

Summary of the Results of the Evaluation Survey

1. Outline of the Project	
Country: Cameroon	Project Title: Upland Rice Development Project of the Tropical Forest Zone
Issue Sector : Agricultural development	Cooperation Scheme: Technical cooperation project
Division in Charge: Rural Development Department	Total Cost : 3.2 million yen
Period of Cooperation (R/D): 28 th February 2011 May 2011 – May 2014 (3years)	Partner Country's Implementing Organization : Ministry of Agriculture and Rural Development (MINADER)
	Supporting Organization in Japan : N/A
1-1. Background of the Project	
<p>In Cameroon, agriculture is a key industry which makes up about 60% of its labor force (2001), and 20% of its GDP (2009). Main crops in Cameroon are millet and sorghum in Northern part, maize in Central to Southern parts, plantain banana and yams in Southern part. While those are the staple foods, consumption of rice has been growing rapidly especially in the urban areas in recent years. Consumption of rice has been increased (25.7 kg/person/year, in 2008), but its production has remained at low level (e.g. cultivation area: 44,000 ha, production: 100,000 tons of paddy). In 2007, more than 470,000 tons of milled rice was imported. In this situation, promotion of domestic rice production is a pressing need to food security.</p> <p>In October 2008, in the first general meeting of “Coalition for African Rice Development (CARD)”, Cameroon was selected as a member of the first group of the CARD initiative and formulated “National Rice Development Strategy (NRDS)” thereafter. CARD members were expected to start implementing programs to increase rice production. JICA had been supporting those activities; however, as JICA did not have much information concerning the rice production situation in Cameroon, it carried out a Preparatory Survey on rice sub-sector development in June 2009 in order to collect basic information on the situation of rice production in the country.</p> <p>In the Preparatory Survey, the following issues were highlighted: 1) while large amount of rice produced in irrigated areas such as Northern and Western parts of the country is being exported to neighboring countries, domestically produced rice was not supplied to urban areas such as Yaoundé and Douala, and 2) upland rice production is not common in Southern part of the country despite its climate in the tropical forest zone which has potential for production of the upland rice. With these findings, it was proposed that rice production to supply adequate rice to urban areas in Southern part of Cameroon needed be increased. Accordingly, Cameroonian Government made a request to Japanese Government on implementation of a technical cooperation project on the upland rice development in Center, East and South regions.</p>	
1-2. Project Overview	
(1) Overall Goal	
The total amount of upland rice production in the three targeted regions increases.	
(2) Project Purpose	
The total number of upland rice farmers in the project pilot areas increases.	
(3) Outputs	
1) Upland rice varieties and cultivation techniques for extension are identified by experiments in project farm.	
2) Various layers of government officers and extension officers for promotion of upland rice cultivation are trained.	

- 3) Upland rice cultivation is promoted mainly in the pilot areas of the 3 regions through dissemination activities by key farmers, extension officers and staff of local office of MINADER.
- 4) Post-harvest techniques at the farm level are improved in the advanced pilot areas.

(4) Inputs

1) Japanese side:

Dispatch of experts:

Long-term experts: 3 persons

Chief Advisor, Rice Cultivation/Extension, Project Implementation Management/Training

Short-term experts: 5 persons, 13 times

Chief Advisor (7 times), Rice Cultivation Technologies (1 time), Post-Harvest technologies (3 times), Extension (1 time), Rural Society/Farmers Survey (1 time)

Training in Japan: 4 persons

Procurement of equipment:

Equipment for post-harvest, equipment for cultivation, equipment for exhibition field, equipment for seed production, equipment for office, vehicles, equipment for trainings, etc. approximately JY 41 million (Local procurement and equipment form Japan)

Local cost: JY133million (By September 2013)

2) Cameroonian side :

Counterparts: 12 persons

Facilities and utilities:

