conducted by Angola Office: August, 2024

Country Name	**Project for Rice Development**
Republic of Angola	

I. Project Outline

Background	The economic structure of Angola was significantly dependent on oil revenue and development of the agricultural sector was underdeveloped. In particular, rice, as one of the staple foods of the country, was produced to the extent that it could be exported, yet the prolonged civil war caused a decline in rice production due to the loss of human resources and the devastation of agricultural lands, resulting in the dependence on imports for the rice consumption of the country. Under these circumstances, the Ministry of Agriculture, Rural Development and Fisheries (MINADERP) challenged to enhance rice production through the creation of the Rice Unit under the Agricultural Research Institute (IIA) and the import of rice seeds from the Republic of South Africa and other countries as well as their distribution to farmers by the Institute for Agrarian Development (IDA). However, due to the overwhelming lack of knowledge and techniques in the entire agriculture sector, the technical development to support the agriculture promotion (rice cultivation), human resource development in the agricultural sector and strengthening of extension of the farming technologies were remaining issues.		
Objectives of the Project	Through (1) the clarification of the situation and the challenges of agriculture/rice production in the target areas, (2) the capacity development of IIA for the study and research on rice cultivation and the enhancement of recommended seed multination, (3) the clarification and proposal for the implementation of irrigation development policy by the National Directorate of Agriculture (DNA), (4) the technical package for rice cultivation for small farmers by IIA in cooperation with IDA and DNA (5) the creation of a consensus within the Ministry of Agriculture and Forestry (MINAGRIF) on the implementation of the rice development policy in provinces of Bié and Huambo, the project aims at improving rice cultivation methods of model farmers[1] in the project sites, thereby contributing to improving the yield of rice at the village where the model sites in the target provinces.		
	1. Overall Goal: The yield of rice at the village where the model sites are located in Bié and Huambo province is improved. 2. Project Purpose: Improved rice cultivation methods are practiced by model farmers in the target sites.		
Activities of the Project	1. Project Site: Bié Province and Huambo Province Main Activities: (1) Studying the current situation of rice cultivation, distribution of farmers, and the demand for agricultural production in the target areas, (2) Selecting varieties suited to target regions and developing technologies of rice cultivation to be recommended, (3) Advising on the methods of planning and management of irrigation schemes, (4) introducing the postharvest technologies suitable for small farmers and training the technical package for rice to farmers in the target site (5) Promoting the outcome of the project activities with related institutions and examining the implementing system. 2. Inputs (to carry out the above activities) Japanese Side 1) Experts: 17 persons 2) Trainees Received: 20 persons 3) Equipment: Vehicles, milling machines, office supplies, moisture meters, pH meters, etc. Angolan Side 1) Staff Allocated: 67 persons 2) Facility and equipment: Project offices (Luanda and Huambo), test and exhibition plots, warehouses, etc. 3) Local cost: Utilities and travel expenses, etc.		
Project Period	(ex-ante) February 2013 – March 2018 (60 months)[2] (actual) August 2013 – August 2019 (73 months)	Project Cost (Japanese side only)	(ex-ante)1,080 million yen, (actual) 757 million yen
Implementing Agency	・ National Directorate of Agriculture (DNA) (At the beginning of the project, it was the National Directorate of Hydraulics and Rural Engineering (DNHAER), then the National Directorate of Rural Engineering (DNER), before operations were handed over to DNA in 2018.) ・ Institute for Agrarian Development (IDA) ・ Agricultural Research Institute (IIA)		
Cooperation Agency in Japan	NTC International Co., Ltd.		

II. Result of the Evaluation

<Special Perspectives Considered in the Ex-Post Evaluation>

[Verification of Continuation Status of the Project Effects]

The verifiable indicator for Project the Purpose is "introduction of the core rice cultivation techniques to model farmers," and "dissemination of the introduced core techniques to farmers in the target areas" was an expected project effects to be continued as a factor to contribute to the Overall Goal.. Therefore, continuous application of the core techniques introduced to model farmers was verified as a factor to affect the achievement level of the verifiable indicator for the Overall Goal.

[1] A farmer who has been participating in a project-related farmer field school (FFS) at the model sites for at least one year and who continues to cultivate rice in individual farmlands or FFS.

