

People's Republic of Bangladesh

FY2023 Ex-Post Evaluation Report of Japanese ODA Loan Project

“Small and Marginal Sized Farmers Agricultural Productivity Improvement
and Diversification Financing Project”

External Evaluator: Hideyuki Takagi, Ernst & Young ShinNihon LLC

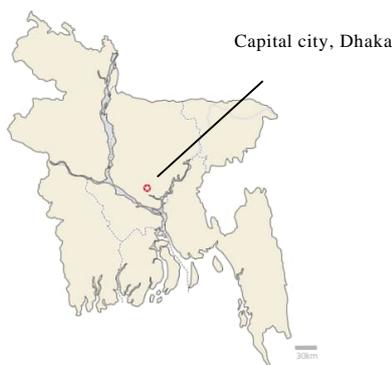
0. Summary

This project was implemented with the aim of facilitating financial intermediation functions for agricultural finance, improving agricultural productivity of small and marginal farmers, and diversifying crops throughout Bangladesh, through the provision of two-step loans to improve agricultural productivity for small and marginal farmers, and agricultural technical guidance to borrowing farmers, as a way to address the constraints on access to funds for agricultural inputs and equipment and lack of agricultural technology faced by small and marginal farmers in Bangladesh, thereby contributing to the deepening of agricultural finance and development of the agricultural sector.

The implementation of this project highly aligns with Bangladesh's policies, development needs, and Japan's development cooperation policy for promoting agricultural productivity improvement and crop diversification for small and marginal farmers in Bangladesh. Therefore, its relevance and coherence are high. The project outputs, including agricultural loans to small and marginal farmers, and consulting services such as implementation support and capacity building support related to agricultural technical guidance, were carried out as planned. Both project cost and period were within the plan, and therefore efficiency of the project is very high. The project effects intended through the combination of loans to small and marginal farmers and agricultural technical guidance for improving agricultural productivity and diversifying crops, which were the objectives of the project, were limited. The actual project effects were mainly from providing agricultural loans, while the effects of agricultural technical guidance were insufficient, and the achievement of crop diversification was low. Therefore, effectiveness and impacts of the project are moderately low. Slight issues have been observed in the technical aspects of agricultural technical guidance in the operation and maintenance of this project, however, there are good prospects for improvement/resolution. Therefore, sustainability of the project effects is high.

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

1. Project Description



Project location (All over Bangladesh)
(Source: External evaluator)



Vegetable cultivation by a smallholder farmer who borrowed a loan by the project (Source: Evaluator, May 2024)

1.1 Background

Agriculture is one of Bangladesh's important industries, and in 2012, at the time of project planning, it accounted for about 45% of the employed population and about 17% of GDP. Additionally, with the spread of irrigation wells, cultivated land area expanded to about 50% of the total national land area, and the utilization rate of arable land reached 190% due to increased annual planting frequency. However, due to high population density, per capita cultivated land area was limited, and small and marginal farmers constituted the majority of agricultural producers in Bangladesh. Small and marginal farmers had been continuing conventional low-input traditional farming methods but as described in 3.1.1 Relevance, there was a need to improve agricultural productivity of limited arable land and diversity of crops through the promotion of introducing high-yielding varieties and high market value crops.

Small and marginal farmers had difficulty introducing new crops, high-yielding varieties, and agricultural equipment due to constraints on access to funds for agricultural inputs and equipment and lack of agricultural techniques. Traditionally, microfinance institutions¹ have played an important role as providers of financial products in rural areas, but they mainly focused on supplementary small loans for household expenses, small businesses, and cottage industries, and were not adapted to the needs of agricultural production cycles (screening period, loan amount, repayment method, etc.) such as planting period, harvest period, and cultivation costs, as agricultural loans.

The Bangladesh government, under the leadership of the central bank, was working to improve access to agricultural loans. This project was implemented with the aim of

¹ Microfinance providers in Bangladesh are classified as follows: 1) Grameen Bank (a government-affiliated special bank conducting microfinance operations), 2) NGOs authorized to conduct microfinance operations by the Microcredit Regulatory Authority (MRA), 3) state-owned banks and private commercial banks.

supporting the spatial and quantitative expansion of agricultural finance schemes by introducing loan products suited to agricultural funding cycles, along with agricultural technical guidance, in microfinance institution loans that are highly utilized by small and marginal farmers.

1.2 Project Outline

The objective of this project is to facilitate financial intermediation functions for agricultural finance, and improve agricultural productivity and diversify of small and marginal farmers, by the provision of two-step loans to improve agricultural productivity for small and marginal farmers via on-lending from Bangladesh Bank to Participating Microfinance Institutions (hereinafter referred to as “PMFIs”)², and agricultural technical guidance to borrowing farmers throughout Bangladesh, thereby contributing to the deepening of agricultural finance and development of the agricultural sector.

