, we think that the related budget line would be better valued by supporting certain local actions, such as interventions at school level.
		Number of exchange visits participants	5	0	0%	0	0%	0	0%	

Budget acc.	Expected Result / Planned Activities	Indicator	Project target	Previous achievements		Achievement of the Year 2021		Cumulative achievements		Remarks / Challenges
				Ach.	%	Ach.	%	Ach.	%	
Acivity 3.3.	Support FOs to maintain continuous exchange with FDA and FDAR (state promoted development mechanisms in national level) in order to make a link between farmers and agricultural services									
3.3.1	Ensure Permanent exchange with FDA (state promoted development device in national level) in order to make a link with government development orientations	Number of concerned FDA	1	1	100%	0	0%	1	100%	
3.3.2	Ensure Permanent exchange with FDAR (state promoted development device in regional level) in order to make a link with government development orientation	Number of concerned FDAR	1	1	100%	0	0%	1	100%	Since the beginning of the project, 141 applications integrating agroecology in each micro-project have been submitted to the FDA for funding. Among them, 83 requests were put together and submitted to the FDA during this year 2021. As a result, 5 and 20 micro-projects were funded by the FDA successively in 2020 and 2021.
		Number FOs benefiting finance from FDAR	90	5	6%	20	22%	25	28%	
Acivity 3.4.	Ensure that the FOs obtain permanent utilization of the Agricultural Service Provider to make a link between the farmers and the agricultural services									
3.4.1	Ensure Permanent utilization of CSA or Agricultural Service Center (state promoted development mechanism in District level) to make a link between farmers and agricultural service	Number of concerned CSA (Agricultural Service Center)	6	5	83%	0	0%	5	83%	The CSAs (Agricultural Ag Centers) are no longer interfaces between FOs and their requests, to technical and financial partners. Currently, they become agricultural service providers, particularly at the level of FDA Vakinankaratra. Thus, the CSA/FDA development mechanism as described in the project document has changed.
Acivity 3.5.	Support FOs on their collaborative contracting with various partners such as APDRA, FIFAMANOR, CEFFEL, AVSF, AGRISUD and PAPAM in various interventions									
3.5.1	Built capacity of FOs on rice/fish ecosystem by contracting with APDRA	Support from APDRA (2 Years of support for technicians an lead farmers)	2	2	100%	0	0%	2	100%	The collaboration with the ATDRM within the framework of the promotion of rice-fish farming, and the FIFAMANOR on the improvement of milk production continued during this period. A last mission devoted to the realization of an assessment of the actions carried out was carried out by the ATDRM this year. In addition, on March 24 and 25, 2021, training on livestock management, fodder conservation, animal health, and breed improvement was carried out at the FIFAMANOR center. The 06 Technicians of the project and an Agronomist responsible for Agro-ecology in the collaboration between the GSDM.
3.5.2	Built capacity of FOs on dairy cattle and forages by contracting with FIFAMANOR	Support from FIFAMANOR (2 Years of support for tech-nicians an lead farmers)	2	2	100%	0	0%	2	100%	
3.5.5	Built capacity of FOs on Best practices, bio-pesticides and fruit trees by contracting with CEFFEL	Support from CEFFEL (2 Years of support for technicians an lead farmers	2	1	50%	0	0%	1	50%	

Budget acc.	Expected Result / Planned Activities	Indicator	Project target	Previous achievements		Achievement of the Year 2021		Cumulative achievements		Remarks / Challenges
				Ach.	%	Ach.	%	Ach.	%	
4.	COMMUNICATION AND VISIBILITY									
Acivity 4.1.	Visibility and communication events organization									
4.1.1	Organization of regional field days targeting government authorities and development actors	Number of regional field days	1	1	100%	0	0%	1	100%	activity carried out
		Number of participants (Authorities, donors, local stakeholders, lead farmers, researchers, development actors, unions farmer and journalist)	150	167	111%	0	0%	167	111%	
4.1.2	Conception of other Communication tools as streamers, roll up and mass communication	Number of streamer	6	3	50%	0	0%	3	50%	activity carried out
		Number of roll up	6	4	67%	0	0%	4	67%	
4.1.3	Car hiring for all communication and visibility action	Number of car hiring days	60	32	53%	8	13%	40	67%	
Acivity 4.2.	Publications and broadcasting									
4.2.1	Broadcasting on national TV	Number of TV broadcasting	2	7	350%	4	200%	11	550%	This year, 4 technical films were produced as part of a collaboration with the National Television programme E-see Magazine . Each film develops different agroecological practices: • Conservation agriculture, • Ricefish farming, • Dairy farming, • And, reforestation Each of these films have already been broadcast on the E-see Magazine program of the Malagasy National Television (TVM).
4.2.2	Broadcasting on national Radio	Number of Radio broadcasting	30	28	93%	12	40%	40	133%	Then, the FIVOHY program on the Malagasy National Radio (RNM) also participates in mass awareness on Agroecology, through reports and testimonies from various stakeholders. This program is broadcast monthly.
4.2.3	Expenses related to attendance of journalists or reproters in events for publication on TV or newspapers	Man-day of reporters (20 reporters x 5events)	120	65	54%	0	0%	65	54%	activity carried out
		Number of newspapers'publication	8	15	188%	0	0%	15	188%	activity carried out
		Number of publication type (online & social media)	2	28	1400%	36	1800%	64	3200%	The online publication of various documents relating to agroecology is done regularly by the Communication team of the GSDM.
		Number of TV events broadcasting	6	16	267%	0	0%	16	267%	activity carried out

Budget acc.	Expected Result / Planned Activities	Indicator	Project target	Previous achievements		Achievement of the Year 2021		Cumulative achievements		Remarks / Challenges
				Ach.	%	Ach.	%	Ach.	%	
		Number of Radio events broadcasting	6	**11**	183%	**0**	0%	**11**	183%	activity carried out
Acivity 4.3.	**Documentaries conception and edition**									
4.3.1	Edition documents and tools for techicians and farmers	Nomber of document and tools pack edited	1	**2**	200%	**0**	0%	**2**	200%	activity carried out
4.3.2	Editing of films for each project events	Number of films	5	**6**	120%	**4**	80%	**10**	200%	This year, 4 technical films were produced as part of a collaboration with the E-see Magazine (TVM) team. Each film develops different agroecological practices: conservation agriculture, rice-fish farming, dairy farming, and reforestation.
4.3.3	Capitalization leaflets	Number of capitalization leaflets	1	**1**	100%	**1**	100%	**2**	200%	In addition, the project has developed, with GSDM partners, a specific journal on agroecology n°12. The link to this journal and the other editions are listed in the appendix.
5.	**PROJECT ADMINISTRATION (HUMAN AND EQUIPEMENTS)**									
Acivity 5.1.	**PMU officials recruited**									
5.1.1	National Technical Assistant (Project Leader)	Months	33	**28**	83%	**12**	36%	**40**	120%	activity carried out
5.1.2	Assitant of project leader	Months	33	**27**	82%	**7**	21%	**34**	103%	
5.1.3	Technician Agroecology (Highland+Middle West) (6 technicians)	Months	198	**165**	83%	**72**	36%	**237**	120%	
Activity 5.2.	**GSDM Backstopping fully implemented by his key staff**									
5.2.1	Director (2 months per year)	Months	6	**5**	83%	**2,0**	33,3%	**7**	116,67%	activity carried out
5.2.2	Agronomist (2 months per year)	Months	6	**5**	83%	**2,0**	33,3%	**7**	116,67%	
5.2.3	Trainers agronomists (2 months per year per trainer): 2 trainers (Martin and Hasina)	Months	12	**10**	83%	**4,0**	33,3%	**14**	116,67%	
5.2.4	Agro economist (2 months per year)	Months	6	**5**	83%	**2,0**	33,3%	**7**	116,67%	
5.2.5	Communication Officer (2 months per year)	Months	6	**5**	83%	**2,0**	33,3%	**7**	116,67%	
5.2.6	Agronomist Vakinankaratra (2 months per year)	Months	6	**5**	83%	**2,0**	33,3%	**7**	116,67%	
Activity 5.3.	**Local missions**									

