

Republic of Mozambique

FY2023 Ex-Post Evaluation Report of Technical Cooperation Project

“The Project for Establishment of Development Model at Communities’ Level Under
Nacala Corridor Agricultural Development”

External Evaluator: Ito Haruo, ICONS Inc.

0. Summary

The agricultural sector in Mozambique accounted for 23% of the GDP in 2010, with approximately 80% of the labor force engaged in agriculture, of which approximately 90% were women. However, only approximately 10% of arable land is cultivated.¹ The tropical savanna region in the north, with its substantial rainfall and extensive arable land, has considerable potential for expanding agricultural production. Despite this potential, small-scale farmers face challenges, such as low productivity and slow adoption of new technologies. Against this backdrop, the *Triangular Cooperation Programme for Agricultural Development of the African Tropical Savannah among Japan, Brazil, and Mozambique* (hereinafter referred to as “ProSAVANA”) was launched in 2011 with the aim of reducing poverty in the region and ensuring food security. Following that, the *Project for Establishment of Development Model at Communities’ Level Under Nacala Corridor Agricultural Development* (hereinafter referred to as “the project” or “ProSAVANA–PEM”) was implemented within the framework of *ProSAVANA*. Its purpose was to increase agricultural production among farmers and farmer organizations in the target area, and ultimately expand agricultural production in the Nacala Corridor region by developing and promoting agricultural development models adapted to the local context.

Regarding the evaluation results of the project, it was confirmed that there was relevance to the development plans and needs of Mozambique, as well as the appropriateness of the project’s plan and approach. Furthermore, synergistic effects were confirmed between the project and other projects of *ProSAVANA*, infrastructure development supported by Japanese ODA loans, and agricultural assistance from other organizations, in alignment with the cooperation policies of the Government of Japan and JICA. Therefore, its relevance and coherence are high. In addition, the development of locally-adapted agricultural development models and the training of agricultural extension officers, which were the key goals of the project, were successfully carried out according to the plan. By the time the project was completed, the indicators of Project Purpose regarding agricultural production, productivity, and income were achieved. Although the indicators of the Overall Goal were almost achieved, those related to the dissemination of the model were not fully met. However, many positive impacts are emerging. Therefore, effectiveness and impacts of the

¹ Referencing Mozambique’s *Agriculture Sector Development Strategy Plan* (hereinafter referred to as “PEDSA”) <https://www5.open.ac.uk/technology/mozambique/sites/www.open.ac.uk.technology.mozambique/files/pics/d130876.pdf> (accessed on October 21, 2024)

project are high. The project period slightly exceeded the original plan because of a one-year extension based on recommendations from the terminal evaluation conducted in November 2018 to ensure sustainability of the project. Due to the expansion of project sites and additional activities, the project cost also exceeded the original plan. Therefore, efficiency of the project is moderately low. The institutional/organizational and technical sustainability of the agricultural development models introduced by the project were secured. However, there are some challenges in policy, system and financial sustainability regarding institutionalization and budget allocation for the dissemination of agricultural development models. Therefore, sustainability of the project effects is moderately low.

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

1. Project Description



Three target provinces in the Nacala Corridor
(Source: Modified from JICA’s website)



Irrigation administered by the project
(Source: Photographed by the evaluator)

1.1 Background

As previously mentioned, *ProSAVANA*, an agricultural development project under triangular cooperation between the governments of Mozambique, Japan, and Brazil, was agreed upon by the three countries in September, 2009, with the goal of improving the livelihoods of local residents, primarily small-scale farmers in Nacala Corridor, through sustainable agricultural development. Under the umbrella of *ProSAVANA*, two preceding projects were implemented: the *Project for Improving Research and Technology Transfer Capacity for Nacala Corridor Agriculture Development, Mozambique* (hereinafter referred to as “ProSAVANA–PI”), which began in May, 2011, and the *Support for Agriculture Development Master Plan for Nacala Corridor in Mozambique* (hereinafter referred to as “ProSAVANA–PD”), which began in February, 2012. Finally, the project (*ProSAVANA–PEM*), was launched in May, 2013. The table below outlines the objectives of the three

projects that comprise *ProSAVANA*.

Table 1 Projects under ProSAVANA and Objectives

Projects	Objective
<i>ProSAVANA-PI</i> (2011–2017)	Improving the research capacity of the regional Agriculture Research Institute of Mozambique (IIAM) and demonstrating new technologies at pilot farms.
<i>ProSAVANA-PD</i> (2012–2020)	Formulating a master plan for agricultural development in the Nacala Corridor that contributes to socio-economic development through private investment and poverty reduction in small-scale farmers.
<i>ProSAVANA-PEM</i> (2013–2020)	Developing and promoting community-level management models based on agricultural scale suitable for local agricultural technologies and improving the productivity of farmers and farmer organizations.

Source: JICA

1.2 Project Outline

Overall Goal	Agriculture production, productivity, or income increases at each farming level ² in the ProSAVANA area in a sustainable manner.	
Project Purpose	Agricultural production, productivity, or income increases at each farming level by adoption of the agricultural development models in the target areas of the ProSAVANA area.	
Outputs	Output 1	Agricultural development models for increasing agricultural production in accordance with farming size are implemented in the target areas of ProSAVANA area.
	Output 2	Accessibility and quality of the agricultural extension services is improved in the target areas of the ProSAVANA area.
Total cost (Japanese Side)	1,613 million yen	
Period of Cooperation	May 2013–May 2020 (with an extension period from June 2019–May 2020)	
Target Area	21 districts in total: 11 districts in Nampula Province, eight districts in Niassa Province, and two districts in Zambezia Province ³	
Implementing Agency	Ministry of Agriculture and Rural Development (MADER), ⁴ Provincial Directorate of Agriculture and Fisheries (DPAP), ⁵ Provincial Economic Activity Services (SPAE) ⁶	
Other Relevant Agencies/ Organizations	Brazilian Cooperation Agency (ABC), National Service for Rural Learning (SENAR), Brazilian Agricultural Technical Assistance and Extension Company (EMATER), Federal University of Viçosa (Brazil)	
Consultant/ Organization in Japan	NTC International Co., Ltd., IC Net Limited, Oriental Consultants Global Co., Ltd.	
Related Projects	<p>Technical Cooperation</p> <ul style="list-style-type: none"> • <i>Support for Agriculture Development Master Plan for Nacala Corridor in Mozambique (2012–2020)</i> • <i>Project for Improving Research and Technology Transfer Capacity for Nacala Corridor Agriculture Development,</i> 	

² “each farming level” corresponds to the degree of organization such as individual, association, or cooperative.

³ **Nampula Province:** Malema, Ribáuè, Murrupula, Nampula, Meconta, Mogovolas, Muecate, Monapo, Mecuburi, Lalaua, Rapale (11 districts), **Niassa Province:** Lichinga, Chimbonila, Ngauma, Mandimba, Cuamba, Sanga, Majune, Mecanhelas (eight districts), **Zambezia Province:** Gurué, Alto Molocué (two districts), Total of 21 districts.

⁴ The Ministry of Agriculture and Food Security (MASA) was renamed the Ministry of Agriculture and Rural Development (MADER) in February 2020

⁵ At the time of project completion, it was the Provincial Directorate of Agriculture and Food Security (DPASA).