[2] The project is divided into Phase 1 (February 2013 to July 2014 and Phase 2 (September 2014 to March 2018) months, which is 60 months since there are two months in the transition period. The division into Phase 1 and Phase 2 is to internally organize the project and is not divided into two separate projects.

1 Relevance/Coherence

[Relevance]

<Consistency with the Development Policy of Angola at the Time of Ex-Ante Evaluation >

The project was consistent with the development policy of Angola at the time of ex-ante evaluation such as "the Medium-term Agricultural Sector Development Plan (PDMPSA)" (2009-2013), which aims to (1) comprehensively develop rural areas, (2) promote agribusiness, and (3) support and strengthen production infrastructure development. In particular, the strategy for strengthening food security clearly states that small- and large-scale agricultural development will improve the productivity of cash crops such as rice. It also states that the sustainable development of the agricultural sector will proceed in an integrated manner by improving food security and domestic food supply through agricultural development, as well as by creating more job opportunities and income.

<Consistency with the Development Needs of Angola at the Time of Ex-Ante Evaluation >

The project was consistent with the development needs of Angola at the time of ex-ante evaluation. Due to the overwhelming lack of knowledge and techniques in the overall agricultural sector, it was necessary to develop farming technologies for supporting the agriculture promotion (rice cultivation) and human resources as well as to strengthen the extension of the farming technologies.

<Appropriateness of Project Design/Approach>

The project design/approach was appropriate. No problem attributed to the project design/approach was confirmed.

<Evaluation Result>

In light of the above, the relevance of the project is ③[3].

[Coherence]

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

The project was consistent with the Japan's ODA policy to Angola at the time of ex-ante evaluation. "Country Assistance Policy to the Republic of Angola" (2011) focused "Human resource development and improvement of agriculture and food security in the agricultural sector with great potential in order to facilitate balanced and sustainable economic development and industrial diversification" as one of the priority areas.

<Collaboration/Coordination with JICA's other interventions>

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

<Cooperation with other institutions/ Coordination with international framework>

The cooperation/coordination with other international institutions was 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>

At the time of project completion, the Project Purpose was achieved as planned. All the core items[4] of the Rice Cultivation Technical Package (RCTP) were applied by 39 out of the 44 (88.6%) model farmers in the 2017/2018 cropping season (Indicator 1).

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

By the time of the ex-post evaluation, the project effects have been continued. The core items of RCTP have been continuously utilized by farmers near the model sites and the extension areas, and the average yield of the farmers who were not affected by drought has increased. The number of farmers who partially applies the core items of RCTP also have increased.

<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 mostly achieved as planned. The total amount of income from rice has increased because of expansion of the cultivation areas (Indicator 1). In Huambo, from the period from 2019 to 2022 except 2020 when the drought affected the rice cultivation, the average yield of rice increased from 1.5 tons to 3.5 tons and the total sales income raised from 2.7 million Angola kwanza (AOA) to 6.3 million AOA. On the one hand, the average yield of individual farmlands at the model sites in the Bie Province decreased because of the drought. For the farmers near the model sites and in the respective extension sites, the average yield of rice increased by application of the core items of RCTP and extension of the Rice Cultivation Guide (RCG) to the farmers. In addition, although the number of farmers adopting all the core items of RCTP has still limited, the number of farmers partially adopting RCTP by selecting adaptable core items increased rapidly from 609 in 2019 to 965 in 2022.

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

Some positive impacts by the project have been confirmed at the time of ex-post evaluation. In terms of gender, since women implemented the rice farming activities in the Farmer's Field School (FFS) by the project, they became engaged in the extension of rice farming and sales of rice. As other positive impacts, the number of rice farmers has increased, and domestic rice has currently been sold in markets around the target areas. It is because the price of rice produced by the project is cheaper than imported rice, and their taste is better, as a result rice farming became more profitable than the corn that had been used to be cultivated in the areas.