Project office, seed growing fields, seed storage facilities

Local cost: 612 million FCFA *1FCFA=JY0.21

2. Evaluation Team

Members of Evaluation Team	Japanese side		
	Team Leader	Mr. Motonori Tomitaka	Senior Advisor, JICA
	Evaluation Analysis	Mr. Satoshi Nagashima	Consultant, Icons Ltd
	Evaluation Coordination	Mr. Suguru Shiina	Associate Expert, Rural Development Department, JICA
	Senegalese side		
	Team Leader	Ms. Christine PEDHOM	MINADER
	Joint evaluation member	Mr. Clotaire ALIKOU NGUIMGO	MINADER
	Joint evaluation member	Mr. Yves Narcisse TCHOUALAK PECHEU	MINEPAT

Period of Evaluation	29 th November 2013 – 16 th December 2013	Type of Evaluation : Terminal Evaluation
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3. Results of Evaluation

3-1 Verification of Achievement

(1) Level of the achievement of Outputs

Output 1: Upland rice varieties and cultivation techniques for extension are identified by experiments in project farm.

Output 1 is likely to be achieved. Two (2) upland rice varieties identified by IRAD were selected. A document on techniques of upland rice cultivation has been drafted based on the experiences and experiments in project farms. In addition, some teaching materials have been produced for dissemination and trainings.

Output 2: Various layers of government officers and extension officers for promotion of upland rice cultivation are trained.

Output 2 is likely to be achieved. One hundred fifty eight (158) staffs of MINADER and 176 extension workers were trained and the cultivation techniques of upland rice were transferred. In addition, the learned techniques are practiced on sowing and harvesting by more than 83 % and 62 % of key farmers, respectively, who have been trained at IRAD.

Output 3: Upland rice cultivation is promoted mainly in the pilot areas of the 3 regions through dissemination activities by key farmers, extension officers and staff of local office of MINADER.

Output 3 is likely to be achieved. Annual production of registered seed and certified seed produced was 4.4 ton and 13.4 ton, respectively and it exceeded the indicator's values in average. At the time of the terminal evaluation, 175 field trainings have been already held and 6,297 farmers participated in the trainings. Five thousand twenty four (5,024) farmers also received the upland rice seeds. In addition, trainings of first season in 2014 are planned for some more farmers.

Output 4: Post-harvest techniques at the farm level are improved in the advanced pilot areas.

For Output 4, 140 persons participated in the training for post-harvest processing and the indicator has been achieved. However, for the 3 indicators on 1) broken rice rate, 2) alien substance rate and 3) collection of data on upland rice cultivation and improved conditions of post-harvest operations, are difficult to predict at the time of terminal evaluation.

(2) Level of the achievement of Project Purpose

Project purpose: The total number of upland rice farmers in the project pilot areas increase

It is likely to be achieved the Project Purpose but it is necessary to monitor longer period to verify the achievement.

In the PDM version 1, the indicator of the Project Purpose was “3,000 farmers start to cultivate upland rice”. According to the monitoring by AVZ, out of 2,071 farmers who received the seed in 2012, 1,297 farmers (62.6%) harvested it more than once. By the time of the terminal evaluation, rice seeds have been distributed to 5,024 farmers. Therefore, it would be possible to achieve the indicator.

In the mid-term review, the indicator was modified and added as “repeat the production at least 2 seasons during the project period” because continuation was an important factor of the Project Purpose. According to the result of the social survey conducted by the Project, farmers who cultivated the upland rice at least 2 times were 535 (25.8%) out of the total 2,071 (actual respondents were 974). Reasons not to continue the cultivation were problems of bird attack, wrong sowing time, etc. The continuation rate will be improved with the countermeasures such as early sowing in the main crop season, planting in a season of less birds, etc. Based on the 2 years monitoring by the Project, it has been confirmed that there are some areas not suitable for 2 times of rice cropping in a year. Therefore, it takes at least 2 cropping seasons (or 2 years) at each site to verify the continuation of rice cultivation even if the countermeasures are taken by the Project (and farmers).

