

Country Name	Project on Supporting Sustainable Production of Rain Fed Rice
Republic of Senegal	

I. Project Outline

Background	In Senegal, although 71% of the total population (about 12 million people) were engaged in the agriculture sector, agricultural production represented only 13% of the GDP and a great part of the food commodities, such as rice, wheat, and maize, were imported. Rice was a principal food in Senegal with the annual consumption per person being between 60 to 80 kg, but the rate of self-sufficiency was limited to 37%. It was therefore urgent to increase rice production in the country from the viewpoint of food security.		
Objectives of the Project	Through i) increase in production of quality rice seeds of recommended variety, ii) development of guidance on rice cultivation techniques, iii) dissemination of rice seeds of recommended varieties and recommended rice cultivation techniques, iv) capacity building of the key farmers on secondary development of rice field facilities, and v) strengthening and promoting development framework of the rain-fed rice cultivation in the project area, other regions, and surrounding countries, the project aims at the improvement of issues regarding rice production such as access to seeds, cultivation technique, farm management, and rice field’ facilities operation and maintenance as well as the establishment of an appropriate extension system of rice cultivation techniques according to the local conditions, thereby contributing improvement of the production system of rain-fed rice cultivation in Regions of Fatick, Kaolack, and Kaffrine.		
	1. Overall Goal: Improvement of production system of rain fed rice cultivation in the Project area (Regions of Fatick, Kaolack and Kaffrine). 2. Project Purpose: In the project area, the situation regarding the main issues to rice production of farmers (1. Access to seeds, 2. Cultivation techniques, 3. Farm management, 4. Rice field's facilities operation and maintenance) is improved and an appropriate extension system of rice cultivation techniques according to the local condition is established.		
Activities of the Project	1. Project Site: Region of Fatick, Kaolack, and Kaffrine 2. Main Activities: 1) Selecting suitable rice varieties and establishing a seed production system, 2) Field training on rice cultivation to the key farmers and extension workers, 3) Training on rice cultivation for general farmers using demonstration farms by trained key farmers and extensions workers, 4) Trainings on farming and organizational capacity building for extension workers, 5) Organizing seminars to share experiences with project-related parties, other regions and neighbouring countries, and so on. 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 13 persons 2) Trainees Received: 10 persons 3) Equipment: vehicle, motorcycle, projector, automatic weather observation device, thresher, PC and so on. 4) Local operation cost: Employment of local staff, Cost of training sessions/seminars/workshops, elaboration of manuals Senegalese Side 1) C/P allocated: 34 persons 2) Facilities and land: project offices, replacement of machinery and equipment 3) Local operation cost: utility cost, seminar for key farmers, transportation fee		
Project Period	(ex-ante) October 2013 - February 2018 (actual) October 2014 - September 2018	Project Cost	(ex-ante) 420 million yen, (actual) 615 million yen
Implementing Agency	Ministry of Agriculture and Rural Equipment (Ministère de l’Agriculture et d l’Equipment Rural: MAER)		
Cooperation Agency in Japan	RECS International Inc. Nippon Koei Co., Ltd.		

II. Result of the Evaluation

1 Relevance/Coherence
<p>[Relevance]</p> <p><Consistency with the Development Policy of Senegal at the Time of Ex-Ante Evaluation ></p> <p>The project was consistent with the development policy of Senegal at the time of ex-ante evaluation such as the National Program of Self Sufficiency of Rice (Programme Nationale d'Autosuffisance en Riz: PNAR) aiming at 1.6 million tons of rice production by 2017. The introduction of rain-fed rice cultivation to the crop diversification strategy was one of the activities in PNAR.</p> <p><Consistency with the Development Needs of Senegal at the Time of Ex-Ante Evaluation ></p> <p>The project was consistent with the development needs of Senegal at the time of ex-ante evaluation to increase rice production from the viewpoint of food security since rice was a principal food but the rate of self-sufficiency for rice was low.</p> <p><Appropriateness of Project Design/Approach></p> <p>The project design/approach was appropriate. No problem attributed to the project design/approach was confirmed.</p> <p><Evaluation Result></p> <p>In light of the above, the relevance of the project is ③¹.</p>
[Coherence]

¹④:very high, ③:high, ②:moderately low, ①:low *To be the same afterwards

<Consistency with Japan's ODA Policy at the Time of Ex-Ante Evaluation>

The project was consistent with the Japan's ODA policy to Senegal (2012) prioritizing "Support for sustainable economic growth" including promotion of primary industry, mainly rice production as one of the priority areas.