Budget acc.	Expected Result / Planned Activities	Indicator	Project target	Previous achievements		Achievement of the Year 2021		Cumulative achievements		Remarks / Challenges
				Ach.	%	Ach.	%	Ach.	%	
5.3.1	Per diem for GSDM national staff	Days	600	350	58%	103	17%	453	76%	Completed partially
5.3.2	Per diem for local staff	Days	300	155	52%	26	9%	181	60%	
Activity 5.4.	Mean and equipments implementation									
5.4.3	Offices renting and communication									
5.4.3.1	Regional office renting	month	36	29	81%	12	33%	41	114%	activity carried out
5.4.4	Equipments									
5.4.4.1	PC/laptop	Unit	4	5	125%	0	0%	5	125%	activity carried out
5.4.4.2	Printers/scanner/photocopiers	Unit	2	2	100%	0	0%	2	100%	
5.4.4.3	Digital camera	Unit	2	2	100%	0	0%	2	100%	
5.4.4.4	Videoprojectors + screens	Unit	2	2	100%	0	0%	2	100%	
5.4.4.5	Hard disks	Unit	1	1	100%	0	0%	1	100%	
5.4.4.6	Other equipments (flat rate per technician)	Per technician	6	6	100%	0	0%	6	100%	
5.4.4.7	Communication/courier and other coordination expenses	Unit	3	4	117%	1	33%	5	150%	activity carried out
5.4.5	Spare parts for hard ware and other office machineries									
5.4.5.1	Spares (hard ware, photocopiers etc.)	year	3	3	83%	1	33%	4	117%	activity carried out
6.	PPROJECT OVERSIGHT									
Acivity 6.1.	Steering committee									
6.1.1	Steering committee establishment	Steering comittee established	1	1	100%	0	0%	1	100%	activity carried out
6.1.2	Steering committee meetings to give strategic orientation and advice during all phases of the project	Number of steering comittee meetings	3	2	67%	0	0%	2	67%	
Acivity 6.2.	Monitoring and Evaluation of the project									
6.2.1	Base line study through external expertise	One base line study	1	1	100%	0	0%	1	100%	activity carried out
6.2.2	Financial auditing	Financial auditing (one per year by COMESA)	3	1	33%	0	0%	1	33%	Still tobe completed
6.2.3	Bi-annual reportings	Semestrial report (1st : 1 per year)	3	2	67%	1	33%	3	100%	activity carried out
6.2.4	Annual reportings	Annual report (including semestrial 2 report)	3	3	100%	0	0%	3	100%	activity carried out

Budget acc.	Expected Result / Planned Activities	Indicator	Project target	Previous achievements		Achievement of the Year 2021		Cumulative achievements		Remarks / Challenges
				Ach.	%	Ach.	%	Ach.	%	
6.2.5	Mid-term evaluation through external expertise	One Mid-term evaluation	1	**1**	100%	**0**	0%	**1**	100%	For this activity, after taking the necessary steps to comply with the procurement rules, the project commissioned the "Rivo Rabarijohn" consulting group. This group has already carried out the surveys in certain areas of MANITATRA 2. It has already presented a provisional report to the Board of Directors of GSDM. Various comments and recommendations were made during this validation meeting. And, currently, this group of consultants is in the process of finalizing the report of this study.
6.2.6	Final evaluation through external expertise	One Final evaluation	1	**0**	0%	**0**	0%	**0**	0%	
6.2.7	Car hiring for monitoring and evaluation	Number of car hiring days	90	**11**	12%	**21**	23%	**32**	36%	
Acivity 6.3.	**Project achievements capitalization**									
6.3.1	Project capitalization report	Number of capitalization report	1	**0**	0%	**0**	0%	**0**	0%	

Appendix 2 : Financial Performance

Budget acc.	Planned Activities	Budget (€) PROJECT DOC	Budget (€) PROJECT REALLOC	TOTAL ENGAGED € (JULY 18-SEPT 21)	TOTAL DISBURSED € (JULY 18-SEPT 21)	TOTAL DISBURSED EURO (OCT 21 - DEC 21)	TOTAL ENGAGED EURO (OCT 21 - DEC 21)	TOTAL DISBURSED € (JULY 18- DEC 21)	TOTAL ENGAGED EURO (JUL 18 - DEC 21)	% ENGAGED/ Budget Realloc	% DISBURSED / Budget Realloc
1.	RESULT 1 : CSA and best practices are up scaled in two ecosystems of the VAKINANKARATRA region, covering the Highland and Middle West regions in Madagascar	280 039,47	329 552,89	286 528,47	258 358,89	4 393,65	2 819,38	263 230,80	289 826,11	87,95%	79,88%
Activity 1.1	Conduct awareness raising, advocacy, exchanges visits and field days to facilitate experiences sharing and learning between beneficiaries	19 736,85	21 157,55	16 164,16	20 151,66	-	-	20 629,92	16 642,42	78,66%	97,51%
1.1.1	Inception workshop and other advocacys (TFP, journalists,…)	10 526,32	2 197,70	4 411,94	4 411,94	-	-	4 411,94	4 411,94	200,75%	200,75%
1.1.2	Exchanges visites between & inside communes	1 315,79	12 008,01	6 962,11	10 949,62	-	-	10 949,62	6 962,11	57,98%	91,19%
1.1.3	Car hiring and other expenses during awareness raising	7 894,74	6 951,84	4 790,10	4 790,10	-	-	5 268,36	5 268,36	75,78%	75,78%
Activity 1.2	Upscale Conservation Agriculture to support the growing of up land rice and other crops	26 315,79	46 037,48	35 084,35	37 050,40	2 643,17	2 643,17	39 693,58	37 727,53	81,95%	86,22%
1.2.1	Provides seeds of cover crops (mucuna, stylosanthes, cowpea…)	19 736,84	42 090,11	35 084,35	37 050,40	-	-	37 050,40	35 084,35	83,36%	88,03%
1.2.2	Support for Stylosanthes rollers	6 578,95	3 947,37	-	-	2 643,17	2 643,17	2 643,17	2 643,17	66,96%	66,96%

Budget acc.	Planned Activities	Budget (€) PROJECT DOC	Budget (€) PROJECT REALLOC	TOTAL ENGAGED € (JULY 18-SEPT 21)	TOTAL DISBURSED € (JULY 18-SEPT 21)	TOTAL DISBURSED EURO (OCT 21 - DEC 21)	TOTAL ENGAGED EURO (OCT 21 - DEC 21)	TOTAL DISBURSED € (JULY 18- DEC 21)	TOTAL ENGAGED EURO (JUL 18 - DEC 21)	% ENGAGED/ Budget Realloc	% DISBURSED / Budget Realloc
Activity 1.3	**Upscale agroforestry and forestation (equipement and seed support to nurseryman and adopting farmers)**	**113 552,63**	**123 242,07**	**125 629,40**	**109 972,43**	**-**	**-**	**109 972,43**	**125 629,40**	**101,94%**	**89,23%**
1.3.1	Support tree nurserimen (potting bags, other materials…)	7 894,74	1 339,04	1 170,24	1 167,99	-	-	1 167,99	1 170,24	87,39%	87,23%
1.3.2	Support adopting farmers in tree plantlets for reforestation (Acacia, Eucalyptus…)	78 947,37	109 896,51	116 290,61	100 662,69	-	-	100 662,69	116 290,61	105,82%	91,60%
1.3.3	Support adopting farmers in fruit plantlets	16 447,36	6 585,20	4 304,46	4 277,56	-	-	4 277,56	4 304,46	65,37%	64,96%
1.3.4	Provides seeds of hedgerow (Cajanus, Tephrosia…)	10 263,16	5 421,31	3 864,09	3 864,19	-	-	3 864,19	3 864,09	71,28%	71,28%
Activity 1.4	**Promote other best practices (bio-pesticides and repellent plants, technology of composting, improved organic fertilizers, forages, species for food safety as orange flesh sweet potatoes..., regenerative income activity as vegetables…)**	**27 421,05**	**29 378,54**	**20 501,71**	**20 501,75**	**-**	**-**	**20 501,75**	**20 501,71**	**69,78%**	**69,78%**
1.4.1	Provide seeds of mucuna, crotalaire, others plants used as bio-pesticides/repellent plants (based on the experiences of BVPI, GSDM, CEFFEL)	5 789,47	2 161,23	2 061,68	2 061,69	-	-	2 061,69	2 061,68	95,39%	95,39%
1.4.2	Provide worms for composting	1 052,63	1 024,49	1 024,49	1 024,49	-	-	1 024,49	1 024,49	100,00%	100,00%