⁶ At the time of project completion, it was the Provincial Rural Extension Services (SPER)

	<p><i>Mozambique (2011–2017)</i></p> <ul style="list-style-type: none"> • <i>Project for Nacala Corridor Economic Development Strategies in the Republic of Mozambique (2012–2016)</i> <p>Japanese ODA Loan Project</p> <ul style="list-style-type: none"> • <i>Nampula – Cuamba Road Upgrading Project (L/A: 2010)</i> • <i>Mandimba – Lichinga Road Upgrading Project (L/A: 2013)</i> • <i>Nacala Port Development Project Phase 1 (L/A: 2013)</i> • <i>Nacala Port Development Project Phase 2 (L/A: 2015)</i> <p>Grant Aid</p> <ul style="list-style-type: none"> • <i>Project for Construction of Bridges on the Road between Ile and Cuamba (G/A: 2013)</i> • <i>Project for Reinforcement of Transmission Network in Nacala Corridor (G/A: 2015)</i>
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Source: JICA

1.3 Outline of the Terminal Evaluation

1.3.1 Achievement Status of Project Purpose at the Terminal Evaluation

In the terminal evaluation of the project (October–November 2018), the indicators related to the Project Purpose were achieved to a certain extent, but challenges were identified concerning the repayment of the revolving fund and securing profits. As a result, the terminal evaluation recommended an extension of the project, and these issues were addressed during the extension period. By the time the project was completed, all Project Purpose indicators had been achieved.

1.3.2 Achievement Status of Overall Goal at the Terminal Evaluation

In the target districts, dissemination systems for each model were established, and improvements in productivity and income increases for the target farmers were confirmed. Although it was considered premature at the time of the terminal evaluation to judge the likelihood of achieving the Overall Goal, it was determined that the continuation of the agricultural development model by the Government of Mozambique would make it possible to achieve the Overall Goal.

1.3.3 Recommendations from the Terminal Evaluation

In the Terminal Evaluation, short-term recommendations (by the end of the project) included: (i) the reliable implementation of planned activities, reviewing the design and operational system of the revolving fund, finalizing and concretizing guidelines related to the agricultural development model, drafting policy recommendations and strategic plans, and training extension officers of the Provincial Directorate of Agriculture and Fisheries (hereinafter referred to as “DPAP”⁷) and the District Economic Activities Services (hereinafter referred to as “SDAE”), (ii) the institutionalization of the project implementation process and results, (iii) strengthening collaboration with other

⁷ At the time of the terminal evaluation, it was the Provincial Directorate of Agriculture and Food Security (DPASA)

organizations (such as NGOs and other aid agencies), (iv) enhancing cooperation with research, and (v) promoting the sharing and publicizing of project activities and outcomes. Additionally, medium-to long-term recommendations (after the project completion) included: (i) securing the budget (including human resources) necessary for the expansion of the model and (ii) the appointment and training of personnel responsible for promoting agribusiness.

2. Outline of the Evaluation Study

2.1 External Evaluator

Ito Haruo, ICONS Inc.

2.2 Duration of Evaluation Study

This ex-post evaluation study was conducted with the following schedule:

Duration of the Study: September, 2023–January, 2025

Duration of the Field Study: April 21, 2024–May 22, 2024

July 14, 2024–August 9, 2024

3. Results of the Evaluation (Overall Rating: B⁸)

3.1 Relevance/Coherence (Rating: ③⁹)

3.1.1 Relevance (Rating: ③)

3.1.1.1 Consistency with the Development Plan of Mozambique

At the time of project planning, alignment with development strategies, such as the *Government's Five-Year Plan (PQG) (2010–2014)*, the *Action Plan for the Reduction of Absolute Poverty (PARPA) (2010–2014)*, *PEDSA (2010–2019)*, and the *Action Plan for Food Production (PAPA) (2008–2011)* was confirmed. Even at the time of project completion, the consistency between the Project Purposes and the aforementioned agricultural policies, including *PEDSA (2011–2020¹⁰)*, the *Master Plan for Agricultural Extension (PDEA) (2006–2019)*, and the *National Program for Agricultural Extension (PRONEA) (2006–2017)*, was confirmed. Furthermore, in valid provincial development plans at the time of project completion, agriculture was positioned as a key industrial sector in all target provinces.¹¹ Additionally, the agricultural development model established by the project was designed in line with the legal framework of the country's farmer organization support programs, including Presidential Decrees (*Law No. 2/2006*) and the Cooperative Law (*Law No. 23/2009*). This further demonstrates that the project objectives were aligned with the

⁸ A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

⁹ ④: Very High, ③: High, ②: Moderately Low, ①: Low

¹⁰ At the time of project planning, alignment with the draft version of *PEDSA (2010–2019)* was confirmed. Later, the finalized version, *PEDSA (2011–2020)*, was officially published. <https://faolex.fao.org/docs/pdf/moz169514.pdf> (accessed on October 21, 2024)

¹¹ Referencing the *Nampula Provincial Development Plan (2011–2020)*, *Zambezia Provincial Development Plan (2011–2020)*, and *Niassa Provincial Development Plan (2018–2029)*.

development policies of Mozambique.

3.1.1.2 Consistency with the Development Needs of Mozambique

At the time of project planning, the agricultural sector in Mozambique accounted for 23% of the GDP (2010), and agriculture was positioned as an important industry, with approximately 80% of the labor force engaged in agriculture, of which about 90% were women. Furthermore, only approximately 10% of arable land was cultivated.¹² The target region, the Nacala area, is located in the tropical savanna region of northern Mozambique, which has favorable conditions with a certain amount of rainfall and vast arable land, offering potential for expanding agricultural production. However, the agricultural practices of small-scale farmers, who constitute the majority of the region, are limited to traditional techniques and their farming methods are extensive, with low productivity in both subsistence and commercial crops. Even medium- and large-scale farmers face challenges in productivity owing to the limited adoption of advanced agricultural technologies.

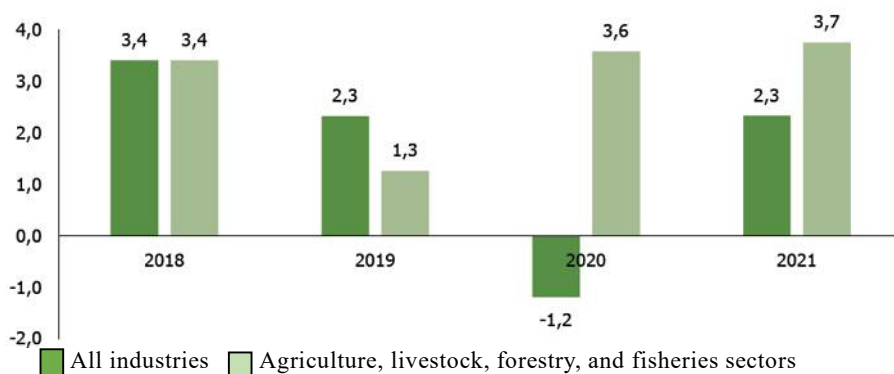
At the time of the project completion, the number of family and commercial farms in the country continued to increase, from 4.13 million in 2018 to 4.61 million in 2022. Many of these farmers were concentrated in the target provinces of Zambezia (880,000 farmers) and Nampula (810,000 farmers), indicating a high demand for agricultural development in the region. The agricultural sector remains the largest source of employment and income in Mozambique, with 66% of the workforce engaged in agriculture in 2020 and 98% of agricultural workers managing small-scale farms¹³. In rural areas, 82% of the population worked in agriculture, compared to 32% in urban areas. The annual growth rate of the youth population (aged 18–35 y) in rural areas was 2.5%, making agriculture a critical source of employment, particularly in rural regions.¹⁴ Moreover, as shown in Figure 1, the country's overall GDP experienced negative growth from 2020 onward due to the impact of the COVID–19 pandemic; however, the agriculture, livestock, forestry, and fisheries sectors demonstrated steady growth and played a key role in driving Mozambique's economic recovery from 2018 to 2022.

