

# Internal Ex-Post Evaluation for Grant Aid Project

conducted by Madagascar Office: February 2014

Country Name	Project of extension and improvement of equipment of the Center of Training and Application of Agricultural Mechanization in Antsirabe)
Madagascar	(Projet de'extension et d'aménagement des équipements du Center de Formation et d'Application du Machinisme Agricole à Antsirabe)

## I. Project Outline

Background	The Center of Training and Application of Agricultural Mechanization in Antsirabe (CFAMA) is a sole training center specializing agricultural machineries in Madagascar. CFAMA has occupied an important position in the national policy of agricultural mechanization in the country. It was established in 1982 and delivered trainings for mechanization dealing with various needs. However, the decrepit training facilities and equipment restrained implementation of the trainings. In addition, CFAMA faced financial constraint to construct training facilities and to procure new equipment due to the self-supporting accounting system since 2000.		
Objectives of the Project	To improve trainings at CFAMA by constructing facilities and procuring machineries/equipment for the trainings, and thereby contributing to promotion of agricultural mechanization in Madagascar.		
Outputs of the Project	<ol style="list-style-type: none"> <li>1. Project Site: Zone Ivory and Zone Indafy, Antsirabe, Vakinankaratra Region</li> <li>2. Japanese side <ol style="list-style-type: none"> <li>1) Construction of the following facilities: training facilities at Zone Ivory and Zone Indafy</li> <li>2) Procurement of the following equipment: 43 items of agricultural machineries (tractors, cultivators, etc), construction machineries (bulldozers, backhoes, semi-trailers, etc.), workshop equipment and training equipment.</li> </ol> </li> <li>3. Malagasy side:                     Removal of existing building and land leveling, moving existing equipment to other places.                 </li> </ol>		
E/N Date	November 14, 2007	Completion Date	May 20, 2009
Project Cost	E/N Grant Limit: : 578 million yen, Contract Amount: 563 million yen		
Implementing Agency	Implementing Agency : Ministry of Agriculture (the former Ministry of Agriculture, Livestock and Fisheries) Operating Agency : Center for Training and Application of Agriculture Machinery in Antsirabe (CFAMA: Centre de Formation et d'Application au Machinisme Agricole)		
Contracted Agencies	NTC International Corporation, Tokura Corporation, and Sirius Corporation		
Related Studies	Basic Design Study: February 2007 – September 2007		
Related Projects (if any)	Japan's Cooperation: <ul style="list-style-type: none"> <li>• The Project for Rice Productivity Improvement in Central Highland (PAPRIZ) (Technical Cooperation, 2009-2015)</li> </ul> Other Donors' Cooperation: <ul style="list-style-type: none"> <li>• Project for Watershed Management and Irrigation System (BVPI), (WB, 2006-2014 ※to be extended)</li> <li>• Project for Watershed Management of Lake Araotra (BV Lac), (AFD, 2003-2013)</li> <li>• Promotion of Small Agricultural Equipment, (FAO)</li> </ul>		

## II. Result of the Evaluation

1 Relevance
<p>This project has been highly consistent with Madagascar's development policy, such as the promotion of agricultural mechanization prioritized by "Madagascar Action Plan (2007-2012)" and "the Sector Program of the Agriculture, Livestock and Fisheries (under finalization 2013-2025)", the development needs to achieve food self-sufficiency and to increase agricultural productivity, as well as Japan's ODA policy for supporting agriculture sector and rural development as one of priority areas specified by the policy dialogue on economic cooperation in 2006. Therefore, relevance of this project is high.</p>
2 Effectiveness/Impact
<p>The project has somewhat achieved its objectives, "to improve trainings for agricultural mechanization at CFAMA". CFAMA delivered improved trainings for key actors of agricultural mechanization in Madagascar, including higher level agriculture engineers as instructors, local manufacturers producing agricultural equipment and farmers as users of equipment.</p> <p>[The Achievement of the Target set in the Basic Design Report] In terms of training course for agricultural machine conductors, the number of trainees completing the course has constantly exceeded the target number of 30 from 2010 to 2012. On the other hand, in terms of the certificate courses of "Training course for professional qualification diploma (DOQ)" and "Training course for advanced engineer certificate (BTS)", the numbers of trainees completing the course were below the target. This is due to the fact that CFAMA has reduced the number of trainee to 25 per year and the training period to 5 months for the agricultural machine maintenance. This is attributed to the economic downturn caused by the political crisis in 2009, therefore the preference of trainees has been changing into the shorter and more general training courses (indicator 1) for minimizing the</p>