3-2 Summary of Evaluation Results

(1) Relevance

Relevance of the Project is high as following reasons.

The Project which aims to increase production of upland rice is consistent with the policy goals of the rice sector. Based on the framework of the CARD, NRDS was formulated in 2009 as a promotion policy of the rice sector. The goal is a national self-sufficiency in rice by the domestic rice

development. In particular, it is assumed that the target to achieve is about 9.7 time increase of the rice production by 2018 and upland rice cultivation accounts 70% of the total production amount.

The Project is consistent with the needs of the Cameroon side.

The promotion of rice production in the country has become a pressing issue from the view point of food security. In recent years, consumption of rice is spreading rapidly in urban areas as Yaoundé and Douala, while rice production was about 100,000 tons of paddy in 2007, about 470,000 tons of milled rice was imported in the same year.

In the country assistance strategy of Japan that was created in 2012, “Agriculture and Rural Development” is positioned as a priority area.

Japanese technology is utilized usefully. In Cameroon, knowledge and skills to produce high quality rice seeds, especially NERICA, are in progress. Japan has advantages of rice seed production technologies and rice cultivation extension. Thus, technical transfer by Japanese experts and training of Cameroonian in Japan are very effective.

(2) Effectiveness

Effectiveness is relatively high as following reasons.

It is likely to be achieved the Project Purpose but it is necessary to monitor longer period to verify the achievement. About 60% of farmers who received the seeds practiced upland rice cultivation at least once and the achievement of the indicator will be possible in the future.

In the Project, the scope of the activities was rice double cropping in the all pilot areas at initial stage. However, it was revealed that the double cropping was not suitable in some areas with the two years' monitoring. If the double cropping is not practiced, it is difficult to verify the indicator of “repeat the production at least 2 seasons during the project period” added in the mid-term review within the project period.

Some farms were damaged by bird in the first season of 2012 (Center region). Though the bird damage is very small in the second season, the tendency to increase the bird damage has been observed due to the increase of the number of rice cultivation.

(3) Efficiency

Efficiency is relatively high as following reason.

Outputs 1-3 (indicator value) are likely to be achieved by the end of the Project and sufficient activities have been carried out. However, Output 4 is slightly delayed due to the lack of qualified seed at the initial stage of the Project and farmer's rice production is still low at present. Therefore, it is difficult to predict the achievement of Output 4 within the project period.

There are some remarks on the inputs from Cameroonian side and Japanese side as follows:

- 1) Comparing the project scale and required result, there were only 2 long-term experts assigned at the beginning of the Project. It affected the progress of seed production, establishment of cultivation techniques, capacity building of C/P, etc. In addition, the chief advisor shuttled as short-term expert in the first two years and it also affected the implementation of the Project strategically.
- 2) Two (2) full-time C/Ps have been assigned from MINADER, and Center region of MINADER also assign a C/P for seed multiplication farm at Yaoundé. They have reached a sufficient level by technical transfer. Therefore, the number of C/Ps, their positions, their competencies, etc. have been appropriate.
- 3) Sufficient funds are allocated from Cameroonian side such as activity costs for extension workers, utility costs, costs for JCC. In addition, Public Investment Budget (PIB) has been also allocated by MINADER for upland rice seed production.

(4) Impact

Impact is relatively high as following reasons.

It is expected to achieve the Overall Goal at certain level. PIB is allocated by MINADER and it is expected to be able to produce around 200-300 tons of seeds in 2013 - 2015. If the budget is

continued, it may be achieved the indicator of the Overall Goal to some extent.

It becomes estranged. In consultation with JCC, the indicator became “at least 11,000 tons of upland rice is annually produced in the three regions”, and it is an excessive value even this will be the result after 5 years of the achievement of the Project Purpose. However, in the second JCC, it was agreed that the value of the Overall Goal would not be only by the effect of the Project, but it would be the result of the upland rice promotion in whole Cameroon based on NRDS, etc.