<Collaboration/Coordination with other JICA's interventions>

Any collaboration/coordination between the project and other JICA's intervention was not clearly planned at the time of ex-ante evaluation.

<Cooperation with other institutions/ Coordination with international framework>

Any cooperation/coordination was not clearly planned at the time of ex-ante evaluation.

<Evaluation Result>

In light of the above, the coherence of the project is ②.

[Evaluation Result of Relevance/Coherence]

In the light above, the relevance/coherence of the project is ③.

2 Effectiveness/Impact

<Status of Achievement of the Project Purpose at the Time of Project Completion>

By the time of project completion, the Project Purpose was partially achieved. Although the rice seed produced at the demonstration farm met the standards for certified seeds in terms of germination rate, there were no years that met the quality standards for certified seeds (Indicator1). More than 50% of the farmers trained by the project utilized some recommended cultivation techniques in fields and low wetlands (Indicator2). According to the extension workers of Project on Supporting Sustainable Production of Rain-Fed Rice (Agence National de Conseil Agricole et Rural: PRiP) and National Agency for Agricultural and Rural Council (Agence National de Conseil Agricole et Rural: ANCAR), about 90% of the extension workers trained by the project disseminated the recommended rice cultivation techniques, farm management tools, and secondary development techniques to farmers. In addition, NGOs and other project extension staff took training on seed production and rain-fed rice cultivation and voluntarily disseminated these activities to key farmers through the training that they hold (Indicator3). 10 farmers' organizations in the project area implemented secondary development works (Indicator4). The extension system was included in the technical manual for extension workers and employs the use of key farmers to compensate for the lack of extension agents and demonstration farms (indicator5).

<Continuation Status of Project Effects at the Time of Ex-Post Evaluation>

By the time of the ex-ante evaluation, the project effects have been partially continued. Although there has been no specific data on rice seed production and the number of rice seed producers trained by the project, some rice seed producers have continued to produce quality seeds, especially in the lowlands. Also, some farmers have continuously used the rice cultivation techniques recommended by the PRiP project, particularly in the lowlands and the plateau. While the number of farmers' organizations decreased to less than 10, some farmer organizations such as Symbiose² in Niore in the Kaolack region have become interested in rain-fed rice production and new lands have been developed for it. Secondary development works have been utilized so that these producers have increased their area for rice production.

<Status of Achievement of the Overall Goal at the Time of Ex-Post Evaluation>

At the time of ex-post evaluation, the Overall Goal has been partially achieved. The rain-fed rice cultivation areas have dramatically increased from 2,600 ha in 2013 to 12,120 ha in 2022 (Indicator 1). The survey result shows that the areas have expanded more than fivefold. Many producers have taken a greater interest in rice production which leads to improving livelihood. "Agricultural Program for Sustainable Food Sovereignty" (Programme Agricole pour une Souveraineté Alimentaire Durable: PASAD) was replaced by "Acceleration Program of the Pace of Senegalese Agriculture" (Programme d'Acceleration de la Cadence de l'Agriculture Sénégalaise: PRACAS) and rice seeds has been distributed by PNAR within its framework. The seed distribution by PNAR has been much bigger than what the project had planned. According to the statistics by National Rice Production Strategy 2(NRDS2) and the statistics from PNAR coordinator, the yield of rain-fed rice cultivation has slightly increased from about 2.6 ton/ha in 2013. The field survey conducted by the ex-post evaluation team indicates that some of beneficiaries using the techniques introduced by the project had achieved the yield of over 3 ton/ha in 2021(Indicator2).

<Other Impacts at the Time of Ex-Post Evaluation>

No negative impact on natural environment was observed.

<Evaluation Result>

In light of the above, the effectiveness/impact of the project is ③.