Budget acc.	Planned Activities	Budget (€) PROJECT DOC	Budget (€) PROJECT REALLOC	TOTAL ENGAGED € (JULY 18-SEPT 21)	TOTAL DISBURSED € (JULY 18-SEPT 21)	TOTAL DISBURSED EURO (OCT 21 - DEC 21)	TOTAL ENGAGED EURO (OCT 21 - DEC 21)	TOTAL DISBURSED € (JULY 18- DEC 21)	TOTAL ENGAGED EURO (JUL 18 - DEC 21)	% ENGAGED/ Budget Realloc	% DISBURSED / Budget Realloc
1.4.3	Participate to improve cowsheds for quality manure and composting	7 894,74	13 895,58	5 346,58	5 346,58	-		5 346,58	5 346,58	38,48%	38,48%
1.4.4	Provide seeds of forage (grasses and legumes and off season forage…) and food safety plants (orange flesh potatoes) based on experiences of FIFAMANOR	10 315,79	9 928,82	10 101,21	10 101,23	-	-	10 101,23	10 101,21	101,74%	101,74%
1.4.5	Provide fry and other equipment for farmers for fish raising in the paddy field or in ponds (based on the experiences of APDRA and CIRAD)	2 368,42	2 368,42	1 967,75	1 967,77	-	-	1 967,77	1 967,75	83,08%	83,08%
Activity 1.5	**Collect data on CSA in some strategic area at National level in a view to update data on upscaling of CSA and best practices in the Country**	**39 000,00**	**40 052,63**	**20 851,17**	**6 255,35**	**-**	**-**	**6 255,35**	**20 851,17**	**52,06%**	**15,62%**
1.5.1	Contratc with a firm to conduct National survey in some strategic agro-écological areas	20 000,00	21 052,63	20 851,17	6 255,35	-	-	6 255,35	20 851,17	99,04%	29,71%
1.5.2	Integrate data in MANAMORA database - and include database improvement by contratcing with CIRAD	15 000,00	15 000,00	-	-	-	-	-	-	0,00%	0,00%
1.5.3	Train regional directorates of MPAE (DRAE) in the use of the data base MANAMORA		-	-	-	-	-	-	-		
1.5.4	National database transfert to DRAE (Ministry regional branch)	4 000,00	4 000,00	-	-	-	-	-	-	0,00%	0,00%

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Activity 1.6	Purchase principal mean for upscaling activity	54 013,15	69 684,62	68 297,68	64 427,29	1 750,48	176,21	66 177,77	68 473,89	98,26%	94,97%
1.6.1	Purchase of Equipments	25 000,00	26 318,53	26 318,53	26 318,53	-	-	26 318,53	26 318,53	100,00%	100,00%
1.6.1.1	Purchase of motorcycles	21 052,63	22 125,68	22 125,68	22 125,68	-	-	22 125,68	22 125,68	100,00%	100,00%
1.6.1.2	Purchase of bicycles	3 947,37	4 192,85	4 192,85	4 192,85	-	-	4 192,85	4 192,85	100,00%	100,00%
1.6.2	Fuel and repairs	29 013,15	43 366,09	41 979,15	38 108,76	1 750,48	176,21	39 859,24	42 155,36	97,21%	91,91%
1.6.2.1	Fuel and repairs (spare parts) for motorcycle	19 539,47	37 102,95	39 016,01	35 145,62	1 574,26	-	36 719,88	39 016,01	105,16%	98,97%
1.6.2.2	Car hiring for field backstopping and monitoring (all CSA : CA, Agroforestry and best practices)	9 473,68	6 263,14	2 963,14	2 963,14	176,21	176,21	3 139,35	3 139,35	50,12%	50,12%
2.	RESULT 2 : Capacity of various stakeholders is built in Climate smart Agriculture Conservation Agriculture and Agroforestry	103 022,11	88 857,87	86 441,96	77 497,66	1 621,26	644,38	79 118,92	87 086,34	98,01%	89,04%
Activity 2.1	Train nursymen in the technology of tree nurseries and in the choice of the appropriate tree species	2 302,63	-	-	-	-	-	-	-		
2.1.1	Train Nurserymen/women	2 302,63	-	-	-	-	-	-	-		
Activity 2.2	Train lead farmers and farmers in CSA (CA, agroforestry and forestation, other good practices)	33 157,89	32 827,94	31 947,38	30 821,48	-	-	30 821,48	31 947,38	97,32%	93,89%
2.2.1	Train Lead farmers (LF) by technicians and other stakeholders	-	1 769,06	1 776,56	1 769,06	-	-	1 769,06	1 776,56	100,42%	100,00%

Budget acc.	Planned Activities	Budget (€)	Budget (€)	TOTAL ENGAGED € (JULY 18-SEPT 21)	TOTAL DISBURSED € (JULY 18-SEPT 21)	TOTAL DISBURSED EURO (OCT 21 - DEC 21)	TOTAL ENGAGED EURO (OCT 21 - DEC 21)	TOTAL DISBURSED € (JULY 18- DEC 21)	TOTAL ENGAGED EURO (JUL 18 - DEC 21)	% ENGAGED/ Budget Realloc	% DISBURSED / Budget Realloc
		PROJECT DOC	PROJECT REALLOC								
2.2.2	Support cost of farmers training by Lead farmers (Farmer to farmer approach, based on man-day spent on training of their peer farmers)	33 157,89	31 058,88	30 170,82	29 052,41	-	-	29 052,41	30 170,82	97,14%	93,54%
Activity 2.3	**Train secondary school students in CSA (CA, Agroforestry and forestation, other good practices)**	**46 117,63**	**41 492,71**	**39 888,98**	**40 511,68**	**666,52**	**666,52**	**41 178,19**	**40 555,50**	**97,74%**	**99,24%**
2.3.1	Make Diagnosis to select beneficiary schools	185,26	150,92	150,92	150,92	-	-	150,92	150,92	100,00%	100,00%
2.3.2	Organize Events (Commitment charte event, Tools delivery)	370,53	2 033,74	2 033,72	2 033,74	-	-	2 033,74	2 033,72	100,00%	100,00%
2.3.3	Organize Training for Ministry Branch (OEMC/DREMC/BEMC)	131,58	355,13	355,12	355,13	-	-	355,13	355,12	100,00%	100,00%
2.3.4	Organize Training for teachers (3 sessions of training in Vakinankaratra)	5 292,63	2 676,91		2 676,91	-	-	2 676,91	2 676,91	100,00%	100,00%
2.3.5	Training Tools (tarpaulin, booklet, teacher guideline, langage-photo) - 6 new schools	3 806,05	8 012,29	7 621,99	7 305,39	-	-	7 305,39	7 621,99	95,13%	91,18%
2.3.6	Produce and edit Communication tools (tarpaulin, Roll up)	210,53	205,21	99,95	99,95	-	-	99,95	99,95	48,71%	48,71%
2.3.7	Produce Film for communication	3 684,21	487,26	487,26	487,26	-	-	487,26	487,26	100,00%	100,00%
2.3.8	Produce Cartoon strips for school children	10 000,00	17 491,25	17 491,25	18 430,56	-	-	18 430,56	17 491,25	100,00%	105,37%
2.3.9	Provide some kits and inputs for demonstration plot (Materials and tools, Teaching Tools, inputs) for 6 new school	3 857,89	1 525,09	1 282,64	1 282,64	402,20	402,20	1 684,84	1 684,84	110,47%	110,47%
2.3.10	Accompany students in the implementation	-	-	-	-	-	-	-	-		