Loan Approved Amount / Disbursed Amount	9,930 million yen / 9,675 million yen	
Exchange of Notes Date / Loan Agreement Signing Date	May 2014 / June 2014	
Terms and Conditions	Interest rate	0.01%
	Repayment period	40 years (Grace period: 10 years)
	Conditions for procurement	General untied
Borrower Executing Agency Implementing Agency	<ul style="list-style-type: none"> • The Government of the People’s Republic of Bangladesh • The Banking and Financial Institutions Division, Ministry of Finance • Bangladesh Bank 	
Project Completion	July 2021 (Completion of Disbursement)	
Target Area	All over Bangladesh	
Main Contractor(s) (Over 1 billion yen)	Not applicable	
Main Consultant(s) (Over 100 million yen)	<ul style="list-style-type: none"> • Services and Solutions International Ltd. (Bangladesh) • AFC Consultants International GmbH (Germany) • Akademie Deutscher Genossenschaften e.V. (Germany) 	
Related Studies	JICA “Information Collection and Confirmation Survey on Agricultural Finance in Bangladesh” (2014)	

² Eleven NGOs authorized by MRA to conduct microfinance operations are serving as PMFIs, conducting agricultural loan and agricultural technical guidance operations for this project.

Related Projects	JICA Technical Cooperation Project “The Market-oriented Agriculture Promotion Project for Smallholder Horticulture Farmers through Multi-stakeholder Partnerships” (August 2021 - December 2025)
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2. Outline of the Evaluation Study

2.1 External Evaluator

Hideyuki Takagi (Ernst & Young ShinNihon LLC)

2.2 Duration of Evaluation Study

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

Duration of the Study: December 2023 - January 2025

Duration of the Field Study: April 19 - May 24, 2024, and September 13 - 20, 2024

3. Results of the Evaluation (Overall Rating: B³)

3.1 Relevance/Coherence (Rating: ③⁴)

3.1.1. Relevance (Rating: ③)

3.1.1.1 Consistency with the Development Plan of Bangladesh

At the time of project appraisal, Bangladesh’s national development plan, the *Sixth Five Year Plan (FY2011-FY2015)*, aimed to eliminate regional disparities, achieve balanced development and ensure food security, and emphasized the promotion of agricultural productivity improvement and crop diversification. Specific strategies included encouraging the planting of non-rice crops during winter (November-February), promoting cultivation of crops suitable for farmland conditions, promoting the use of high-yielding seeds and stress-resistant (salt, drought, waterlogging) seeds, promoting surface water irrigation, and eliminating yield gaps caused by farmers’ technical deficiencies. The *National Agriculture Policy (2009)*, along with the *Sixth Five Year Plan*, aimed to improve agricultural productivity and diversify crops by focusing on agricultural productivity improvement while promoting research, development and introduction of high-yielding variety seeds, improving farmers’ techniques, increasing planting frequency through introduction of irrigation, and promoting planting according to farmland conditions, in order to achieve income improvement and food security for the people.

The agricultural sector development strategy in the *Eighth Five Year Plan (FY2020-FY2025)* at the time of ex-post evaluation continues to emphasize ensuring food security, and additionally specifies crop diversification for climate-resilient production and relaxation

³ A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

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

of credit conditions in financing for small farmers. The *National Agriculture Policy* (2018) also aims to achieve safe and profitable agriculture and food security, and states that it will improve people’s economic and social conditions through improving farmers’ productivity, increasing income, diversifying crops, and improving marketing systems.

Bangladesh Bank, the implementing agency for this project, stated in its *Agricultural and Rural Credit Policy and Programme (FY2012)* at the time of appraisal that it would work to improve agricultural productivity in cooperation with microfinance institutions. At the time of ex-post evaluation, agricultural finance policies continue in the *Agricultural and Rural Credit Policy and Programme*, and the FY2024 program plans for further increase in agricultural loans.

Therefore, both before and after the project, it aligns with Bangladesh’s national policies and sector development policies for promoting agricultural productivity improvement and crop diversification, and with Bangladesh Bank’s Agricultural and Rural Credit Policy and Programme aimed at realizing these objectives.

3.1.1.2 Consistency with the Development Needs of Bangladesh

In Bangladesh, per capita cultivated land area is limited due to high population density, and small and marginal farmers constitute the majority of farmers. To improve agricultural income for small and marginal farmers, it is necessary to increase yield and revenue per unit area, which requires farmers to invest in agricultural materials and equipment. At the time of project appraisal, there was a supply-demand gap in agricultural finance, with Bangladesh Bank’s 2014 estimate showing agricultural loan demand of about 290 billion Bangladesh Taka (BDT) compared to actual agricultural lending of about 120 billion BDT.