¹² Source: *PEDSA*

<https://www5.open.ac.uk/technology/mozambique/sites/www.open.ac.uk.technology.mozambique/files/pics/d130876.pdf> (accessed on October 21, 2024)

¹³ According to the Mozambican government's definition, small-scale farmers typically own agricultural land of 5 hectares or less, and agricultural production often relies on family labor. (Source: *PEDSA*)

¹⁴ Source: National Institute of Statistics (INE)



Source: Mozambique National Institute of Statistics

Figure 1 Trends in GDP growth rates for all industries and the agriculture, livestock, forestry, and fisheries sectors

3.1.1.3 Appropriateness of the Project Plan and Approach

Regarding the use of triangular cooperation with Brazil, this ex-post evaluation indicated that Brazil, which shares Portuguese as its official language and has advanced agricultural research in similar natural conditions with Mozambique, provided advantages to Mozambique, particularly in the training and capacity building of technicians and extension officers. Training conducted by the Brazil side, mainly targeting technicians who provide training to extension officers, contributed to improving the quality of training and the monitoring of extension activities. However, challenges were noted during the collaboration between Japanese consultants responsible for the project implementation and Brazilian government research institutions in coordinating schedules and ensuring consistency in daily allowances for counterpart training, owing to differences in organizational regulations. These issues posed some difficulties in the collaboration.

3.1.2 Coherence (Rating: ③)

3.1.2.1 Consistency with Japan’s and Brazil’s ODA Policies

At the time of planning, the project was aligned with Japan’s priority assistance areas for Mozambique, particularly the *Regional Economic Revitalization Development Program*, including the *Nacala Corridor Development and Improvement Program*, and the *Agricultural Technical Support Program*. Considering that 95% of the rural farmers engaged in agriculture were small and impoverished at the time of planning, the project was consistent with the *United Nations Millennium Development Goals (MDGs)*, which aimed to halve the population suffering from extreme poverty and hunger. Furthermore, the project’s objectives were in line with the goals outlined in the *Yokohama Action Plan* during the *Fourth Tokyo International Conference on African Development (TICAD)* in 2008, specifically regarding “Capacity building for increasing food production and agricultural productivity” and the “Promotion of triangular cooperation to expand partnerships in

Africa”.¹⁵

As for triangular cooperation with Brazil, the project was aligned with the *Japan–Brazil Partnership Program (JBPP)* and the framework was signed in 2000 to effectively promote triangular cooperation between Japan and Brazil, particularly targeting Portuguese-speaking Africans and supporting Brazil’s capacity as a development partner.¹⁶ Additionally, Brazil’s foreign policy strategy of the government of Brazil under President Lula, starting in 2003, prioritized strengthening relations with Africa, which included numerous presidential visits to the region and the establishment of many embassies. In 2010, Brazil reinforced its ties with Africa by hosting the *Brazil–Africa Policy Dialogue*, which focused on food security and invited agricultural ministers and senior officials from approximately 50 African countries.¹⁷ This also demonstrates the alignment with diplomatic strategy of the government of Brazil.

3.1.2.2 Internal Coherence

Within the framework of *ProSAVANA*, the project aimed to increase agricultural production by farmers and farmer organizations and expand agricultural output in the Nacala Corridor region by utilizing the new agricultural technologies proposed in *ProSAVANA–PI* and the master plan developed under *ProSAVANA–PD*. The project focused on developing and disseminating community-level agricultural development models that use regionally-adapted technologies, and demonstrated appropriate farm management methods for different scales of farming. In collaboration with *ProSAVANA–PI*, guidelines and manuals (training materials) for extension officers and farmers were created with support from its implementation agencies such as the Mozambique Agricultural Research Institute (hereinafter referred to as “IIAM”), DPAP and SDAE. Additionally, joint activities such as training sessions on soil conservation and nutrition were conducted by both projects.¹⁸ In collaboration with *ProSAVANA–PD*, the agricultural models of the project and dissemination plans were developed based on the draft version of the master plan formulated by *ProSAVANA–PD*. Furthermore, the agricultural development model (Model 4) implemented in the project drew on lessons from the pilot projects under *ProSAVANA–PD* which aimed to support contract farming companies working towards sustainable agribusiness using the *Development Initiative Fund* (hereinafter referred to as “DIF”).

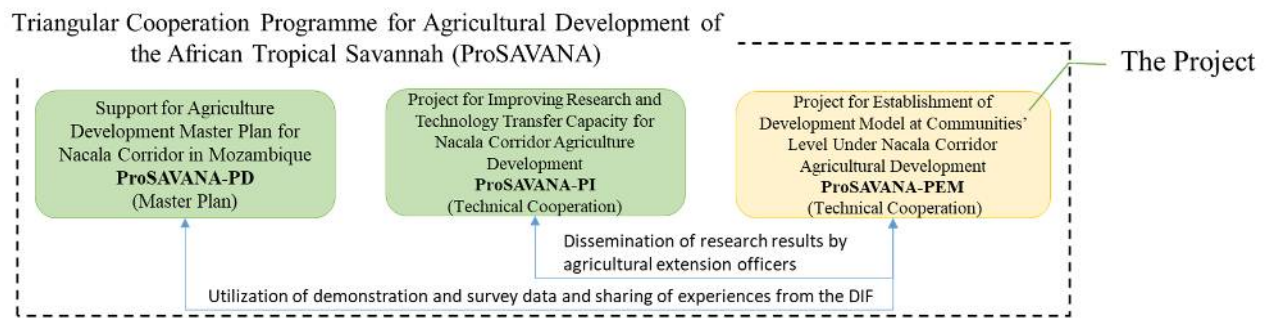
¹⁵ https://www.mofa.go.jp/mofaj/area/ticad/index_tc4.html (accessed on October 21, 2024)

¹⁶ <https://www.jica.go.jp/Resource/brazil/office/activities/program/triangular/index.html> (accessed on October 21, 2024)

¹⁷ Source: Ministry of Foreign Affairs in Japan.

https://www.mofa.go.jp/mofaj/gaiko/oda/shiryo/hyouka/kunibetu/gai/brazil/pdfs/kn09_03_01.pdf (accessed on October 21, 2024)

¹⁸ The Provincial Directorate of Agriculture and Fisheries (DPAP) has a Department of Agricultural Research (DIA), which plays a role in connecting research and extension. The Agricultural Research Department evaluates technologies based on research reports from IIAM, and those technologies whose effectiveness is recognized are transferred to the farmers by the extension officers. In collaboration with *ProSAVANA–PI* in the project, this existing system was strengthened.