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2.3.11	Organise competition of best school (demonstration plot and student knowledge)	421,05	526,32	-	-	-	-	-	-	0,00%	0,00%
2.3.12	Exchange visits between School	5 526,32	1 233,18	759,50	759,50	-	-	759,50	759,50	61,59%	61,59%
2.3.13	Organize annual workshop (capitalisation, experiences exchange)	6 315,79	3 106,22	3 343,51	3 343,51	-	-	3 343,51	3 343,51	107,64%	107,64%
2.3.14	Car hiring for training, monitoring and other actions fo secondary school	6 315,79	3 689,18	3 586,21	3 586,18	264,32	264,32	3 850,49	3 850,52	104,37%	104,37%
Activity 2.4.	**Organise training sessions targeting development actors such as farmers organisations, NGO and services providers**	**5 842,11**	**3 951,58**	**1 077,46**	**949,78**	**-**	**-**	**949,78**	**1 077,46**	**27,27%**	**24,04%**
2.4.1	Organize training sessions targeting development actors as farmers organizations, NGO, local service provider	3 947,37	2 631,58	712,19	627,80	-	-	627,80	712,19	27,06%	23,86%
2.4.2	Organize exchange visit in the training sites of GSDM		-	-	-	-	-	-	-		
2.4.3	Car hiring during training sessions (6 days per session)	1 894,74	1 320,00	365,27	321,98	-	-	321,98	365,27	27,67%	24,39%
Activity 2.5	**Involve regional Directorate of Meteorology in Climate smart Agriculture Conservation Agriculture and Agroforestry**	**7 707,11**	**2 690,91**	**7 721,24**	**1 684,48**	**-**	**-**	**1 684,48**	**7 721,24**	**286,94%**	**62,60%**
2.5.1	Organize Information/sensitization of local stakeholders	789,47	685,32	429,66	614,34	-	-	614,34	429,66	62,69%	89,64%
2.5.2	Organize Training workshop for local stakeholders	4 497,64	766,97	4 910,53	121,98	-	-	121,98	4 910,53	640,25%	15,90%

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2.5.3	Provide regional Meteorological information bulletins (quarterly)	421,05	748,72	1 073,68	579,20	-	-	579,20	1 073,68	143,40%	77,36%
2.5.4	Provide perdiem for meteorological officer	1 998,95	489,89	1 307,37	368,95	-	-	368,95	1 307,37	266,87%	75,31%
Activity 2.6	**Involve the Ministry of Agriculture and livestock (MPAE) and Ministry of Environment and Forestry (MEEF) or regional directorates**	**7 894,74**	**6 315,79**	**5 524,74**	**3 248,10**	**976,87**	**-**	**4 224,97**	**5 524,74**	**87,48%**	**66,90%**
2.6.1	Organize field collaboration and exchange by MPAE + MEEF	2 368,42	789,47	-	-	-	-	-	-	0,00%	0,00%
2.6.2	Organize field collaboration and exchange by regional directorates (DRAE + DREEF)	5 526,32	5 526,32	5 524,74	3 248,10	976,87	-	4 224,97	5 524,74	99,97%	76,45%
Activity 2.7	**Participate to CSA integration into public policies**	**-**	**1 578,95**	**282,16**	**282,16**	**- 22,14**	**- 22,14**	**260,02**	**260,02**	**16,47%**	**16,47%**
2.7.1	Participate to workshops or meeting to advocate CSA (no cost)		789,47	-	-	-	-	-	-	0,00%	0,00%
2.7.2	Participate to workshops or meeting on climate change to advocate CSA (no cost)		789,47	282,16	282,16	- 22,14	- 22,14	260,02	260,02	32,94%	32,94%
3.	**RESULT 3 : Farmers organisations are supported and linked to various stakeholers in the Agriculture to support sustainability of the project results**	**32 512,20**	**25 614,84**	**12 008,77**	**7 188,74**	**-**	**-**	**7 188,74**	**12 008,77**	**46,88%**	**28,06%**
Activity 3.1.	**Support FOs to participate in the development of National Action Plan for Climate Change as well as other Climate Change Frameworks**	**3 692,47**	**1 491,89**	**141,60**	**141,60**	**-**	**-**	**141,60**	**141,60**	**9,49%**	**9,49%**

Budget acc.	Planned Activities	Budget (€) PROJECT DOC	Budget (€) PROJECT REALLOC	TOTAL ENGAGED € (JULY 18-SEPT 21)	TOTAL DISBURSED € (JULY 18-SEPT 21)	TOTAL DISBURSED EURO (OCT 21 - DEC 21)	TOTAL ENGAGED EURO (OCT 21 - DEC 21)	TOTAL DISBURSED € (JULY 18- DEC 21)	TOTAL ENGAGED EURO (JUL 18 - DEC 21)	% ENGAGED/ Budget Realloc	% DISBURSED / Budget Realloc
3.1.1	Organize awareness raising on Climate Change targeting development actors as farmers organizations, NGO, local service provider	3 060,89	1 161,89	141,60	141,60	-	-	141,60	141,60	12,19%	12,19%
3.1.2	Car hiring during training sessions (2 days per session)	631,58	330,00	-	-	-	-	-	-	0,00%	0,00%
Activity 3.2	**Sharing experience at the regional level (COMESA and other regions) integrating political actors and development actors**	**9 161,84**	**11 478,26**	**-**	**-**	**-**	**-**	**-**	**-**	**0,00%**	**0,00%**
3.2.1	Organize exchange visits targeting policy makers, development actors (technicians) and farmers in COMESA and other regions	9 161,84	11 478,26	-	-	-	-	-	-	0,00%	0,00%
			-	-	-	-	-	-	-		
Activity 3.3.	**Support FOs to maintain continuous exchange with FDA and FDAR (state promoted development mechanisms in national level) in order to make a link between farmers and agricultural services**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**		
3.3.1	Ensure Permanent exchange with FDA (state promoted development device in national level) in order to make a link with government development orientations		-	-	-	-	-	-	-		

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3.3.2	Ensure Permanent exchange with FDAR (state promoted development device in regional level) in order to make a link with government development orientation		-	-	-	-	-	-	-		
Acivity 3.4.	**Ensure that the FOs obtain permanent utilization of the Agricultural Service Provider (state promoted development mecanisms in national level) to make a link between the farmers and the agricultural services**	**1 500,00**	**953,37**	**453,37**	**453,37**	**-**	**-**	**453,37**	**453,37**	**47,55%**	**47,55%**
3.4.1	Ensure Permanent utilization of CSA or Agricultural Service Center (state promoted development mechanism in District level) to make a link between farmers and agricultural service	1 500,00	953,37	453,37	453,37	-	-	453,37	453,37	47,55%	47,55%
Activity 3.5.	**Support FOs on their collaborative contracting with various partners such as APDRA, FIFAMANOR, CEFFEL, AVSF, AGRISUD and PAPAM in various interventions**	**18 157,89**	**11 691,31**	**11 413,80**	**6 593,77**	**-**	**-**	**6 593,77**	**11 413,80**	**97,63%**	**56,40%**
3.5.1	Built capacity of FOs on rice/fish ecosystem by contracting with APDRA	3 421,06	3 706,71	3 519,61	2 463,73	-	-	2 463,73	3 519,61	94,95%	66,47%
3.5.2	Built capacity of FOs on dairy cattle and forages by contracting with FIFAMANOR	5 263,16	6 159,77	6 069,35	2 305,20	-	-	2 305,20	6 069,35	98,53%	37,42%

