

Summary of the Terminal Evaluation Results

1. Outline of the Project	
Country: Republic of Mozambique	Project title: The Integrated Agricultural Development for Small Scale Farmers in Chokwe Irrigation Scheme
Issue/Sector: Rural Development / Irrigation	Cooperation scheme: Technical Cooperation
Division in charge: Rural Development Department	Total cost (as of December 2009): 352 million yen
Period of Cooperation: March, 2007 – March, 2010	Partner Country's Implementing Organisations: <ul style="list-style-type: none"> • Ministry of Agriculture, National Directorate for Agricultural Extension • District Services for Economic Activities in Chokwe (SDAE) • Chokwe Agricultural Research Station (EAC) • Chokwe Hydraulic Public Corporation (HICEP)
	Related Cooperation: <ul style="list-style-type: none"> • Grant Aid : The Project for Rehabilitation of Chokwe Irrigation Scheme (2002-2003) • Technical Cooperation (Expert) : Advisor on Agricultural Development (2001-2005)
<p>1-1 Background of the Project</p> <p>Mozambique is a country with 800,000 km² land area (180,000 km² farmland). Its population is 20.37 million (2007). Agriculture is the main industry, which contains 81% of labor force, 33% of its GDP. Potential area for rice production in the country is estimated to be 900,000 ha. From which only 200,000 ha (Action Plan for Food Production, 2007) are cultivated, and its production is 196,000 ton (2007) (average yield is 0.98 ton/ha). With the increase of demand for rice, rice the self-sufficient rate is low (38.3%), therefore, around 316,000 ton of rice is imported. Rice is the second staple food next to maize. From the food security standpoint, improvement of food self-sufficiency should be achieved immediately.</p> <p>Chokwe Irrigation Scheme in Chokwe District, Gaza Province is the largest irrigation scheme in the nation. Its irrigation area is 23,000 ha and in former times, more than 100,000 ton of rice was produced. The scheme's function was stagnated and rice production in the scheme was dropped to one tenth of the past production because of the civil war in the 80's, change of the economic system after independence, and the flood of the Limpopo River in 2000.</p> <p>Mozambique set up the irrigation scheme improvement program in 1992. Japan supported its through the grant aid form 2002 to 2003 by repairing main channels (primary</p>	

channels of 14 km). During the years 1998 to 2004, secondary and tertiary channels were partially repaired and water user associations were strengthened by French Development Agency's (AFD) support. HICEP manages the Chokwe Irrigation Scheme in 1) management of primary channels to secure water supply and distribution, 2) collection and management of water fee, and 3) operation and maintenance of irrigation facilities. Water user associations have roles in managing and maintaining secondary and tertiary channels, but they lack skills to manage and maintain irrigation facilities appropriately. Therefore, irrigation facilities have been poorly managed.

In Chokwe district, there are SDAE and EAC. Those offices are in charge of provision of agricultural technical services and development of agricultural technologies in order to provide agricultural extension services for farmers. But due to lack of number of staff members, their ability, and mutual collaboration of organizations concerned, farming support system such as technical guidance, microfinance, and introduction of rice mills, for small-scale farmers has not been worked well.

Around 90% of farmers in the Chokwe Irrigation Scheme are small-scale farmers. Due to lack of proper farming technology and difficulty on efficient use of water resources, agricultural inputs, and access to market, cultivated area in the scheme is only 6,000 ha. Due to low profitability on agriculture, collection rate of water fee is low, and this brought insufficient management of irrigation facilities by the water users' associations.

The Government of Mozambique requested a technical cooperation to the Government of Japan in order to improve livelihood of small-scale farmers in the Chokwe Irrigation Scheme. Based on the results of the preliminary study, the Record of Discussions (R/D) on the Project was signed by both Japanese and Mozambican sides on December 4, 2006. The Project has been implemented since March 17, 2007 for the cooperation period of around 3 years (by the end of March 2010).

1-2 Project Overview

- (1) Overall Goal: Small-scale farmers' income in Chokwe Irrigation Scheme is improved.
- (2) Project Purpose: Agricultural production by small-scale farmers in the target area in Chokwe Irrigation Scheme is increased.
- (3) Outputs:
 - 1) Techniques for small-scale farmers in the target area are improved.
 - 2) Management of irrigation facilities and water use in the target area is improved.
 - 3) Farming support activities provided by extension officers for small-scale farmers in the target

area are strengthened.

4) Collaboration among SDAE, EAC, and HICEP is strengthened.