Source: Prepared by the evaluator

Figure 2 Collaboration/coordination between projects within the ProSAVANA Program

It was noted that the distribution of agricultural products and the procurement of fertilizers and materials became easier as a result of JICA-supported ODA loan projects, including the *Nampula–Cuamba Road Improvement Plan*, *Mandimba–Lichinga Road Improvement Project*, and the *Nacala Port Development Project*. Furthermore, the knowledge of market-oriented approach and revolving fund introduced by the project was utilized in the *Rice Productivity Improvement Project (2016–2021)* that JICA implemented in Zambezia Province.¹⁹

3.1.2.3 External Coherence

At the time of planning, NGO called the National Cooperative Business Association CLUSA International (NCBA CLUSA) supported for organizing farmers, funded by the United States Agency for International Development (USAID), in the Nacala Corridor region. Simultaneously, the World Food Programme (WFP) conducted the *Purchase for Progress (P4P)* initiative in Nampula Province, where food was procured from organized farmers for food aid purposes. Additionally, since December 2007, donors such as the International Fund for Agricultural Development (IFAD) have supported the *National Program for Agricultural Extension (PRONEA)* implemented by the Government of Mozambique. The experiences, lessons learned, and guidelines from these donor-funded projects were utilized to develop agricultural development models in the project.

During the implementation period of the project, the *Rural Markets Promotion Project (PROMER) (2018–2021)* implemented by the IFAD and the European Union (EU), targeted small-scale farmers and small-to-medium agricultural enterprises in the provinces of Cabo Delgado, Nampula, Niassa, and Zambezia. Due to the similarity of support contents, experiences were shared between the project and PROMER. In addition, agricultural

¹⁹ In the *Rice Productivity Improvement Project* by JICA, the knowledge accumulated through the project was used in Zambezia Province through the technical transfer to rice farmers via the agricultural extension officers trained by the project; this included marketing training, business meetings, farmers' fairs, accounting training, and matchmaking with potential buyers.

extension officers in the target provinces benefited from joint training under both projects, which led to a synergistic effect in their capacity development. Under the *Integrated Agriculture and Natural Resource Management Project* (hereinafter referred to as “SUSTENTA”) (2017–2023), funded by the World Bank and led by the Government of Mozambique, efforts were made to integrate small-scale farmers into the agricultural production value chain and promote sustainable agricultural practices. Stakeholders, including representatives from the World Bank and MADER, noted that training materials for market-oriented agriculture from the project were incorporated into training programs under *SUSTENTA*. Additionally, agricultural extension officers trained under the project were also used in *SUSTENTA*.

As of the ex-post evaluation, it was confirmed that under the *Inclusive Agri-Food Value Chain Development Project (PROCAVA)* (2024–2028), supported by IFAD, the agricultural extension officers trained under the project were being used to improve nutritional security, provide livelihood support, and increase income for farmers.

In terms of relevance, alignment with the development plans and development needs of Mozambique, and appropriateness of the project plan and approach were confirmed. Regarding coherence, it was confirmed that the project aligned with the cooperation policies of the Government of Japan and JICA, other projects of *ProSAVANA*, infrastructure development through ODA loan projects, and agricultural support from other organizations, resulting in tangible synergies.

Therefore, its relevance and coherence are high.

3.2 Effectiveness and Impacts²⁰ (Rating: ③)

3.2.1 Effectiveness

3.2.1.1 Project Output

The project set two Outputs for the target regions, Output 1 “The concretization and implementation of agricultural development models,” and Output 2 “Improved access to and quality of agricultural extension services.” For the Output 1 “The concretization and implementation of agricultural development models,” four agricultural development models shown in Table 2, were developed to ultimately improve agricultural production, productivity, and income. Guidelines for each model, including lessons learned from their implementation, were created. In April 2019, the governments of Nampula, Niassa, and Zambezia provinces approved policy recommendations that included these guidelines.

²⁰ When providing the sub-rating, Effectiveness and Impacts are to be considered together.

Table 2 Agricultural development models introduced by the project

Model 1	Community Support
Main Target	<ul style="list-style-type: none"> ● Communities located in remote areas with limited access to agricultural extension services ● Farmers not affiliated with local farmer organizations
Objective	<ul style="list-style-type: none"> ● Efficient transfer of agricultural technologies and dissemination of improved seeds to communities with limited government extension services ● Promotion of women’s participation in agriculture through gender equality and nutrition improvement initiatives, diversification of crops for improved nutrition, and management of agricultural income
Model 2	Association Support
Main Target	<ul style="list-style-type: none"> ● Associations and forums integrating multiple associations ● Small-scale farmers affiliated with associations (farmer organizations)
Objective	<ul style="list-style-type: none"> ● Comprehensive support to increase the income of associations ● Capacity-building of extension officers to promote self-reliant agribusiness activities within associations and forums
Model 3	Cooperative Support
Main Target	<ul style="list-style-type: none"> ● Producer groups interested in establishing cooperatives and existing agricultural cooperatives
Objective	<ul style="list-style-type: none"> ● Supporting the establishment of agricultural cooperatives²¹ and expanding sales profits through collective shipment of members’ agricultural products to bulk buyers, as well as processing agricultural products through cooperatives
Model 4	Sustainable Contract Farming
Main Target	<ul style="list-style-type: none"> ● Contract farmers ● Contract farming companies ● SDAE
Objective	<ul style="list-style-type: none"> ● Establishing mechanisms for discussions and improved relations between contract farmers and companies, facilitated by SDAE, to ensure smooth contract farming operations within local communities

Source: JICA

Regarding Output 2, “Improved access to and quality of agricultural extension services,” agricultural extension officers responsible for implementing the designed agricultural development models, along with supervisors who supported the activities of the extension officers, were trained. Technical transfer from extension officers to the farmers was implemented as planned.

3.2.1.2 Achievement of Project Purpose

To measure the achievement of the Project Purposes, two indicators were set: Indicator 1 “Agricultural production, productivity, or income of farmers and agricultural organizations adopting the agricultural development models increases,” and Indicator 2, “At least 6% of households in the target sites of the *ProSAVANA* adopt the agricultural development models”.²² Furthermore, the sub-indicators were set to Indicator 1 for each agricultural

²¹ The cooperative was expected to have approximately 100 members.

²² Indicator 2 was initially defined as “The number of households adopting the agricultural model in the target sites of the ProSAVANA region will increase by at least 6%.” However, since there were no households adopting the agricultural development model (0%) before the project intervention, this ex-post evaluation reinterpreted the indicator as “The proportion of households adopting the model should be at least 6% of the total households,” and the indicator was reset accordingly.

development model. By the time the project was completed, all the set indicators had been achieved. The achievement status for the sub-indicators of Indicator 1 is shown in Table 3, and the achievement status for Indicator 2 is shown in Table 4.