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3.5.3	Built capacity of FOs on market gardening and livestock by contracting with AVSF (targeting mainly women)	3 157,89		-	-	-	-	-	-		
3.5.4	Built capacity of FOs on FFS School approach as developped by PAPAM project by AGRISUD	3 157,89		-	-	-	-	-	-		
3.5.5	Built capacity of FOs on Best practices, bio-pesticides and fruit trees by contracting with CEFFEL	3 157,89	1 824,84	1 824,84	1 824,84	-	-	1 824,84	1 824,84	100,00%	100,00%
4.	**COMMUNICATION AND VISIBILITY**	**50 235,86**	**36 807,93**	**24 902,08**	**27 758,89**	**6 520,85**	**6 256,53**	**34 279,74**	**30 808,79**	**83,70%**	**93,13%**
Acivity 4.1.	**Visibility and communication events organization**	**19 483,86**	**14 449,66**	**11 154,19**	**13 371,44**	**812,78**	**812,78**	**14 184,22**	**11 966,96**	**82,82%**	**98,16%**
4.1.1	Organization of regional field days targeting government authorities and development actors	12 493,43	6 633,50	4 692,00	6 909,36	-	-	6 909,36	4 692,00	70,73%	104,16%
4.1.2	Conception of other Communication tools as streamers, roll up and mass communication	168,66	2 610,71	2 686,92	2 686,92	-	-	2 686,92	2 686,92	102,92%	102,92%
		505,98	168,66	58,37	58,37	-	-	58,37	58,37	34,61%	34,61%
4.1.3	Car hiring for all communication and visibility action	6 315,79	5 036,79	3 716,89	3 716,79	812,78	812,78	4 529,57	4 529,67	89,93%	89,93%
Acivity 4.2.	**Publications and broadcasting**	**5 363,84**	**1 971,49**	**1 613,50**	**1 263,63**	**-**	**-**	**1 263,63**	**1 263,68**	**64,10%**	**64,10%**
4.2.1	Broadcasting on national TV	3 165,00	-		-	-		-	-		
4.2.2	Broadcasting on national Radio	999,47	-	-	-	-	-	-	-		
4.2.3	Expenses related to attendance of journalists or reproters in events for publication on TV or newspapers	1 199,37	399,79	-	-	-	-	-	-	0,00%	0,00%
		-	1 571,70	1 613,50	1 263,63	-	-	1 263,63	1 263,68	80,40%	80,40%

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		-	-	-	-	-	-	-	-		
		-	-	-	-	-	-	-	-		
Acivity 4.3.	**Documentaries conception and edition**	**25 388,16**	**20 386,78**	**12 134,40**	**13 123,82**	**5 708,07**	**5 443,75**	**18 831,89**	**17 578,15**	**86,22%**	**92,37%**
4.3.1	Edition documents and tools for techicians and farmers	2 368,42	4 163,57	5 403,83	5 403,83	-	-	5 403,83	5 403,83	129,79%	129,79%
4.3.2	Editing of films for each project events	12 493,42	5 696,89	6 268,07	7 257,49	264,32	-	7 521,81	6 268,07	110,03%	132,03%
4.3.3	Capitalization leaflets	10 526,32	10 526,32	462,49	462,49	5 443,75	5 443,75	5 906,25	5 906,25	56,11%	56,11%
5.	**PROJECT ADMINISTRATION (HUMAN AND EQUIPEMENTS)**	**168 093,87**	**165 057,26**	**155 683,84**	**154 763,00**	**14 011,85**	**13 225,42**	**168 774,85**	**168 909,26**	**102,33%**	**102,25%**
Activity 5.1.	**PMU officials recruited**	**89 447,37**	**92 515,31**	**86 457,28**	**85 712,10**	**7 770,52**	**7 770,52**	**93 482,62**	**94 227,81**	**101,85%**	**101,05%**
5.1.1	project Leader	21 710,53	22 685,71	21 485,84	21 578,22	2 299,56	2 299,56	23 877,78	23 785,40	104,85%	105,25%
5.1.2	Assitant of project leader	15 631,58	18 386,64	16 214,62	15 731,71	-	-	15 731,71	16 214,62	88,19%	85,56%
5.1.3	Technicians (Highland+Middle West) (6 technicians)	52 105,26	51 442,96	48 756,82	48 402,17	5 470,97	5 470,97	53 873,13	54 227,79	105,41%	104,72%
Activity 5.2.	**GSDM Backstopping fully implemented by his key staff**	**43 240,04**	**39 799,86**	**36 241,46**	**36 027,37**	**3 523,58**	**3 523,58**	**39 550,95**	**39 765,05**	**99,91%**	**99,37%**
5.2.1	Director (2 months per year)	11 126,53	11 076,79	10 684,50	10 580,17	1 034,77	1 034,77	11 614,94	11 719,27	105,80%	104,86%
5.2.2	Agronomist (2 months per year)	5 352,25	5 328,33	5 139,63	5 089,44	497,76	497,76	5 587,20	5 637,39	105,80%	104,86%
5.2.3	Trainers agronomists (2 months per year per trainer) : 2 trainers (Martin and Célestin)	10 704,51	7 409,76	5 139,63	5 089,44	497,76	497,76	5 587,20	5 637,39	76,08%	75,40%
5.2.4	Agro economist (2 months per year)	5 352,25	5 328,33	5 139,63	5 089,44	497,76	497,76	5 587,20	5 637,39	105,80%	104,86%

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		PROJECT DOC	PROJECT REALLOC								
5.2.5	Communication Officer (2 months per year)	5 352,25	5 328,33	4 998,46	5 089,44	497,76	497,76	5 587,20	5 496,22	103,15%	104,86%
5.2.6	Agronomist Vakinankaratra (2 months per year)	5 352,25	5 328,33	5 139,63	5 089,44	497,76	497,76	5 587,20	5 637,39	105,80%	104,86%
Activity 5.3.	**Local missions**	**15 789,48**	**10 845,85**	**8 781,82**	**8 033,19**	**1 689,03**	**1 689,03**	**9 722,22**	**10 470,85**	**96,54%**	**89,64%**
5.3.1	Per diem for GSDM national staff	11 842,11	8 095,37	6 551,30	5 982,59	1 241,23	1 241,23	7 223,82	7 792,53	96,26%	89,23%
5.3.2	Per diem for local staff	3 947,37	2 750,48	2 230,52	2 050,61	447,80	447,80	2 498,40	2 678,31	97,38%	90,84%
Activity 5.4.	**Mean and equipments implementation**	**19 616,98**	**21 896,25**	**24 203,27**	**24 990,34**	**1 028,72**	**242,29**	**26 019,06**	**24 445,56**	**111,64%**	**118,83%**
5.4.3	**Offices renting and communication**	**3 315,79**	**2 604,51**	**2 411,58**	**2 543,74**	**242,29**	**242,29**	**2 786,03**	**2 653,87**	**101,90%**	**106,97%**
5.4.3.1	Regional office renting	3 315,79	2 604,51	2 411,58	2 543,74	242,29	242,29	2 786,03	2 653,87	101,90%	106,97%
5.4.4	**Offices renting and communication**	**15 227,51**	**18 825,14**	**20 955,35**	**21 610,25**	**541,94**	**-**	**22 152,19**	**20 955,35**	**111,32%**	**117,67%**
5.4.4.1	PC/laptop	4 210,53	6 268,48	6 268,48	6 268,48	-	-	6 268,48	6 268,48	100,00%	100,00%
5.4.4.2	printers/scanner/photocopiers	552,63	604,38	604,39	604,38	-	-	604,38	604,39	100,00%	100,00%
5.4.4.3	Digital camera	947,37	852,10	852,02	852,10	-	-	852,10	852,02	99,99%	100,00%
5.4.4.4	videoprojectors + screens	2 105,26	1 405,72	1 405,80	1 405,72	-	-	1 405,72	1 405,80	100,01%	100,00%
5.4.4.5	hard disks	97,37	75,80	75,80	75,80	-	-	75,80	75,80	100,00%	100,00%
5.4.4.6	Other equipments (flat rate per technician)	552,63	993,97	1 347,54	1 012,71	-	-	1 012,71	1 347,54	135,57%	101,89%
5.4.4.7	Communication/courier and other coordination expenses	6 761,72	8 624,69	10 401,32	11 391,06	541,94	-	11 933,00	10 401,32	120,60%	138,36%