(4) Inputs (as of September 2009)

Japanese side:

- Japanese experts: 7 persons (70MM)
- Training in Japan: 7 persons
- Equipment: 2,447,397 JPY (Japanese Yen) (64,041USD)
- Operational Expenses: 50,665,000 JPY

Mozambican side:

- 9 personnel (1 in DNEA, 3 in SDAE, 2 in EAC, 3 in HICEP)
- Project Offices: 3 offices (1 office in SDAE, 1 office in EAC and 1 office in HICEP)
- Local Cost Sharing: 2,440,823Mt

2. Outline of the Final Evaluation Team

Evaluation Team	<p>1. Leader, Mr. Yoshitaka SUMI, Deputy Director General, Rural Development Department (RDD), Japan International Cooperation Agency (JICA)</p> <p>2. Irrigated Rice Cultivation, Mr. Motonori TOMITAKA, ICA Senior Advisor/ Chief Advisor Technical, Cooperation for Supporting Service Delivery Systems of Irrigated Agriculture ("TANRICE") in Tanzania</p> <p>3. Planning & Management, Mr. Kazuyuki FUJIWARA, Associate Expert, Eastern & Southern Africa Division, Rural Development Department, JICA</p> <p>4. Evaluation Analysis, Dr. Junichi WATANABE, Senior Consultant /Researcher, International Development Center of Japan (IDCJ)</p>	
Period	November 29, 2009 – December 13, 2009	Type of Evaluation: Final

3. Summary of Evaluation Results

3-1 Achievements

(1) Likelihood of Achieving the Project Purpose

Average yield of rice produced by the model farmers in 2008/09 cropping season are 5.1t/ha in D4 and 5.3t/ha in D7. Thus, these yields have reached the 5.t/ha as target yield.

(2) Level of Achievements: Outputs

Output 1: Development of appropriate rice cultivation techniques, preparation of manuals on rice cultivation, capacity development of extension officers, the model farmers, and other farmers are progressing mostly as planned.

Output 2: Capacity development on water management and irrigation facility maintenance, and preparation of manuals have been almost implemented as planned. In regard to collection rate of water fee, some measures for improvement are necessary to be taken especially to the model farmers in D4 and D7.

Output 3: Farming support activities are progressing with good effects for small-scale farmers. Further strengthening in terms of preparation of a vision, marketing, management, regulation etc. are important.

Output 4: Collaboration among three institutions is under strengthening through joint planning and implementation of activities in the Chokwe Irrigation Scheme.

3-2 Results as per the Five Evaluation Criteria

(1) Relevance

Relevance of the Project is high.

The objective of the Action Plan for the Reduction of Absolute Poverty 2006-2009 (PARPA II) of the Government of Mozambique is to reduce poverty rate from 54% in 2003 to 45% in 2009. In agricultural sector, production increase, improvement of productivity, food security, income increase, strengthening of competitiveness of farmers are important issues. The objectives of the National Program for Agrarian Development II are poverty reduction and food security and main principle of this program is to take right of small-scale farmers and their needs into well consideration. This Project is well relevant to Government Plans of Mozambique.

In Japanese ODA (Official Development Assistance) policy, assistance to the agricultural sector for food production and rural development is considered important for poverty reduction and sustainable development. At TICAD IV (Tokyo International Conference on African Development IV), it is decided to provide assistance with priority in order to double rice production in Sub-Saharan Africa through CARD (Coalition for African Rice Development) by promoting self-help of countries of Sub-Saharan Africa.

(2) Effectiveness

Effectiveness of the Project has reached at a satisfactory level.

As mentioned earlier, the average yield of rice of the model farmers in 2008/09 are 5.1 t/ha in D4 and 5.3 t/ha in D7, because the model farmers have adapted new techniques developed by the Project with available water properly managed by them.

(3) Efficiency

Efficiency of the Project is at a moderately satisfactory level.

As mentioned in the Mid-Term evaluation, Inputs of Mozambican and Japanese sides were appropriate in general in terms of quantity, quality and timing, and have been utilized well for the Project activities. That is confirmed in the Terminal Evaluation. However, Mozambican

counterparts have pointed out again that duration of stay of Japanese experts is short and it is necessary to stay at least whole period of a rice cropping season particularly for the first year of the Project. As for counterparts, it is important that the Government of Mozambique assign full-time counterparts to work directly with Japanese experts in order to ensure technical transfer.

(4) Impact

It is still early to judge whether the Overall Goal will be achieved or not. However, some other side effects or unexpected effects have been observed.

1) Prospect of achieving the Overall Goal

Overall Goal: Small-scale farmers' income in Chokwe Irrigation Scheme is improved.

The Baseline surveys were carried out under the Project in D4, D5, D6, D7 and D12 areas in the Chokwe Irrigation Scheme in 2007 and 2009. The surveys show that average rice production has increased from 1,285kg/a household to 1670.5 (1.3 times) in the above areas. Accordingly average income produced by rice selling has increased from 5,835 Mt to 11,086.5 Mt (1.9 times). It seems that this amount of income increase is significant for small-scale farmers.