Achievement of Project Purpose and Overall Goal

Aim	Indicators	Results	Source
(Project Purpose) In the project area, the situation regarding the main issues to rice production of farmers (1. Access to seeds, 2. Cultivation techniques, 3. Farm management, 4. Rice field's facilities operation and maintenance) is improved and an appropriate extension system of rice cultivation	Indicator 1 More than 80% of the rice seed producers (both individual producers and seed cooperative members) trained by the Project succeed to multiply the quality seed by themselves.	Status of the Achievement (Status of the Continuation): Not achieved (Not verified) (Project Completion) <ul style="list-style-type: none"> Seeds produced at the demonstration farm met the standards for certified seeds in terms of germination rate. There were no years that met the quality standards for certified seed. (Ex-post Evaluation) <ul style="list-style-type: none"> Some of the rice seed producers have produced quality seeds, especially in lowland while other producers faced with water shortage in the plateaus. 	Project completion report
	Indicator 2 More than 80% of the farmers	Status of the Achievement (Status of the Continuation): partially achieved (Partially continued)	Project completion

² Symbiose is an NGO that supports community-based agricultural development and livelihood improvement in communities.

techniques according to the local condition is established.	trained by the Project utilize the recommended rice cultivation techniques along with PRiP cultivation manuals.	(Project Completion) <ul style="list-style-type: none"> More than 50% of the farmers trained by the Project utilized 7 recommended cultivation techniques in fields and lowland wetlands. In 2016 and 2017, many farmers abandoned rain-fed rice cultivation because of drought. (EX-post Evaluation) <ul style="list-style-type: none"> some farmers have continuously used the rice cultivation techniques recommended by the PRiP project, in particular in the lowlands and the plateau. 	report
	Indicator 3 More than 90% of the extension workers trained by the Project disseminate the recommended rice cultivation techniques, farm management tools, and secondary development techniques to farmers.	Status of the Achievement (Status of the Continuation): Achieved beyond the plan (Not verified) (Project Completion) <ul style="list-style-type: none"> According to the extension workers of PRiP and ANCAR, about 90% of those trained by the project disseminate the recommended rice cultivation techniques, farm management tools, and secondary development techniques to farmers. (Ex-Post Evaluation) <ul style="list-style-type: none"> The extension staff of ANCAR, NGO and farmers' organization has sustained the skills and knowledge necessary to promote the activities for improving the rice production of the farmers introduced by the project but there were no statistical data on the number of extension workers to disseminate the recommended techniques. 	Project completion report
	Indicator 4 10 farmers' organizations in the Project area implement secondary development works.	Status of the Achievement (Status of the Continuation): Mostly achieved as planned (partially continued) (Project Completion) <ul style="list-style-type: none"> 10 farmers' organizations in the Project area implemented secondary development works. (Ex-post Evaluation) <ul style="list-style-type: none"> The number of farmers' organizations is less than 10. However, some of them such as SYMBIOSE in Nioro in the Kaolack region have become interested in rain-fed rice production and have developed new lands for production. Secondary development works have been utilized so that these producers have increased their area for rice production. 	Project completion report
	Indicator 5 An extension system proposed by the Project is validated and approved by the Senegalese side.	Status of the Achievement (Status of the Continuation): mostly achieved as planned (continued) (Project Completion) <ul style="list-style-type: none"> The extension system was included in the technical manual for extension workers. The extension system employs the use of key farmers to compensate for the lack of extension agents and demonstration farms. (Ex-ante Evaluation) <ul style="list-style-type: none"> Refer to "Sustainability" (Institutional/Organizational Aspect)" 	Project completion report
(Overall Goal) Improvement of production system of rain fed rice cultivation in the Project area (Regions of Fatick, Kaolack and Kaffrine).	Indicator 1 Rainfed rice cultivation area is doubled in the Project area by 2023 compared to 2,600ha in 2013.	(Ex-Post Evaluation) achieved beyond the plan <ul style="list-style-type: none"> The cultivation area increased to 12,120ha in 2022. Many producers have been interested in rice production which leads to improving their welfare. PASAD was replaced by PRACAS and rice seeds has been distributed by PNAR within its framework. The seed distribution by PNAR is much bigger than what the project was planned. 	NRDS2, Interview to beneficiaries
	Indicator 2 Yield of rain fed rice cultivation is increased to 3.0 ton/ha in the Project area by 2023 compared to 2.6ton/ha in 2013.	(Ex-Post Evaluation) partially achieved <ul style="list-style-type: none"> According to the statistics by National Rice Production Strategy 2(NRDS2) and the statistics from PNAR coordinator, the yield of rain- fed rice cultivation has slightly increased compared to about 2.6 ton/ha in 2013 The field survey conducted by the ex-post evaluation team indicates that some of beneficiaries using the techniques introduced by the project had achieved the yield of over 3ton/ha in 2021. 	NRDS2, Interview to beneficiaries

3 Efficiency

Although the project period was within the plan (the ratio against the plan:92%) and , the project cost was exceeded the plan (the ratio against the plan:146%) because of combined factors. Outputs were produced as planned. In the light above, the efficiency of the project is

③.