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5.4.5	**Spare parts for hard ware and other office machineries**	**1 073,68**	**466,59**	**836,34**	**836,34**	**244,49**	**-**	**1 080,84**	**836,34**	**179,24%**	**231,64%**
5.4.5.1	Spares (hard ware, photocopiers etc.)	1 073,68	466,59	836,34	836,34	244,49	-	1 080,84	836,34	179,24%	231,64%
6.	**PROJECT OVERSIGHT**	**45 789,27**	**37 583,60**	**37 391,77**	**27 031,98**	**9 923,46**	**1 982,38**	**36 955,44**	**39 374,15**	**104,76%**	**98,33%**
Activity 6.1.	**Steering committee**	**789,27**	**999,68**	**1 578,71**	**1 063,97**	**-**	**-**	**1 063,97**	**1 578,71**	157,92%	**106,43%**
6.1.1	Steering committee establishment		-	514,74	-	-	-	-	514,74		
6.1.2	Steering committee meetings to give strategic orientation and advice during all phases of the project	789,27	999,68	1 063,97	1 063,97	-	-	1 063,97	1 063,97	106,43%	106,43%
Activity 6.2.	**Monitoring and Evaluation of the project**	**45 000,00**	**34 616,21**	**34 570,63**	**24 725,59**	**9 491,74**	**1 550,66**	**34 217,33**	**36 121,29**	**104,35%**	**98,85%**
6.2.1	Base line study through external expertise	15 789,47	4 426,46	2 177,59	2 177,59	-	-	2 177,59	2 177,59	49,19%	49,19%
6.2.2	Financial auditing		-	-	303,02	-	-	303,02	-		
6.2.3	Bi-annual reportings		-	-	-	-	-	-	-		
6.2.4	Annual reportings		-	-	-	-	-	-	-		
6.2.5	Mid-term evaluation through external expertise	7 894,74	13 213,27	17 015,01	16 483,27	-	-	16 483,27	17 015,01	128,77%	124,75%
6.2.6	Final evaluation through external expertise	11 842,11	13 547,37	12 952,28	3 885,68	7 941,08	-	11 826,77	12 952,28	95,61%	87,30%
6.2.7	Car hiring for monitoring and evaluation	9 473,68	3 429,11	2 425,75	1 876,03	1 550,66	1 550,66	3 426,69	3 976,41	115,96%	99,93%
Activity 6.3.	**Project achievements capitalization**	**-**	**1 967,71**	**1 242,43**	**1 242,43**	**431,72**	**431,72**	**1 674,14**	**1 674,14**	**85,08%**	**85,08%**
6.3.1	Project capitalization report		1 967,71	1 242,43	1 242,43	431,72	431,72	1 674,14	1 674,14	85,08%	85,08%

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July 2018 to Sept 2021		679 692,79	683 474,40	602 956,88	552 599,16	36 471,06	24 928,10	589 548,48	628 013,42	91,89%	86,26%
7.2.1	Adminstrative charges	47 578,49	43 796,88	44 785,84	37 205,94	1 991,08	-	39 197,02	44 785,84	102,26%	89,50%
YEAR 3 TOTAL REALLOC BUDGET (EUROS)		727 271,28	727 271,28	647 742,72	589 805,10	38 462,14	24 928,10	628 745,50	672 799,26	92,51%	86,45%

Appendix 3: List and youtube links of films produced from 2016 to 2021

Le projet PAPAM et MANITATRA 2 a fait l'objet de production et de réalisation de 56 films durant les 5 dernières années. Il s'agit de film documentaire sur les différents thématiques proposés par le projet, mais aussi des films de capitalisation autours d'évènement spécifiques. D'une manière générale, les films sont produits en 2 ou 3 versions, notamment en version malagasy sous-titré en français et anglais ou en version malagasy sous-titré en anglais uniquement.

N°	Publication period	movie title	Connections
1	Avril 2016	GSDM Manitatra-Middle West	GSDM Manitatra-Middle West - YouTube
2	Avril 2016	GSDM Manitatra - South East	GSDM Manitatra - South East - YouTube
3	Avril 2017	Mission de Supervision du projet PAPAM	Mission de Supervision du projet PAPAM - YouTube
4	Juin 2017	GSDM - Visite des parcelles à Iavoloha - 2017	GSDM - Visite des parcelles à Iavoloha - 2017 - YouTube
5	Juin 2017	Remise premice de récolte IAVOLOHA _GSDM – Vitrine Iavoloha	GSDM - Iavoloha -2017 - YouTube
6	Mars 2018	L'Agroécologie pour les generations futures (ny fambolena maharitra ho an'ny taranaka mifandimby	l'agro-ecologie pour les generations futures (ny fambolena maharitra ho an'ny taranaka mifandimby) - youtube
7	Avril 2018	Journées Agroécologiques du Vakinankaratra, 12 et 13 Avril 2018	Journées Agro-écologies : Région Vakinankaratra 12 & 13 Avril 2018 - YouTube
8	Juin 2019	Ny Agroécologie mamerina ny tsiron'ny tany	NY AGRO-ECOLOGIE MAMERINA NY TSIRON'NY TANY - YouTube
9		Ny Agroécologie mamerina ny tsiron'ny tany, version française	VF Ny Agro écologie mamerina ny tsiron'ny tany - YouTube
10		Ny Agro écologie mamerina ny tsiron'ny tany, version anglaise	VA Ny Agro écologie mamerina ny tsiron'ny tany - YouTube
11		Témoignage enseignants bilan école PAPAM et MANITATRA 2	Témoignage enseignants bilan école PAPAM et MANITATRA 2 - YouTube

N°	Publication period	movie title	Connections
12	Décembre 2019	Témoignages écoliers bilan école PAPAM et MANITATRA 2	Témoignage écoliers bilan école PAPAM et MANITATRA 2 - YouTube
13		Témoignages parents d'élèves bilan école Vakinankaratra	Témoignage parents d'élèves bilan école Vakinankaratra - YouTube
14		Témoignages des intervenants mise en œuvre de l'intégration de l'Agro écologie en milieu scolaire	Témoignage des intervenants mise en oeuvre de l'intégration de l'Agro écologie en milieu scolaire - YouTube
15		Démarche de mise en place des cultures au niveau des parcelles d'application	Démarche de mise en place des cultures au niveau des parcelles d'application - YouTube
16	Mars 2020	L' AGRO-ECOLOGIE POUR RESTAURER LA FERTILITÉ DES SOLS (VF) - VERSION COURTE	L' AGRO-ECOLOGIE POUR RESTAURER LA FERTILITÉ DES SOLS (VF) - VERSION COURTE - YouTube
17	Avril 2020	Journées Agroécologiques du Vakinankaratra, version malgache	2 ROA ANDRO HO AN'NY AGRO ECOLOGIE VM - YouTube
18		Journées Agroécologiques du Vakinankaratra, version française	JOURNEES AGRO ECOLOGIQUES DU VAKINANKARATRA MARS 2020 - YouTube
19		Field days for agro ecology in vakinankaratra march 2020	**VII- FIELD DAYS FOR AGRO ECOLOGY IN VAKINANKARATRA MARCH 2020 - YOUTUBE**
20		Technique de fabrication du lombricompost, version malgache	FAMOKARANA ZEZIKA KANKANA - YouTube
21		Technique de fabrication du lombricompost, version française	TECHNIQUE DE FABRICATION DU LOMBRICOMPOST - YouTube
22		Production of lombricompost, version anglaise	PRODUCTION OF LOMBRICOMPOST - YouTube