In the Project, seed distribution activities have been carried out to outside of the project pilot areas and it was distributed 1,526 bags (4.5-5 kg/bag) for the first season of 2013 and 1,619 bags for the second season of 2013. Therefore effect of the Project is spreading to outside of the project pilot areas.

(5) Sustainability

Sustainability is relatively high as following reasons.

1) Political and institutional aspects

Possibility to continue the policy support is high.

There is a NRDS as promotion policy of rice sector. In NRDS, the indicator was set to produce rice 9.7 times by 2018 from 100,000 tons of domestic rice production in 2008 (paddy, estimated value). The direction is accorded with the Project aims.

2) Organizational aspects

Sustainability of the organizational aspect is moderate.

It is unclear that MINADER continues the activities after the Project. It is necessary to consider that the technology remains producers (farmers) to promote upland rice production with continued follow-up by MINADER.

3) Financial aspects

Sustainability of the financial aspect is high.

Counterpart funds were available during the Project period, and MINADER has supported upland rice seed production in 2012 and 2013 with PIB. Even after the Project, it is necessary to ensure a sufficient budget for the management of quality seed production and preservation of original seed.

4) Technical aspects

Sustainability of technical aspect is high.

C/Ps have acquired necessary knowledge and technologies during the Project period. They have been able to conduct training for extension workers and key farmers as well as production of rice seed with the minimum advice. It is expected that their capacity will be utilized for rice industry promotion in Cameroon.

3-3 Contributing Factors to Realize the Effects

(1) On the contents of the Plan

N/A

(2) On the implementing process

- 1) Seed production was included in the early stages of the Project.
- 2) Realization of quick input (purchase of tractors, etc.) for the seed production by understanding of JICA side.
- 3) The situation of the rice cultivation became clear by the monitoring of 4 seasons in 2012 and 2013. The feedback started from the second season in 2013 and the Project management became more effective.
- 4) In the Project, weekly meeting is held for sharing important information and direction of the Project. Since the Project office is located in the headquarters of MINADER, there is also day to

day communication with the Secretary General, the Supervisor, and the Project Coordinator. Good communication facilitates progress of the Project which covers many collaboration institutions.

3-4 Inhibiting Factors to Cause the Problem

(1) On the contents of the Plan

Because high-quality seeds were not available, it had to be started from seed production. Therefore, there was delay in starting of the seed distribution.

(2) On the implementing process

- 1) Because most farmers who have a relationship with extension officers took part in the field training, there is a tendency that the number of participants reaches the limit.
- 2) Bird damages affect the practice of upland rice cultivation.
- 3) At the beginning of the Project, there was limited information on the period of rainy seasons in the target areas, the period of rice cultivation, farming activities, etc. According to the result of the monitoring, that there are some areas where rice double cropping is not suitable.

3-5 Conclusion

The Project contributes a lot on the development of upland rice cultivation in Cameroon. In the beginning of the Project, high quality seed was not available and the activities of the seed distribution were slightly delayed. However, seed production was included in the project scope and about 8,000 farmers inside and outside of the project pilot areas received the high quality seeds and started the cultivation.

In addition, there is an impact of the Project for rice seed production initiated by MINADER. PIB has been allocated to produce the upland rice seed nationwide. The quality seed should be always available.

On the other hand, there are some concerns to verify the achievement of the Project Purpose within the project period.

According to the monitoring of the Project, there are some areas where rice double cropping is not suitable because of the shorter rainy season than expected and severer bird attacks either rainy season. The indicator of the Project Purpose is “At least 3,000 farmers start to cultivate upland rice and repeat the production at least 2 seasons during the project period”. It will take longer period to verify the indicator if rice double cropping is not practical.