Table 3 Achievement of Project Purpose (Indicator 1)

	Sub-Indicator	Achievement Status/Results (as of project completion: 2020) ²³
Model 1	【Approach 1】 75% or more of members of the target community groups implement at least one of the disseminated techniques in their field.	【Achieved】 86% of the members acquired and applied an average of two techniques.
	【Approach 2】 75% or more of members of the target community implement at least one of the disseminated knowledge areas at home.	【Achieved】 Over 80% of the members in the target community used at least one of the disseminated knowledge areas (gender equality, family farm accounting, savings activities, and nutrition improvement).
Model 2	Members of the target associations increase their income by 20%.	【Achieved】 Vegetable cultivation: income increased by 41% (average of nine associations) Poultry farming: income increased by 148% (average of six associations) Seed production: income increased by 23% (average of 38 associations)
Model 3	【Existing Cooperatives】 Cooperative revenue increases by 20% through value chain development.	【Achieved】 Milling: revenue increased by 34% (including repayment of the fund)
	【New Cooperatives】 Generate profits while repaying the revolving fund according to the business plan.	【Achieved】 Milling: profit in the second year was 24,520 Mozambican Metical. ²⁴ (average fund repayment rate of 56% for three cooperatives) Collective sell: income per member farmer was 2,300 Mozambican Metical. (average of 50 cooperative members across nine communities)
Model 4	Contract farmers' income per unit area (1ha) increases by 50%.	【Achieved】 Farmers participating in contract farming with the target agricultural companies increased their income by 72% per hectare (average across four companies).

Source: JICA

Table 4 Achievement of Project Purpose (Indicator 2)

Indicator	Achievement Status/Results (as of project completion in 2020)
At least 6% of households adopt agricultural development models.	【Achieved】 Out of a total of 65,099 households in the target area, 4,694 households benefited, accounting for 7.2%, which exceeded the target of 6%.

Source: JICA

²³ For income improvement figures, the total annual income per household from both agricultural and non-agricultural sources, collected during the baseline survey, was used for Models 1, 2, and 4. For Model 3, the annual profit of the cooperatives was used. In the case of existing cooperatives, the comparison was made against the annual income from the collective sell that was operated mainly before the start of the project.

²⁴ As of October 2024, 1.00 Mozambican Metical (MZN) = 2.25 Japanese Yen

Agricultural development models tailored to regional characteristics were developed as planned and agricultural extension officers were trained as scheduled. By the time the project was completed, Project Purpose indicators, improvements in agricultural production, productivity, and income, had been achieved. Thus, the project achieved its purpose.

3.2.2 Impacts

3.2.2.1 Achievement of Overall Goal

The Overall Goal of the project was “To sustainably improve agricultural production, productivity, or income at various scales of farming in the ProSAVANA target region.” Indicator 1, “The application of the models in the ProSAVANA target region progresses steadily” and Indicator 2, “The goals set in the guidelines for each model are achieved” were set to measure this goal. As no specific timeframe was stipulated for achieving these indicators, the evaluation was based on the status at the time of the ex-post evaluation (May 2024).

For indicator 1, nearly all surveyed farmers²⁵ were applying the techniques learned through the project at the time of the ex-post evaluation, indicating that the “application of models” mentioned in the indicator was steadily progressing among the target farmers, cooperatives, and agricultural companies where the agricultural development models had been introduced. However, from the perspective of disseminating the models to other farmers in the ProSAVANA target regions (the three target provinces), the effect was limited. Thus, this indicator is partially unmet. One of the barriers is that the models have not been institutionalized, and the Government of Mozambique is unable to secure a budget for dissemination activities (e.g., purchasing seeds, fertilizers, pesticides, and revolving fund capital for new organizations). Initially, it was intended that the *Master Plan for Agricultural Development*, formulated by the related project, *ProSAVANA-PD*, would be approved by the Government of Mozambique, thus institutionalizing the models from the project. However, the *Master Plan* was not approved because of a lack of consensus with civil society, which became a barrier to institutionalization and dissemination of the models. In this regard, one of the external conditions for achieving the Overall Goal that was assumed during planning— “related existing projects are implemented and operated as scheduled”—was only partially fulfilled, becoming a hindrance to achieving the Overall Goal.

For Indicator 2, regarding “the achievement of the goals set in the guidelines for each model”, the status of each model’s sub-indicators under the Project Purpose (Indicator 1) was confirmed at the time of the ex-post evaluation and was reflected in the evaluation. As

²⁵ In this ex-post evaluation, surveys were conducted in 27 communities located across all 21 target districts. Of these, 6 districts were surveyed by the evaluator together with local research assistants, while the remaining 15 districts were surveyed independently by local research assistants. A total of 153 farmers (89 men and 64 women) participated in the interviews.

a result, it was confirmed that the Project Purpose indicators were continuously being realized even at the time of the ex-post evaluation, and it can be judged that the Overall Goal “Sustainable improvement of agricultural production, productivity, and income in the target regions” has mostly been achieved. Challenges related to sustainability were noted, such as some associations discontinuing poultry farming in Model 2 and milling operations in Model 3. Therefore, the project mostly achieved its Overall Goal. Table 5 presents the achievement of Overall Goal.

Table 5 Achievement of Overall Goal

Indicator	Achievement Status/Results (as of ex-post evaluation: 2024)
Indicator 1: The application of the models progresses steadily in the ProSAVANA target region.	<p>【Partially Achieved】</p> <p>The agricultural development models continue to be practiced in all target districts, and the “application of models” is progressing in communities that received technical transfers. However, the dissemination of models in the target regions remains limited.</p>
Indicator 2: The goals set in the guidelines for each model are achieved.	<p>【Mostly Achieved】</p> <p><Model 1></p> <p>Approach 1: 95% of surveyed farmers applied at least one learned technique.</p> <p>Approach 2: 91% of surveyed farmers applied at least one piece of knowledge on gender equality, family accounting, savings activities, or nutrition improvement.</p> <p><Model 2></p> <p>Vegetable cultivation: The average income of farmers in the target associations increased by 385%, to 31,667 Mozambican Metical/year, compared to before the project.</p> <p>Poultry farming: In the three associations that continued their activities, farmers’ income increased by 233% to 15,429 Mozambican Metical/year, compared to before the project. However, poultry farming was discontinued in the remaining three associations due to infectious diseases and budget shortages.</p> <p>Seed production: The average income of farmers in the target associations increased by 567% to 45,894 Mozambican Metical /year, compared to before the project.</p> <p><Model 3></p> <p>Milling: In the newly-established cooperatives in the Monapo and Alto Molocué districts, the average profit in 2022 was approximately 50,000 Mozambican Metical/year. However, operations were subsequently discontinued due to a lack of consistent electricity supply for milling equipment and insufficient funds for repairs.</p> <p>Collective sell: The cooperative in Gurué district fully repaid its fund and generated an average income of 1,500 Mozambican Metical/year per member in 2023. However, income has been declining due to crop failures caused by climate change.</p> <p><Model 4></p> <p>The profit per hectare of contract farmers from three agricultural companies financed by <i>DIF</i> increased by an average of 150%. Although there have been fluctuations in company revenue and the number of contract farmers, there is improvement, confirming that the project’s financing contributed to business expansion.</p>

Source: Results from ex-post evaluation survey

3.2.2.2 Other Positive and Negative Impacts

1) Impacts on the Environment

At the time of planning, the project was assessed that the undesirable impact on the environment was minimal, thus it was classified as Category C based on the *JICA Guidelines for the Confirmation of Environmental and Social Consideration (April 2010)*. The technologies and farming methods selected for the project were carefully selected by experts working in the target areas, and it was confirmed that seeds, fertilizers, and irrigation methods were adapted to the local environment. Furthermore, in collaboration with *ProSAVANA-PI*, the promotion of environmentally-sustainable agriculture and soil erosion reduction and prevention contributes to environmental conservation in the target areas.