N°	Publication period	movie title	Connections
23	Juin 2020	ADY GASY Iarovana ny voly, version malagasy	ADY GASY Iarovana ny voly - YouTube
24		Le ADY GASY ou lutte biologique pour prévenir les maladies et les insectes, version française	VIII- LE ADY GASY OU LUTTE BIOLOGIQUE POUR PREVENIR LES MALADIES ET LES INSECTES. - YOUTUBE
25		The ADY GASY to prevent pests and diseases. (Ny Ady Gasy iarovana ny voly), version anglaise	The Ady Gasy to prevent pests and diseases. (Ny Ady Gasy iarovana ny voly) - YouTube
26		Reboiser pour les générations futures, version malgache	Mamboly hazo ho an'ny taranaka mifandimby. - YouTube
27		Reboiser pour les générations futures, version française	Reboiser pour les générations futures - YouTube
28		Reforesting for the future Generations, version anglaise	Reforesting for the future Generations. - YouTube
29		Ny voly rakotra anatsarana ny nofon-tany, version malagasy	Ny voly rakotra anatsarana ny nofon-tany. - YouTube
30		L'agriculture de Conservation pour fertiliser les sols, version française	IX- L'AGRICULTURE DE CONSERVATION POUR FERTILISER LES SOLS. - YOUTUBE
31		Conservation agriculture as a sustainable measure for soil fertility, version anglaise	Conservation agriculture as a sustainable measure for soil fertility. - YouTube
32	Juillet 2020	fambolena Maharitra amin'ny tanety sy tanimbary saro-drano aty Alaotra. GSDM	fambolena Maharitra amin'ny tanety sy tanimbary saro-drano aty Alaotra. GSDM - YouTube

N°	Publication period	movie title	Connections
33	Octobre 2020	Sary miaina 3D" Ny fambolena maharitra ho an'ny taranaka mifandimby ", version Malagasy	Sary miaina 3D" Ny fambolena maharitra ho an'ny taranaka mifandimby " - YouTube
34		Dessin animé 3D " L'Agro-écologie pour les générations future ", version française	Dessin animé 3D " L'Agro-écologie pour les générations future " - YouTube
35		Cartoon 3D " Agroecology for future generations", version anglaise	Cartoon 3D " Agroecology for future generations" - YouTube
36	Février 2021	Sary miaina 3D "Ny tontolo iainana miatrika ny fiovan'ny toetr'andro", version Malagasy, episode 1	Sary miaina 3D "Ny tontolo iainana miatrika ny fiovan'ny toetr'andro" - YouTube
37		Dessin animé 3D "L'environnement face au changement climatique", version française, épisode 1	Dessin animé 3D "L'environnement face au changement climatique" - YouTube
38		Cartoon 3D "The environment facing climate change", version anglaise, épisode 1	Cartoon 3D "The environment facing climate change" - YouTube
39		Sary miaina 3D "Ireo teknikam-pambolena mampaharitra ny famokarana", version Malagasy, episode 2	Sary miaina 3D "Ireo teknikam-pambolena mampaharitra ny famokarana" - YouTube
40		Dessin animé 3D "Les bonnes pratiques agricoles face à l'agriculture durable", version française, épisode 2	Dessin animé 3D "Les bonnes pratiques agricoles face à l'agriculture durable" - YouTube
41		Cartoon 3D "Best practices towards sustainable agriculture", version anglaise, épisode 2 :	Cartoon 3D "Best practices towards sustainable agriculture" - YouTube

N°	Publication period	movie title	Connections
42		Sary miaina 3D "Ny fomba fambolena miatrika ny fiovan'ny toetr'andro", version Malagasy, episode 3	X- SARY MIAINA 3D "NY FOMBA FAMBOLENA MIATRIKA NY FIOVAN'NY TOETR'ANDRO" - YOUTUBE
43		Dessin animé 3D "Les pratiques Agro écologiques face au changement climatique", version française, épisode 3	XI- DESSIN ANIME 3D "LES PRATIQUES AGRO ECOLOGIQUES FACE AU CHANGEMENT CLIMATIQUE" - YOUTUBE
44		Cartoon 3D " Agro-ecological practices facing climate change", version anglaise,épisode 3 :	Cartoon 3D " Agro-ecological practices facing climate change" - YouTube
45	Mars 2020	Roa andro ho an'ny fambolena maharitra Faritra Atsimo Atsinanana. Novambra 2020	Roa andro ho an'ny fambolena maharitra Faritra Atsimo Atsinanana. Novambra 2020. - YouTube
46		Journées Agro-écologiques du Sud-Est. Novembre 2020	Journées Agro-écologiques du Sud-Est. Novembre 2020 - YouTube
47	Septembre 2021	Roa andro ho an'ny fambolena maharitra Faritra Alaotra Mangoro Aogositra 2021	Roa andro ho an'ny fambolena maharitra Faritra Alaotra Mangoro Aogositra 2021 - YouTube
48		Journées Agroécologiques, Région Alaotra-Mangoro. Août 2021	Journées Agroécologiques, Région Alaotra-Mangoro. Août 2021 - YouTube
49		Fiompiana Omby vavy be ronono: Fampifandraisana ny fiompiana sy ny fambolena, version Malagasy	Fiompiana Omby vavy be ronono: Fampifandraisana ny fiompiana sy ny fambolena. - YouTube

N°	Publication period	movie title	Connections
50	Novembre 2021	MILK DAIRY COW BREEDING, version anglaise	MILK DAIRY COW BREEDING - YouTube
51		Fiompiana trondro antanimbary: Fampifandraisana ny fambolena sy ny fiompiana, version malagasy	Fiompiana trondro antanimbary: Fampifandraisana ny fambolena sy ny fiompiana. - YouTube
52		Rice fish farming, version anglaise	RICE FISH FARMING - YouTube
53		Mamboly hazo ho an'ny taranaka mifandimby_version complète	MAMBOLY HAZO HO AN'NY TARANAKA MIFANDIMBY version complète - YouTube
54		Reforestation, version anglaise	REFORESTATION - YouTube
55	Décembre 2021	Capitalisation en AE du projet PAPAM, version Française	1 CAPITALISATION DU PROJET PAPAM SSTTR VF DEC 2021 - YouTube
56		Capitalisation ae du projet PAPAM, version malagasy	CAPITALISATION AE DU PROJET PAPAM VM - YouTube

Appendix 4: List and youtube links of films produced from 2016 to 2021

4 posts in the GSDM Facebook account (MANITATRA II post)

24 juillet 2021 : Projet Manitatra 2: après la formation, les cadres et techniciens de la Région, APDRA, COEUR DE Forêt, FIFATA/VFTV ont bénéficié d'une visite d'échange dans la région de Vakinankaratra: Mateloina, un exemple de système de culture au Moyen ouest et Andranomanelatra. Lien cliquer ici

04 août 2021 : FIER MADA 22ème édition : Liana amin'ireo tombontsoa azo avy amin'ny fampiasana ireo teknika Agroecologique ireo mpitsidika. Manasa antsika hitsidika ny tranoheva, ireo tantsaha avy any Vakinankaratra, Alaotra, Atsimo Atsinanana ary ny ekipan'i Agroécologie Gsdm dia vonona handray sy hamaly ny fanotaniana avy aminareo. Lien : ici

04 août 2021 : Le GSDM pleure la disparition de leur collègue et ami Rindra, Paix à son âme. Lien : ici

06 août 2021 : Manasa antsika rehetra hanjoy ny fandaharana E-see magasine TVM ny Alahady 8 Aogositra amin'ny 6 Ora hariva : "Mamboly hazo ho an'ny taranaka mifandimby" Lien : ici

06 août 2021 : Émission E-see magazine du 08 Août 2021 : le GSDM Agroécologie Gsdm vous donne Rendez-vous ce dimanche à 18h : “Reboiser pour les générations futures”. Lien : ici

12 août 2021 : Ny GSDM ***Professionnels de l'Agroécologie*** dia faly manolotra anao ny horonantsary mitondra ny lohanteny " Fiompiana omby vavy be ronono"
Araho finaritra tompoko. Lien : ici

12 août 2021 : Ny GSDM ***Professionnels de l'Agroécologie*** dia faly manolotra anao ny horonantsary mitondra ny lohanteny " Fiompiana omby vavy be ronono"
Araho finaritra tompoko. Lien : ici

12 août 2021 : Ny GSDM ***Professionnels de l'Agroécologie*** dia faly manolotra anao ny horonantsary mitondra ny lohanteny " Fiompiana omby vavy be ronono"
Araho finaritra tompoko. Lien : ici