2) Side effects or unexpected effects

Following positive side effects or unexpected effects of the Project have been observed.

- The rice cultivation techniques of the Project is disseminated to farmers of neighbouring areas.
- Women's work load and time on rice milling is reduced.
- Employment opportunity for the people in this area as labour is increased.
- The areas cultivating rice in the Chokwe Irrigation Scheme is increased.
- Rice mill income contributes for extending credit to neighbouring farmers, credit for land preparation and purchase of fertilizer to initial farmers
- Crop rotation also contributes to higher income

(5) Sustainability

Sustainability on policy aspect will be assured. In order to assure sustainability of institutional & organizational, financial and technical aspect, necessary measures should be

taken.

1) Policy aspect

Chokwe District is one of the target districts of the Action Plan for Food Production 2008-2011 and focused crops for Chokwe District are rice, maize and vegetable.

2) Institutional and Organizational aspect

The Government of Mozambique makes efforts to increase the number of extension officers in the country through PRONEA (National Agricultural Extension Program) which is planned to recruit more extension officers in the country to increase from current 693 to 1152 by 2011.

Coordination and collaboration among three institutions (SDAE, EAC and HICEP) are being promoted under the Project and collaboration has been improved.

3) Financial aspect

In order to disseminate outcomes of the Project to neighboring areas in the Chokwe Irrigation Scheme, utilization of budget of Local Initiative Investment Fund or budget from donor institutions will be necessary.

There is a plan for rehabilitation of channels in the Scheme aiming at expansion of rice cultivation by internal and external investments such as the Islam Development Bank.

4) Technical aspect

The Mozambican counterparts of the Project, who are staff members of SDAE, EAC and HICEP, have certain good capability as instructor for training courses carried out under the Project. However, it is necessary to strengthen practical capacity of staff members, especially extension officers.

(6) Factors that promoted/ inhibited realization of effects

- 1) Promoting factors: Japan's Cooperation in agricultural sector in Tanzania; Policy priority on agriculture and irrigation development; and Enhancement of relationships between zone and district irrigation staff have been identified as promoting factors to effectively implement the Project.
- 2) Inhibiting factors: Shortage of irrigation staff and insufficient clarification of personnel in charge; Delay in verification sites; Lack of experiences and equipments for utilising O&M Forms have been identified as inhibiting factors to effectively implement the Project.

3-3 Conclusion

The project activities have been progressed mostly as planned and the project performance

is at a satisfactory level. Although the Project Purpose has been almost achieved, followings are recommended for the remaining period as well as after the termination of the Project.

3-4 Recommendations and Lessons learned

3-4-1 Recommendations

1) Recommendations for the remaining period

- Action Plan of the three institutions, SDAE, EAC and HICEP, should be developed as planned and endorsed by the JCC to be held in January.
- Organization and leadership of farmers' associations need to be strengthened.
- Sufficient copies of manuals and leaflet developed by the Project should be produced and distributed to extension officers and small-scale farmers.
- Nine demonstration model plots set by nine extension officers should be monitored.

2) Recommendations after the termination of the Project

- Activities of the Action Plan promoting the Project technologies of the three institutions, SDAE, EAC and HICEP, should be incorporated into the respective PAAO and be implemented.
- Manuals and leaflet to extension officers and small-scale farmers for the dissemination of technologies developed by the Project should be further distributed and updated.
- Organization and leadership of farmers' associations need to be further enhanced.
- Management of the irrigation scheme for more efficient water use is crucial and needed to be improved.
- Among conditions to achieve the Overall Goal mentioned above, appropriate mechanization should be especially promoted, in particular for puddling and levelling of paddy plots.

3-4-2 Lessons learned

1) Collaboration and partnership among the relevant institutions, SDAE, EAC and HICEP produced more and better impacts than those institutions work separately.

2) It is also significant to involve authorities at three levels of national, provincial and district in order to scale up and extend the results of the Project to wider regions.

3) The adjustment and adaptation of technology to local culture and socioeconomic

environment is important.

- 4) Appropriate machinery between animal traction and large tractors which farmers constantly demanded need to be examined.
- 5) The project approach of completing value chain from production to processing, sales and marketing with credit/finance and revolving fund brought more impacts on the increase of agricultural production and income of small scale farmers.
- 6) Initially the Project considered the rice planting only – other crops in the winter/moner season can also be considered to improve the income of farmers and soil fertility.
- 7) It takes long time to develop capacity of farmers' association, therefore, it requires long time cooperation.