2) Resettlement and Land Acquisition

Civil society raised concerns about resettlement and land acquisition during *ProSAVANA*. Therefore, in the detailed planning of the project, it was emphasized that particular attention should be paid regarding the formation and implementation of privately-managed farms and out-grower schemes.²⁶ This ex-post evaluation was confirmed through interviews with farmers and stakeholders in all target districts where no resettlement or land acquisition issues arose in relation to the project.

3) Gender Equality

Gender training was conducted in the target areas of Agricultural Development Model 1. In interviews with participants of the training, responses included, “Before the training, women carried firewood while holding their children, but after participating in the gender training, my husband began to share the task of carrying firewood,” and “I am now able to make decisions regarding household finances.” Additionally, cases were observed in which women took the lead in market-oriented agricultural activities (seed production and collective sell), promoting women’s advancement. In the nutrition improvement activities, the nutritional status of pregnant and breastfeeding women improved, and there was a reduction in the burden on mothers as childhood illnesses decreased, demonstrating a positive impact on gender equality.

4) Marginalized People and Human Well-being

The project had a positive impact on marginalized groups, including small-scale farmers, the poor, and women. Small-scale farmers increased their agricultural production and, through market research and collective sales, were able to sell their crops at fair prices, thereby alleviating poverty. In terms of well-being, the project contributed to (i) household income, job satisfaction, home ownership, and children’s education; (ii) physical health

²⁶ JICA Detailed Planning Survey Report

through improved nutrition; and (iii) social connections and decision-making within the community through support for organizing farmers.

BOX 1 Improving Livelihoods through Association Activities (Model 1)

The Nicotie Association in the Chiposse community was established in 2017 through the project, consisting of 20 women and 9 men, and began its activities. The farmers participated in training sessions where they learned techniques such as row planting, post-harvest processing, and market research, while also introducing new crops, such as beans and rice, to diversify their crops and improve their agricultural skills. The income of member farmers has improved substantially, allowing them to build brick houses, purchase refrigerators, mattresses, and bicycles. The ability to buy bicycles for school commuting and pay for their children’s school fees has greatly contributed to improving the community’s school attendance rate. The association’s success has attracted attention from donors, and it received support for rice production under the *Rural Markets Promotion Program (PROMER)* implemented by IFAD, as well as a threshing machine donated by the Provincial Farmers’ Union.

The mother (the woman in the photo) who participated in the project’s nutrition improvement training had two malnourished children at the time but learned how to prepare weaning foods and provided them to her children, which improved their nutritional status. Both children have now grown up healthy and are attending school. Furthermore, the gender training led to behavioral changes, with women in the community actively participating in decision-making processes. This resulted in a notable increase in female membership and the election of a woman as the president of the association.



Photo 1 Threshing machine from Farmers’ Union



Photo 2 Mother discussing children’s nutritional improvements

Source: Photographed by the evaluator

5) Unintended Positive/Negative Impacts

By participating in cooperatives and agricultural organizations, farmers formed networks that allowed them to share information and resources, facilitating the exchange of

agricultural techniques and knowledge, which led to improvements in productivity and access to new markets. Through regular meetings and joint activities, trust was fostered among the farmers, enabling them to collaborate in addressing problems. Collective purchasing and selling activities reduced costs, improved bargaining power in the market, and ensured economic stability. Additionally, by incorporating mutual aid schemes and cooperative insurance systems, farmers were able to diversify risk. From the above examples, it can be said that organizing farmer's groups supported by the project played a key role in the formation of social capital, contributing not only to the development of individual farmers, but also to the advancement of the entire community.

BOX 2 Formation of Social Capital in Cooperatives

The NIVENHE Cooperative, targeted under Model 2 of the project, was initially established as an association in 2016, with farmers collectively starting seed production. Currently, it has 58 members, all of whom are women. Through the implementation of the model, vegetable cultivation, market research, farm planning, and a revolving fund were introduced. The cooperative's collective selling of crops, sales contracts with brokers, and the construction of storage facilities to sell crops when prices are higher have substantially increased farmers' incomes. Members were able to use their increased income to start new income-generating activities such as livestock breeding, leading to improved livelihoods. Additionally, part of the sales revenue was accumulated in the revolving fund, which serves as mutual aid by lending to farmers in need of funds. The organization of farmers into an association led to an increase in participation in group activities, stronger solidarity, and the sharing of agricultural knowledge, resulting in the formation of social capital among the farmers. Recognizing these achievements, the association was upgraded to a cooperative in 2020, and the model's activities continue with support from the European Union's *PROMOVE Comércio* program, which supports trade and development in Mozambique.



Photo 3 Exterior view of the NIVENHE Cooperative



Photo 4 Ledger created by cooperative members

Source: Photographed by the evaluator

The Project Purpose of “improving agricultural production, productivity, and income of target farmers through the adaptation of each agricultural development model in the target region” has been achieved. The Overall Goal aims for these indicators to manifest sustainably. Although it can be concluded that the indicators for the Overall Goal have mostly been achieved, the dissemination of models using the established guidelines has not progressed sufficiently. However, no negative impacts on the environment or on resettlement were observed. Additionally, many positive impacts were seen, such as improvements in gender equality, benefits for marginalized groups who face barriers to fair social participation, enhanced well-being, and the formation of social capital, indicating a high impact.

Through the implementation of the project, the Project Purpose of “increasing agricultural production, productivity, and income through agricultural development models in the target regions” has been achieved. Furthermore, the indicators for the Overall Goal have mostly been achieved, with planned effects manifesting and confirming positive impacts. Therefore, effectiveness and impacts of the project are high.

3.3 Efficiency (Rating: ②)

3.3.1 Inputs

3.3.1.1 Elements of Inputs

In the project, inputs from the Japanese side were provided as shown in Table 6.

Table 6 Inputs from the Japanese side

Inputs	Plan	Actual (as of project completion)
(1) Experts	Chief Advisor, Agribusiness, Agricultural Finance, Farming Technology, Agricultural Extension System, Demonstration Project Management, Training Plan Management, Evaluation/Monitoring, Coordinator (approximately 270 MM*)	Long-term expert: 1 Short-term experts: 23 (292.45 MM)
(2) Trainees received	Not specified	17 participants (training in Japan, third-country training)
(3) Equipment	Vehicles for activities, materials necessary for dissemination (e.g., fertilizers, seeds)	GPS, digital cameras, PCs, office equipment (printers, projectors), machinery (e.g., milling machines, dehulling machines, irrigation pumps, vehicles, motorcycles)
(4) Others	Costs for the implementation of demonstration projects	Local project expenses, in-county training expenses, etc. 382 million yen

* MM stands for man month
Source: JICA

Table 7 presents the record of inputs from the Brazilian side from 2014 to 2018. The activities included short-term mission trips, expert training in Mozambique, training in Brazil by relevant organizations, and the introduction of an expanded data collection and analysis system (SIRADE²⁷). Whereas detailed planned inputs were not available for comparison, interviews with the Brazilian Cooperation Agency (ABC) indicated that, although the dispatch of experts and training in Brazil were implemented as planned, some local activities by the Brazilian side were not carried out because of budget shortages caused by Brazil's severe economic recession from 2014–2016.