Negative impact has not been 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

[3] ④ : very high, ③ : high, ② : moderately low, ① : low

[4] Core items of RCTP consist of (i) Land Preparation (comprising of bund construction, land leveling and puddling), (ii) Seed Selection, (iii) Sowing at Appropriate Timing, (iv) Transplanting/Line Sowing, (v)Fertilizer Application, (vi) Weeding, and, (vii) Harvest at Appropriate Timing.

<table>
<tr>
<td>(Project Purpose)
Improved rice cultivation methods are practiced by model farmers in the target sites.</td>
<td>Indicator 1
More than 50% of model farmers introduce at least core rice cultivation items of Rice Cultivation Technical Package (RCTP).</td>
<td>Status of the Achievement (Status of the Continuation): achieved as planned
(continued)
(Project Completion)
All the core items of the Rice Cultivation Technical Package (RCTP) were applied by 39 of the 44 (88.6%) model farmers in the 2017/2018 cropping season.
(Ex-Post Evaluation)
Refer to Overall Goal.</td>
<td>- Project completion report
- Questionnaire to DNA</td>
</tr>
<tr>
<td>(Overall Goal)
The yield of rice at the village where the model sites are located in Bié and Huambo province is improved.</td>
<td>Indicator 1
Grain yield is more than 2.0 ton/ha at individual farms in the villages where model sites are located.</td>
<td>Status of the Achievement: mostly achieved as planned
(Ex-Post Evaluation)
< Bie province：10 model sites >
<table>
<tr><th>Year</th><th>2019</th><th>2020</th><th>2021</th><th>2022</th></tr>
<tr><td>Average yield of individual farms in villages within model sites</td><td>2.0t/ha</td><td>2.0t/ha</td><td>1.5t/ha</td><td>1.2t/ha</td></tr>
<tr><td>Total income from rice sales on model sites</td><td>360,000 AOA</td><td>540,000 AOA</td><td>600,000 AOA</td><td>750,000 AOA</td></tr>
<tr><td>Average yield of farmers near model sites (supplement)</td><td>1.0t/ha</td><td>1.2t/ha</td><td>1.5t/ha</td><td>2t/ha</td></tr>
<tr><td>Average yield of extension sites (supplement)</td><td>2.0t/ha</td><td>2.5t/ha</td><td>3.0t/ha</td><td>3.5t/ha</td></tr>
</table>
< Huambo province：9 model sites>
*In 2022, 3 remote model sites were excluded, thus resulting in a total of 6 sites.
<table>
<tr><th>Year</th><th>2019</th><th>2020</th><th>2021</th><th>2022</th></tr>
<tr><td>Average yield of individual farms in villages within model sites</td><td>1.5 t/ha</td><td>0.5t/ha</td><td>2.0t/ha</td><td>3.5t/ha</td></tr>
<tr><td>Total income from rice sales on model sites</td><td>2,700,000 AOA</td><td>900,000 AOA</td><td>3,600,000 AOA</td><td>6,300,000 AOA</td></tr>
<tr><td>Average yield of farmers near model sites (supplement)</td><td>1.5t/ha</td><td>0.5t/ha</td><td>2.0t/ha</td><td>3.5t/ha</td></tr>
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<td>- Questionnaire to DNA</td>
</tr>
</table>

3 Efficiency

The project cost was within the plan/as planned (the ratio against the plan:70%) and the project period exceeded the plan because of combined factors such as safety checks for unexploded ordnance in the target areas (the ratio against the plan: 121%)

	Project Cost (Japanese side only, yen)	Project Period (months)
Plan (ex-ante)	1,080 million	60 months
Actual	757 million	73 months
Ratio (%)	70%	121%

Outputs were produced as planned. In the light above, the efficiency of the project is ③.

4 Sustainability

<Policy Aspect>

The updated version of "the National Rice Development Strategy" (NRDS) (2023-2028) has been currently developed by MINAGRIF. The updated version is mainly targeted at small-scale farmers and assumes that the average production of rice will reach 2.5 tons/ha and yield 45,000 tons/year by 2028. The NRDS task force has also been formed under the Minister of MINAGRIF, which will report to the Minister on the progress from the formulation of the NRDS to implementation monitoring.