There are many challenges for farmers to continue upland rice cultivation. In the pilot areas, there are some inhibiting factors such as bird damage and post-harvest processing; they are negative incentives for farmers. It is necessary to promote the countermeasures such as early sowing in the main crop season, planting in a season of less birds, etc.

In addition, MINADER has started to allocate their own budget for seed production activities based on the result of the Project. For reinforcing the reactivation of rice seed production, it is better that the Project provides them with technical assistance based on the knowledge and experiences accumulated in the Project.

To reinforce these activities for obtaining firm results, an extension of the Project period is necessary.

3-6 Recommendation

The evaluation team recommends the following points:

(1) Improvement of success rate and continuing rate of upland rice production

The majority of farmers practice the upland rice cultivation only one season so far, and it is difficult to predict how many farmers continue the activities in the future. It is necessary to identify the incentive and inhibiting factors to increase the succeeded farmers based on the results of the social survey, which was conducted by the Project. It is also necessary to consider the countermeasures.

(2) Consider the measures to increase the number of rice growing farmers

In the scope of dissemination to farmers, the Project targeted the farmers who had good relationship with extension workers. However, the number reaches a limit and the participants in the field training are gradually reducing. In addition to current dissemination method, it is necessary to find more effective way to increase new rice growing farmers, such as the utilization of farmers' organizations (e.g. GIC), etc.

(3) Roles for seed production activities between Cameroonian side and Japanese side

Based on the Project results so far, MINADER ensures its own budget to strengthen and expand the base of rice seed production. The intention of Cameroonian side is upland rice seed production for the whole country. Since it is beyond the scope of the Project, the Japanese experts may technically advise if necessary.

(4) Sharing the result and the experience of the Project

Some countries around Cameroon are interested in development of upland rice. Through the project activities, useful knowledge and experience on upland rice production is being accumulated and it is recommended to share such knowledge and experience with these countries if requested.

(5) Extension of the project period

As it has been mentioned, since the indicator of the Project Purpose was changed, it is difficult to confirm the achievement of the indicator within the rest of the Project period (by May 2014). In the mid-term review, it was recommended to extend the Project period for 20 months for guiding and monitoring the continuation of upland rice cultivation. However, after accumulation of information on both positive and negative prospects of upland rice development and promotion, the Team recommends to extend the project period for 2 years (24 months).

Upland rice is a new crop with potential risks of production and marketing. Considering 30% of adoption for more than 2 times of upland rice cultivation after participating in the training, there is a need to train and distribute rice seed for 10,000 farmers. So far, the Project has distributed rice seed to about 5,000 farmers in the pilot sites. It is expected that with 2 years of extension, there will be 5,000 farmers to be trained in the coming 4 cropping seasons. Experiences of JICA for upland rice promotion in many African countries will properly guide the direction of its dissemination in Cameroon.

3-7 Lessons learned from the project

(1) Utilization of existing information

In the Project, existing information was utilized especially for Output 1 on the selection of upland rice varieties and upland rice cultivation techniques to accelerate the progress of the Project. It is important to utilize the existing information for effective project management.

(2) Importance of post-harvest processing and marketing

Both pre-harvest technologies and post-harvest handling are important in introduction of upland rice in 3 regions where rice cultivation was not popular. Delayed introduction of post-harvest equipment adversely affected the incentive of the farmers who started upland rice cultivation after the training. If rice milling machines were introduced earlier, continuation rate of upland rice cultivation might be bit higher. It is important to introduce milling machine together with introduction of rice in new area.

(3) Importance of communication among implementers and collaborators

Weekly meeting is held among all project staff (Japanese experts and Cameroonian C/Ps) for sharing important information and direction of the Project. Since the Project office is located in the headquarters of MINADER, there is also day to day communication with the Secretary General, the Supervisor, and the Project Coordinator. Good communication facilitates progress of the Project which

covers many collaboration institutions such as IRAD, 4 seed multiplication farms, 3 regions, 10 pilot sites and others. Communication and direction from the headquarters are respected by such diversified collaborators.