Table 7 Inputs from the Brazilian Side

Inputs	Plan	Actual (as of the project completion)
(1) Experts	Not specified	Experimental planning and statistics, Institutional organization of rural extension services, new approaches in rural extension, Rural extension methodology, Indicators for development and evaluation of rural extension, Project planning, Conservation agriculture technologies and processes, post-harvest procedures/techniques/processes, Mobilization of rural producers, Training of rural professionals, Academic writing (161 participants)
(2) Trainees received in Brazil		Target: central and provincial agricultural technicians, and extension officers (27 participants)
(3) Others		Development and provision of the Extended Data Collection and Analysis System (SIRADE) software

Source: Brazilian Cooperation Agency (ABC)

3.3.1.2 Project Cost

In June 2015, the project expanded its sites and added additional activities to Model 2, including seed production, poultry farming, and vegetable cultivation, using the Smallholder Horticulture Empowerment and Promotion (SHEP) approach. Consequently, new inputs increased, leading to an increase in project costs. The total project cost exceeded the plan as the planned amount of 1,216 million yen, reaching 1,613 million yen (133% of the planned budget).

3.3.1.3 Project Period

The project period, initially planned for six years, was extended by one year following the recommendations of the terminal evaluation in November 2018, resulting in a total of seven years (117% of the planned period), slightly exceeding the plan. During the extension period, the following eight activities were implemented: (i) urgent review of the design and

²⁷ SIRADE is a system developed to support the collection and analysis of agricultural data. It serves as a data management tool aimed at improving the management of agricultural resources and land-use efficiency. SIRADE plays an important role in the development, planning, and monitoring of agricultural policies in rural areas.

management of the revolving fund; (ii) finalization and concretization of the agricultural development model guidelines; (iii) approval of policy recommendations by MADER; (iv) training of DPAP, Provincial Economic Activity Services (hereinafter referred to as “SPAЕ”), and SDAE extension officers; (v) institutionalization of the project implementation process and outcomes; (vi) collaboration with other organizations (e.g., NGOs, other aid agencies); (vii) strengthening collaboration with research institutions and nutrition improvement; and (viii) sharing and promoting project activities and results.

The total project cost exceeded the planned 1,216 million yen, reaching 1,613 million yen (133% of the planned budget). The project period, initially planned as six years, was extended to seven years (117% of the planned period), slightly exceeding the initial plan. Therefore, efficiency of the project is moderately low.

3.4 Sustainability (Rating: ②)

3.4.1 Policy and System

At the time of the ex-post evaluation, the national policy aligned with the content of the project was *PEDSA II (2022–2030)*, which was formulated in 2023. It has four pillars: (i) strengthening agricultural production, productivity, and competitiveness, (ii) sustainable management of natural resources, (iii) improving the agricultural business environment, and (iv) institutional strengthening and development. Additionally, the *Second National Agricultural Sector Investment Plan (2022–2026)* (hereinafter referred to as “PNISA II”) was developed as a plan and budget system to implement *PEDSA II* and promote investment in Mozambique’s agricultural sector. *PNISA II* emphasizes that agricultural growth should be driven by private investment and focuses on strengthening agricultural policies, legal and regulatory reforms, and improving the business environment to promote private investment in the agricultural sector, in line with the support provided by the project. In response to these policies, the Government of Mozambique implemented the agricultural program, *SUSTENTA (2021–2023)*, which provides comprehensive support for securing food security, increasing household income, and creating jobs by improving agricultural production and productivity. The content of the project, including guidelines, was reflected in this program, confirming its alignment.

Policy recommendations, including the *Guidelines for Model Implementation* created by the project in April 2019, were approved by the targeted provincial governments of Nampula, Niassa, and Zambezia, and continuation of model activities after project completion was expected. The *Agricultural Development Master Plan*, formulated under *ProSAVANA–PD* to institutionalize the continuation of the project, was expected to be approved by the Government of Mozambique but remained in a draft version and was unapproved due to opposition from civil society. Therefore, support from the central government for model implementation based on guidelines in the target provinces has not been provided, leaving

some challenges to the sustainability of the project in terms of policy.

3.4.2 Institutional and Organizational Aspect

At the time of the ex-post evaluation, an agricultural extension system was established through supervisors at DPAP and SPAE, as well as agricultural extension officers under SDAE, and extension activities were routinely carried out. Furthermore, the agricultural extension officers trained through the project were utilized in government programs, such as *SUSTENTA* and donor projects, indicating that the institutional and organizational sustainability of the project is high. Additionally, under the government's *SUSTENTA* program, the number of extension officers increased. Whereas the number of extension officers is not yet sufficient for the number of farmers, the extension system in related organizations is being developed, indicating that institutional and organizational sustainability are high.

3.4.3 Technical Aspect

The technical capacity of supervisors at DPAP, SPAE, and agricultural extension officers in SDAE is high. It was confirmed that they had received repeated training under the project and had extensive experience in providing guidance to farmers. They also gained considerable knowledge from similar training conducted by other donors, confirming their capability to continue their activities. In addition, trained agricultural extension officers continue to provide guidance to farmers regarding the content of models as part of their regular duties. Although extension officers used the guidelines and manuals created through the project, a certain level of literacy was required for their use. Extension officers pointed out the need to create simplified materials for farmers following these guidelines. From the above, the technical sustainability is high.

3.4.4 Financial Aspect

The activities of agricultural extension workers in the target districts are primarily funded by the budget provided by MADER, the implementing agency of this project, and the provincial government. Additionally, the budget for extension activities related to the government program *SUSTENTA* is supported by donors such as the World Bank. As shown in Table 8, a certain level of government budget has been secured for the operational costs of extension workers. However, on the ground, many extension workers procure expenses such as motorcycle fuel for visiting farmers out of their own pocket. Furthermore, there is a lack of sufficient inputs, such as seeds, fertilizers, and pesticides, necessary to continue the project. Therefore, there remain some challenges in achieving financial sustainability.

Table 8 Trends in the Agricultural Extension-Related Budget at MADER

(Unit: 1,000 Meticaais)

	2020	2021	2022	2023	2024
National budget (Tax)	16,528.07	25,801.00	135,312.98	185,792.57	155,370.90
Consigned Revenue ²⁸	0	0	182,000.00	112,004.19	89,932.04
Own Revenue ²⁹	0	0	92,200.00	65,806.38	120,000.00
Total	16,528.07	25,801.00	409,512.98	363,603.14	365,302.94

Source: MADER

3.4.5 Environmental and Social Aspect

As mentioned previously, *ProSAVANA* faced opposition from civil society because of concerns about land expropriation and insufficient explanations to local residents regarding the impact of promoting agribusiness. However, the project, by implementing activities with attention to these points, no social considerations issues, such as land use conflicts, have arisen among NGOs, agricultural cooperatives/associations, service providers, seed producers, or farm managers in the target area. Furthermore, the seeds, fertilizers, and irrigation methods distributed through the project were adapted to the local environment. At the time of the ex-post evaluation, no environmental and social issues were found that would affect the continuation of project outcomes.

3.4.6 Preventative Measures to Risks

Owing to the impact of the war in Ukraine and Gaza, there has been a sharp increase in the prices of seeds, fertilizers, pesticides, and fuel, which has made it difficult to obtain these materials for agricultural extension activities. Whereas emergency support from the Government of Mozambique's SUSTENTA program and donors has provided seeds and supplies, this support is insufficient, affecting the sustainability of the project.