4 Sustainability

<Policy Aspect>

The Ministry of Agriculture and Rural Equipment (Ministère de l'Agriculture et de l'Équipement Rural: MAER) has prioritized rain-fed rice cultivation based on NRDS2, a the basic policy to continuously conduct activities for it, as most of the rice cultivation has been done in rain-fed cultivation areas. Although there has been a policy that would ensure the continuation of project effects, it has not been clearly stated whether to adopt the systems, models, and activities introduced and established by the project.

<Institutional/Organizational Aspect>

There have been no changes in terms of an institutional and organizational aspect. MAER has continued to be responsible for promoting/disseminating the system/the model/the activities for the improvement of the rice production of farmers introduced/established by the project. However, it has been difficult to employ additional extension staff of ANCAR, NGO, and farmers' organization for further promotion and dissemination due to the budget constraint. It is noted that no networks or cooperative linkages have been established to promote project activities.

<Technical Aspect>

The extension staff of ANCAR, NGO, and farmers' organization has sustained the skills and knowledge necessary to promote the activities for improving the rice production of the farmers introduced by the project. Although no training systems have been maintained officially after the project completion, the rice seed producers and farmers' organizations benefited from the project continue to voluntarily train other producers. These training sessions have been conducted in the field with the staff of ANCAR, NGOs, and farmers' organizations. In addition to the manual, weeding tools and sowing discs have been used.

<Financial Aspect>

The Senegalese government was unable to allocate a budget for the continuation of the project due to the need to prioritize other urgent projects. For this reason, MAER had worked to secure a budget to promote rain-fed rice cultivation in Senegal and submitted a project request in order to get the budget for developing rice seed production from the grant aid for food assistance (Kennedy Round: KR), and the budget has allowed the project to maintain.

<Environmental and Social Aspect>

No negative impact on natural environment was observed.

<Evaluation Result>

In light of the above, some problems have been observed in terms of the institutional/organizational aspect, and slight problems have been observed in terms of the political, technical, and financial aspects of the implementing agency. Therefore, the sustainability of the project effects is ②.

5 Summary of the Evaluation

The project partially achieved the Project Purpose to improve the rice production of farmers and to establish an appropriate extension system of rice cultivation techniques according to the local condition in the project site and the Overall Goal to the improve production system of rain-fed rice cultivation in Regions of Fatick, Kaolack, and Kaffrine. As for sustainability, some problems have been observed in terms of the institutional/organizational aspect of the implementing agency.

Considering all of the above points, this project is evaluated to be satisfactory.

III. Recommendations & Lessons Learned

Recommendations for Implementing Agency

- Little data was collected on the number of the rice seed producers trained in the project, the training systems for extension workers, and so on since before the project completion. MAER should continuously monitor the activities introduced/established by the project and collect the data. At least, it is recommended that MAER try to manage only important data that is easy to collect if various types of data are difficult to collect. In doing so, MAER could understand which activities to focus on and to invest resources. This could result in effective training, appropriate seed distribution, and eventually higher quality seed production for seed producers.
- MAER needs to resume obtaining a budget for continued activities introduced/established in the project. Through monitoring the activities and data, MAER could grasp the activities that really need to be implemented and develop a more convincing budget proposal to the government, leading to a financially stable organizational management.

Lessons Learned for JICA:

- In order to confirm project effects and consider more effective agricultural techniques, JICA needed to consider what kind of data for verifying project effects and how to collect at the project formation and design stage. In addition, it is preferable to utilize existing statistical data and/or existing information system in order to ensure efficient and sustainable data collection activities without additional work load for the counterpart staff not only during the project implementation but also the post project period. If there is no appropriate existing data for verifying project effects, it is essential to consider viable data collection system for not only verification of project effects but also other benefits for implementing agencies such as policy formulation and implementation.



Practical training manual for a trainer



Rice fields in AIDARA (lowland)