tuition and the time of training instead of the certificate courses (Majority of the trainees cannot afford to spend long time, sacrificing their economic activities). However, indicator 1 has not increased as much as indicator 2 and 3 has been decreased from 2010 to 2012. A la carte course was also below the target, but the reason why it was below is not confirmed at the time of ex-post evaluation.

[Other Achievements] To respond the economic change abovementioned, CFAMA increased the training courses for local manufacturers of agricultural equipment. CFAMA has diversified their training courses targeting from higher level agricultural engineers to farmers using agricultural equipment in order to promote agricultural mechanization by not only human resource development of technical persons but also capacity development of farmers. For example, 1-2 days trainings (Workshops) for farmers on utilization of agricultural machinery have been conducted by CFAMA. From 2010 to 2012, 148 farmers were trained for agricultural mechanization. In addition, CFAMA started more practical courses in cooperation with PAPRIZ, a technical cooperation project by JICA. In the workshops abovementioned, PAPRIZ has been utilizing the facility and equipment installed by the project and delivering technical trainings including metal works for local manufactures of agricultural equipment who supply mechanic services as well as agricultural equipment and parts. CFAMA have contributed to diffusion of agriculture equipment through strengthening the manufacturing capacity. As a synergy effect by PAPRIZ, CFAMA also enhanced their capacity to develop and produce agricultural equipment, such as threshers, winnowers, weeders and seeders. The strengthened technical capacity for agricultural equipment enables CFAMA to collaborate with HONDA, a Japanese manufacturer, and the World Bank in order to supply agricultural equipment. According to the lecturers and instructors of CFAMA as well as the trainees, the quality of trainings has been improved since the facilities and equipment installed by the project are very useful and easy to handle for practical training. In particular, the training equipment installed by the Project enabled to increase the course hours for practical trainings. Also, improved quality of trainings increased good reputation of CFAMA and provided more job opportunities for ex-trainees, especially for the BTS holders. There was no land acquisition for the project, and environmental and social negative impacts were not confirmed at the time of ex-post evaluation.

To sum up, although CFAMA have contributed to the capacity development of local manufacturers producing agricultural equipment and local farmers as users of equipment, the project purpose set at the Basic Design, that approximately 120 agriculture engineers was trained per year, was partially achieved. Therefore, effectiveness of this project is fair.

#### Quantitative Effects

Indicators	(Before the project) 2006 Actual	(After the project) 2010 Planned	2010 Actual	2011 Actual	(Ex-post Evaluation) 2012 Actual
Indicator 1 No. of trainees who complete "Training course for agricultural machine conductors"*	25	30	45	38	34
Indicator 2 No. of trainees who complete "DOQ and agricultural machine maintenance"	31	30***	28	22	18
Indicator 3 No. of trainees who complete "BTS in agricultural mechanization (2-year course)"	23	30***	15	10	18****
Indicator 4 No. of participants for a la carte courses**	41 persons	60 or above	12	5	51
Indicator 5 No. of trainees accommodated in dormitories*****	24	92	425 for short-term 43 for long-term	951 for short-term 40 for long-term	1,475 for short-term 40 for long-term

Note:\* The training period reduced from 2.5 months to 1 month.

\*\* A la carte trainings are organized by requests. Training period took several ranges (from 4days to 5 months).

\*\*\* The fixed number of each course reduced to 25 participants.