<Institutional/Organizational Aspect>

Except for the termination of the Technical Coordination Committee (TCC), which was composed of IDA/ Agrarian Development Station (EDA), IIA, National Seed Service (SENSE), and extension officers from both provinces, there are no changes in the institutional and organizational aspects of the implementing and related organizations, respectively. It has been considered to involve local governments for further extension of the models introduced in the project. In addition to the exchange of information on viable varieties at IIA and IDA, a new JICA project on rice cultivation is scheduled to start in other states, which is expected to further strengthen the cooperative framework of these organizations, including SENSE, for the dissemination of rice cultivation. Since the TCC was an organization whose purpose was to facilitate the project for the implementing agencies, no inconvenience has occurred as a result of its termination. As for the personnel of

each agency, the budget of MINAGRIF, which has jurisdiction over each agency, is insufficient to continue to implement dissemination activities (DNA: 1 person, IIA: 3 persons, IDA: 5 persons, EDA: 1 person, SENSE: 3 persons).

<Technical Aspect>

After the project completion, efforts have been made to continue to maintain and improve techniques and knowledge, including a varieties selection test by IDA, training of facilitators through FFS by EDA, training for rice cultivation techniques and a varieties selection test for extension officers in charge of IIA, and training for certification of rice seeds by SENSE. In addition, in some cases, model farmers have voluntarily disseminated the techniques to farmers in the suburbs. As for the guidelines developed in the project, RCTP, RCG, and the operation and maintenance manuals for rice milling machines continue to be utilized.

<Financial Aspect>

According to MINAGRIF, the specific annual budget amount remained unclear. While the same amount of budget has been allocated each year, it has only been sufficient to cover a portion of the budget for rice crop extension (seeds, fertilizers, etc.). In addition, IDA is responsible for the operation and maintenance of rice milling machines, which are essential for the production of quality rice, and it was suggested at the project completion that without government assistance, it would be difficult to maintain the rice milling machines and that they would cease operation in the case of a breakdown. However, by collecting appropriate rice milling service fees, it has been able to make its own operation and maintenance budget for rice milling.

<Environmental and Social Aspects>

No issue on environmental and social aspects has been observed, and it has not been necessary to take any countermeasures.

<Evaluation Result>

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

5 Summary of the Evaluation

The project achieved the Project Purpose of improving rice cultivation methods of model farmers in the target areas as planned and partially achieved the Overall Goal of improving the yield of rice at the village in the model sites within Bié and Huambo provinces. As for sustainability, some problems have been observed in terms of the institutional/organizational and financial aspects of the implementing agency, but efforts have been made to proactively maintain and improve the technical aspect. The project period exceeded the plan.

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

III. Recommendations & Lessons Learned

Recommendations for Implementing Agency:

- In order to continue to implement project activities, there is a shortage of seed rice, both in quality and quantity, which is necessary for rice development. It is important to promote rice development in order to lead to an increase in yield by strengthening cooperation between IIA and IDA, training seed rice producers, securing sufficient quantities of seed rice of adapted varieties, and improving the quality of rice.
- The total income from rice sales in the model sites of Bie has grown substantially as the production itself has increased due to the expansion of the cultivation areas. Since rice is always in demand for sale and can be a cash crop, MINAGRIF can point to these results to new farmers who are considering adopting RCTP, which will lead to further promotion of RCTP.
- Both the implementing and related agencies have continued to maintain the same number of staff, but the number remains insufficient since the project completion. Given the rise in the number of farmers adopting RCTP and the expansion of rice production after the project completion, IIA in particular faces a significant increase in workload and needs to increase its staffing.
- After the project completion, the reasons why model farmers who adopted the core items of RCTP dropped them was largely because of seed shortage or poor quality seed, which made the core items of RCTP meaningless. Therefore, it is imperative that MINAGRIF be able to systematically produce and support seed production when disseminating the core items to many farmers.

Lessons Learned for JICA:

- After the project completion, the number of model farmers who partially adopted the core items of RCTP has increased rapidly, and the project activities spread rapidly to the neighboring areas of the model sites. This is because model farmlands were located in areas accessible to neighboring farmers and were able to demonstrate the value as a cash crop, thus JICA should refer to this when conducting extension activities in similar operations.

FFS farmland in the village of Kalila, Bie

Rice milling machine installed by IDA, Huambo