12 août 2021 : Ny GSDM ***Professionnels de l'Agroécologie*** dia faly manolotra anao ny horonantsary mitondra ny lohanteny " Miompy trondro ho famenon'ny voly vary"
Araho finaritra tompoko. Lien : ici

12 août 2021 : Ny GSDM ***Professionnels de l'Agroécologie*** dia faly manolotra anao ny horonantsary mitondra ny lohanteny " Miompy trondro ho famenon'ny voly vary"
Agroécologie Gsdm
Araho finaritra tompoko. Lien : ici

17 août 2021 : Ny GSDM Agroécologie Gsdm dia faly manolotra anao horonantsary mitondra ny lohateny "MAMBOLY HAZO HO AN'NY TARANAKA MIFANDIMBY_version complète".
Araho finaritra Tompoko. Lien : ici

06 septembre 2021 : Le GSDM ***Professionnels de l'Agroécologie*** vous invite à découvrir un film documentaire sous-titré en Anglais "**Dairy cow breeding**" ou "**Fiompiana ombivavy be ronono**".
Bonne découverte. Lien : ici

06 septembre 2021 : Le GSDM ***Professionnels de l'Agroécologie*** vous invite à découvrir un film documentaire sous-titré en Anglais "**Reforesting for the future generations**" ou "**Mamboly hazo hoan'ny taranaka mifandimby** " version complète.
Bonne découverte. Lien : ici

06 septembre 2021 : Le GSDM ***Professionnels de l'Agroécologie*** vous invite à découvrir un film documentaire sous-titré en Anglais "**Rice fish farming**" ou "**Miompy trondro ho famenon'ny voly vary** ".
Bonne découverte. Lien : ici

Oct 2021:

- Jour 1: mission de suivi école Vakinankaratra et inventaire des immobilisations du Agroécologie Gsdm . Concertation et réflexion avec les parties prenantes, en vue de la pérennisation des acquis : ici
- Jour 2: mission de suivi école Vakinankaratra et inventaire des immobilisations du Agroécologie Gsdm . Concertation et réflexion avec les parties prenantes, en vue de la pérennisation des acquis : ici
- Jour 3: mission de suivi école Vakinankaratra et inventaire des immobilisations du Agroécologie Gsdm . Concertation et réflexion avec les parties prenantes, en vue de la pérennisation des acquis : ici
- Jour 4: mission de suivi école Vakinankaratra et inventaire des immobilisations du Agroécologie Gsdm . Concertation et réflexion avec les parties prenantes, en vue de la pérennisation des acquis : ici

Dec 2021: Bonjour à tous et à toutes,Pour large diffusion, le GSDM vous invite à découvrir l'édition N°12, spéciale recherche et développement du Journal de l'Agroécologie.Merci de visiter le site web et le Bibliothèque numérique du GSDM Bonne découverte : ici

09 publications in the Facebook page of GSDM (Publication MANITATRA II) / from July 01 to September 15, 2021

04 août : Le GSDM pleure la disparition de leur collègue et ami Rindra, Paix à son âme. Lien : ici

06 août 2021 : Manasa antsika rehetra hanjoy ny fandaharana E-see magasine TVM ny Alahady 8 Aogositra amin'ny 6 Ora hariva : "Mamboly hazo ho an'ny taranaka mifandimby" Lien : ici

12 août 2021 : Ny GSDM ***Professionnels de l'Agroécologie*** dia faly manolotra anao ny horonantsary mitondra ny lohanteny " Fiompiana omby vavy be ronono"
Agroécologie Gsdm
Araho finaritra tompoko. Lien : ici

12 août 2021 : Ny GSDM ***Professionnels de l'Agroécologie*** dia faly manolotra anao ny horonantsary mitondra ny lohanteny " Fiompiana omby vavy be ronono"
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Agroécologie Gsdm
Araho finaritra tompoko. Lien : ici

19 août 2021 : Ny GSDM Agroécologie Gsdm dia faly manolotra anao horonantsary mitondra ny lohateny "MAMBOLY HAZO HO AN'NY TARANAKA MIFANDIMBY_version complète".
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Bonne découverte. Lien :ici

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Bonne découverte. Lien :ici

Oct 2021:

- Jour 1: mission de suivi école Vakinankaratra et inventaire des immobilisations du Agroécologie Gsdm . Concertation et réflexion avec les parties prenantes, en vue de la pérennisation des acquis : ici
- Jour 2: mission de suivi école Vakinankaratra et inventaire des immobilisations du Agroécologie Gsdm . Concertation et réflexion avec les parties prenantes, en vue de la pérennisation des acquis : ici

- Jour 3: mission de suivi école Vakinankaratra et inventaire des immobilisations du Agroécologie Gsdm . Concertation et réflexion avec les parties prenantes, en vue de la pérennisation des acquis : ici
- Jour 4: mission de suivi école Vakinankaratra et inventaire des immobilisations du Agroécologie Gsdm . Concertation et réflexion avec les parties prenantes, en vue de la pérennisation des acquis : ici

Dec 2021: Bonjour à tous et à toutes,Pour large diffusion, le GSDM vous invite à découvrir l'édition N°12, spéciale recherche et développement du Journal de l'Agroécologie.Merci de visiter le site web et le Bibliothèque numérique du GSDM Bonne découverte : ici

Appendix 5: List of editions of the journalof agroecology

Le Journal de l'Agroécologie a fait l'objet de 12 éditions à raison de 2 à 3 éditions annuelle depuis l'année 2017. Initialement, il a été conçu en tant que magazine interactif en ligne. L'objectif étant de partager à large diffusion, via les NTIC les actualités sur l'Agroécologie. Cependant, quelques exemplaires ont été imprimés à chaque édition pour les principaux acteurs, partenaires techniques et financiers et archives. L'impression de l'édition 0 à 8 a été réalisée au travers du projet PAPAM, tandis que l'édition 9 à 12 au travers du projet MANITATRA 2.

Publication date	title	Link
06/12/21	Journal of Agroecology edition 12, special research and development	http://open-library.cirad.fr/files/6/2477__JAE_ASPECIAL_Inn_pour_mise_en_page_VF__compressed.pdf
11/06/21	Journal of Agroecology edition 11	http://open-library.cirad.fr/files/6/2466__JAE_11.pdf
14/10/20	Journal of Agroecology edition n°10	http://open-library.cirad.fr/files/6/2434__JAE10_VF_compressed.pdf
08/04/20	Journal of Agroecology edition n°9	http://open-library.cirad.fr/files/6/2397__JAE_9__VF_compressed.pdf
11/11/19	Journal of Agroecology edition n°8	http://open-library.cirad.fr/files/6/2388__JAE_8_VF_sur_site.pdf
24/06/19	Journal of Agroecology edition n°7 October to December 2018	http://open-library.cirad.fr/files/6/2385__JAE_N°7.pdf
04/01/19	ournal of Agroecology edition n°6 July to September 2018	open-library.cirad.fr/files/6/2377__JOURNAL_GSDM_web.pdf
31/08/18	Journal of Agroecology edition n°5 March to June 2018	open-library.cirad.fr/files/6/2371__Journal_de_l'Agro-ecologie_n°5_-_edition_mars_a_juin_2018.pdf
13/07/18	Journal of Agroecology edition n°4 January to March 2018	open-library.cirad.fr/files/6/2368__Journal_de_l'Agro-ecologie_N°4_du_GSDM.pdf
22/02/18	ournal of Agroecology edition n°3 October to December 2017	open-library.cirad.fr/files/6/2346__Journal_AE_n°3_-_edition_octobre_a_decembre_2017.pdf

08/11/17	Journal of Agroecology n°2	open-library.cirad.fr/files/6/2328_Journal_AE_N°2_edition_juillet_a_septembre_2017.pdf
13/07/17	Journal of Agroecology edition N°1 April to June	open-library.cirad.fr/files/6/2320_Journal_de_l'Agro-ecologie_n°01_edition_Avril_a_Juin_2017.pdf
03/05/17	Journal of Agroecology n°0	open-library.cirad.fr/files/6/2294_Version_1_complet_edition_n°0_-_version_finale_DE_03_mai.pdf