\*\*\*\*This is expected to recover to 26 for the academic term of 2012-2013. Regarding the academic term of 2013-2014, it is reported that No. of trainees of BTS recovers to 42.

\*\*\*\*\*The dormitories was planned to accommodate long-term trainees participating the diploma and certificate courses, but it has also accommodated short-term trainees participating a la carte courses.

Source : CFAMA and the Project for Rice Productivity Improvement in Central Highland (PAPRIZ)

### 3 Efficiency

Although the project cost was within the plan (ratio against the plan: 98%), project period exceeded the plan (ratio against the plan: 162%) because of much time required on restoration works for defects in the newly constructed facilities such as cracks on the walls, broken drain pipes, leakage of water, and distortion of wooden furniture. The outputs of the project were produced as planned. Therefore, efficiency of this project is fair.

### 4 Sustainability

The operation and maintenance of the training facilities and equipment installed by the project have been carried out by CFAMA.

Although the organizational structure of CFAMA is well-developed with necessary number of staff allocated including lecturers and instructors, the limited delegation of decision making on staff deployment hinders the smooth implementation of CFAMA's activities. Due to the control of the Ministry of Agriculture, CFAMA requires to consult with the operation committee headed by the Director of Rural Engineering of the Ministry, which takes a long time to make decision, including deployment of technical staff. As for the technical aspect, the current lecturers and instructors have sufficient knowledge and experience to carry out trainings. However, since most of them are nearly retirement age, the technical transfer from the experienced lecturers to the younger training staff is a key issue to sustain quality of trainings delivered by CFAMA. Since CFAMA has been a financially independent organization, the main revenue sources are tuition fees for the training courses, rental fee of agricultural machinery/equipment to farmers, sales of agricultural equipment and products, and rental fee of the facilities. The most expenses of CFAMA, including costs for consumables and personnel, have been covered by their own revenue and reserves. Salaries for 11 staff dispatched from the Ministry of Agriculture are covered by the government budget. However, no financial plan based on depreciation of the existing facilities and equipment may bring about difficulty to replace aged facilities and equipment in future. The facilities and most equipment have been in good condition except one broken tractor despite that the limited availability of spare parts for some equipment constrains timely replacement. CFAMA has been utilized substitute spare parts produced by themselves for the maintenance as planned, but there are concerns about that it may shorten lives of the machinery and equipment.

Therefore, there are some problems in institutional, technical and financial aspects and the sustainability of this project effect is fair.

### 5 Summary of the Evaluation

The project has somewhat achieved its objectives, "to improve trainings for agricultural mechanization at CFAMA" as CFAMA delivered improved trainings for key actors of agricultural mechanization in Madagascar. Positive impacts were also identified, such as improved quality of trainings, increased reputation of CFAMA, and the strengthened technical capacity of CFAMA to produce agriculture equipment. Therefore, effectiveness/impact of this project is fair. The efficiency of this project is fair due to the exceeded project period caused by the restoration works for defects in the facilities constructed by the Project.

As for sustainability, there is no problem on the current status of operation and maintenance of the facilities and most equipment. However, there are some problems observed in terms of institutional, technical and financial aspects due to the time consuming decision making process, aged training staff and insufficient financial plan for future replacement.

In light of the above, this project is evaluated to be partially satisfactory.

## III. Recommendations & Lessons Learned

### Recommendations to implementing agency:

CFAMA needs to carefully manage their budget for future replacement and rehabilitation of the training facilities and equipment. Also, the plan of employment and training aimed at younger engineers is essential for CFAMA to keep the sufficient training capacity and the current good reputation which have been accumulated by the existing training staff who would be retired near future.

### Lessons learned for JICA:

The synergy effect of grant aid project and technical cooperation project had increased capacity of training center. In the case of this project, CFAMA not only improved their training capacity for agricultural mechanization but also diversified their function to directly promote agricultural mechanization through trainings for local manufacturers and sales of agricultural equipment. Strategic combination of grant aid and technical cooperation can enhance effectiveness and impacts of project.



The graduation ceremony in 2013



Dormitories constructed by the project