3.4.7 Status of Operation and Maintenance

The vehicles and motorcycles procured for monitoring and extension activities at the provincial and district levels are already aging but are being maintained to the greatest extent possible, with approximately 70% of the procured vehicles and motorcycles still in operation at the time of the ex-post evaluation. Since the vehicles were procured as early as 2015 and as late as 2017, seven to nine years have passed since then, aging deterioration and insufficient maintenance funds are presenting challenges.

²⁸ The budget allocated from government revenue to autonomous public institutions (e.g., external bureaus under ministries, local governments, etc.)

²⁹ Revenue generated from economic activities in the market.

In summary, some minor issues have been observed in terms of the policy/system, financial, and preventative measures to risks. They are not expected to be improved or resolved. Therefore, the sustainability of the project effects is moderately low.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

The agricultural sector in Mozambique accounted for 23% of the GDP in 2010, with approximately 80% of the labor force engaged in agriculture, of which approximately 90% were women. However, only approximately 10% of arable land is cultivated. The tropical savanna region in the north, with its substantial rainfall and extensive arable land, has considerable potential for expanding agricultural production. Despite this potential, small-scale farmers face challenges, such as low productivity and slow adoption of new technologies. Against this backdrop, *ProSAVANA* was launched in 2011 with the aim of reducing poverty in the region and ensuring food security. Following that, *ProSAVANA-PEM* was implemented within the framework of *ProSAVANA*. Its purpose was to increase agricultural production among farmers and farmer organizations in the target area, and ultimately expand agricultural production in the Nacala Corridor region by developing and promoting agricultural development models adapted to the local context.

Regarding the evaluation results of the project, it was confirmed that there was relevance to the development plans and needs of Mozambique, as well as the appropriateness of the project's plan and approach. Furthermore, synergistic effects were confirmed between the project and other projects of *ProSAVANA*, infrastructure development supported by Japanese ODA loans, and agricultural assistance from other organizations, in alignment with the cooperation policies of the Government of Japan and JICA. Therefore, its relevance and coherence are high. In addition, the development of locally-adapted agricultural development models and the training of agricultural extension officers, which were the key goals of the project, were successfully carried out according to the plan. By the time the project was completed, the indicators of Project Purpose regarding agricultural production, productivity, and income were achieved. Although the indicators of the Overall Goal were almost achieved, those related to the dissemination of the model were not fully met. However, many positive impacts are emerging. Therefore, effectiveness and impacts of the project are high. The project period slightly exceeded the original plan because of a one-year extension based on recommendations from the terminal evaluation conducted in November 2018 to ensure sustainability of the project. Due to the expansion of project sites and additional activities, the project cost also exceeded the original plan. Therefore, efficiency of the project is moderately low. The institutional/organizational and technical sustainability of the agricultural development models introduced by the project were secured. However, there are some challenges in policy, system and financial sustainability regarding institutionalization and budget allocation for the dissemination of agricultural

development models. Therefore, sustainability of the project effects is moderately low.

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

4.2 Recommendations

4.2.1 Recommendations to the Implementing Agency

Creation and dissemination of simplified training materials for farmers based on agricultural development models

In the project, guidelines were created for each agricultural development model and were primarily used by agricultural extension officers. MADER is recommended for creating simplified training materials, including visual aids and concrete examples, to meet the needs of farmers with insufficient literacy skills.

Securing the budget necessary for expanding the models

The dissemination of the agricultural development models developed through the project requires continuous training for agricultural extension officers, covering the costs of their access to farmers, and providing agricultural inputs to farmers. MADER is expected to secure a budget (including human resources) for the dissemination of agricultural development models as soon as possible, either through a government budget or financial assistance from donors.

4.2.2 Recommendations to JICA

Support for expanding agricultural development models

The project has demonstrated the effectiveness of the agricultural development model as a support approach for the northern region of the country, where there is high agricultural development potential. It is anticipated that suitable support for the model's wider implementation through new projects be provided.

4.3 Lessons Learned

Promoting dissemination by visualizing good practices and impacts

Good practices of agricultural development models implemented in the target regions were compiled and shared through various media, such as exchange programs, seminars, and media publicity, which promoted farmers' interest in the models. Furthermore, visualizing the actual success stories contributed to improving the ownership of the counterparts and farmers involved in the implementation. Visualizing success stories provides stakeholders with concrete images, thereby encouraging the practice and dissemination of models.

Demonstrating the effectiveness of agricultural development models by selecting target areas with different characteristics

By selecting regions with different characteristics (environmental, market access, and community features) and piloting agricultural development models suitable for each region, it is possible to develop models tailored to the characteristics of each region. By reflecting on the insights gained from this process in the creation of guidelines for dissemination to other regions, it is expected that general guidelines with higher versatility can be created, thereby improving the success rate of agricultural development in various geographic conditions.

Importance of strengthening the management organization's capacity for the continuation of revolving funds

For the continuation of revolving funds, it is crucial to strengthen the capacity of farmer organizations to manage them. Specifically, enhancing their ability to assess the feasibility of business plans and repayment capabilities, providing advice to farmers, and building relationships with supervisory institutions are essential for the sustainable operation of revolving funds.

Using radio broadcasts for model dissemination

In the dissemination of the development models under the project, given the limited number of extension officers and access to extension services, radio broadcasts were used in Nampula and Niassa provinces as a method of dissemination, yielding significant results.³⁰ Using radio broadcasts as a dissemination tool is a potentially cost-effective method, especially when the number of extension officers is limited, and the target areas are widespread.

5. Non-Score Criteria

5.1 Performance

5.1.1 Objective Perspective

ProSAVANA, including the project, faced opposition from civil society in Mozambique. As a result, at the start of the project, rumors spread that participating in the project would lead to the loss of farmland, causing some farmers to refuse to participate and leading to difficulties. Despite this, Japanese experts, together with their counterparts, entered the communities, transferred techniques, and obtained visible results, such as increased agricultural production and improved farmers' incomes, which helped build trust in the project among stakeholders.

³⁰ According to the impact evaluation survey conducted by the project team in 2018, the listening rate was 35%, and 96% of listeners responded that "the radio program served as a trigger for some kind of decision-making or behavioral change."

5.2 Additionality

In the project (Model 4), part of the counterpart funds³¹ from Japanese aid were used to establish the *DIF*, and a financing system was created to support private companies and contract farmers through loans provided by the Small Industry Support Finance Company (hereinafter referred to as “GAPI”).³² Private companies used the fund to build granaries and purchase tractors and seeds to improve the income of contract farmers. Simultaneously, agricultural extension officers affiliated with private companies transferred techniques to contract farmers to improve production. The establishment of a support system for private companies using various aid schemes, from both financial and technical perspectives, to promote agricultural development is noteworthy.

(End)

³¹ When developed countries or international organizations provide aid to developing countries, a portion of the profits or revenues generated from that aid is returned to the donor country or international organization in the form of counterpart funds.

³² To promote agricultural development in the Nacala Corridor region and community-level agricultural development, an agreement to establish the *DIF* was signed between the Government of Mozambique (Ministry of Agriculture), GAPI, and JICA in September 2012.