From the time of project appraisal to the time of ex-post evaluation, the total number of farmers has been increasing, and small and marginal farmers with small cultivated land areas continue to increase.

Table 1. Comparison of the number of farmers by farm category⁵ before and after the project

(Unit: 1,000 households)

	Before the Project		During the Project		At the time of ex-post evaluation
	2008		2019		2023
Landless farmers	13,513	48%	18,671	53%	No data
Smallholder and marginal farmers	12,266	44%	15,481	44%	
Medium-scale farmers	2,136	8%	1,299	4%	
Large-scale farmers	234	1%	101	0%	

⁵ Farm classification by arable area in Bangladesh: Marginal farmers: 0.05~0.49 acres, Smallholder farms: 0.5~2.49 acres, Medium-sized farms: 2.5~7.49 acres, Large-scale farms: 7.5 acres or more

	Before the Project		During the Project		At the time of ex-post evaluation
	2008		2019		2023
Total	28,150	100%	35,552	100%	

Source: Documents provided by JICA, Bangladesh Statistics Bureau “AGRICULTURE CENSUS 2019”⁶

Note: At the time of ex-post evaluation, no census has been conducted by the Bangladesh Bureau of Statistics, and no survey has been conducted by Bangladesh Bank.

Agricultural loan amounts have increased significantly from the time of project appraisal to ex-post evaluation as it is shown in Table 2. Particularly in microfinance institutions, agricultural loan amounts have increased more than 90-fold over these 10 years, positioning them as major financial institutions for farmers.

Table 2. Comparison of agricultural loan amounts before and after the project

(Unit: Million BDT)

	At the time of appraisal		At the time of ex-post evaluation	
	2013		2023	
State-owned banks	83,138	50%	131,048	8%
Private Banks	63,487	38%	197,251	12%
Microfinance Institutions	13,200	8%	1,248,180	79%
Rural Development Agency	5,952	4%	15,362	1%
Total	165,777	100%	1,591,841	100%

Source: Documents provided by JICA and the implementing agency

Therefore, both before and after the project, there is a need for loans to small and marginal farmers, and development needs are high.

3.1.1.3 Appropriateness of the Project Plan and Approach

As a “lesson learned from similar projects” stated in the ex-ante evaluation sheet, it was learned that thorough capacity development through various awareness activities, training, and advice, not just providing loans, is important for effect manifestation. As this project’s response, it was planned for PMFIs to provide not only loans to small and marginal farmers but also agricultural technical guidance to contribute to improving agricultural productivity and diversifying crops.

3.1.2 Coherence (Rating: ②)

3.1.2.1 Consistency with Japan’s ODA Policy

At the time of project appraisal, Japan’s Country Assistance Policy for Bangladesh (2012) focused on strengthening food security through improving agricultural productivity,

⁶ Bangladesh Bureau of Statistics AGRICULTURE CENSUS 2019
<https://bbs.portal.gov.bd/site/page/6b4c2697-452b-4bc6-9ee2-1fb5e0fc66c0/->

diversifying crops, and increasing added value as support measures for agriculture and rural development issues, and this project was consistent with Japan's aid policy at the time of appraisal.

3.1.2.2 Internal Coherence

JICA is implementing the “Market-Oriented Agriculture Promotion Project for Smallholder Horticulture Farmers through Multi-stakeholder Partnership (Bangla-SHEP)” for the planned period of August 2021 to December 2025. This project aims to improve the living standards of small farmers by establishing and putting into practice market-oriented agricultural approaches⁷ in areas suitable for horticultural crop cultivation in Dhaka, Mymensingh, Rangpur, and Rajshahi divisions. At Bangladesh Bank, the SMAP-Bangla-SHEP Section has been established in the Agricultural Credit Department (ACD) as the department responsible for this project (Small and Marginal Sized Farmers Agricultural Productivity Improvement and Diversification Financing Project: SMAP) and Bangla-SHEP, and is managing and monitoring these JICA projects. Up to the time of ex-post evaluation, there has been no specific synergy between these two JICA projects, but ACD expects that through strengthened cooperation with the Department of Agricultural Extension (DAE) of the Ministry of Agriculture, which is the executing agency for Bangla-SHEP, borrowing farmers in this project will be able to receive better agricultural technical guidance.

3.1.2.3 External Coherence

During the implementation period of this project, the following agricultural sector projects by other development cooperation agencies were implemented. There was no specific coordination/cooperation or synergy between this project and the support provided by other development cooperation agencies.

- International Fund for Agricultural Development (IFAD): “Promoting Agricultural Commercialization and Enterprises Project (2014-2022),” successor project “Rural Microenterprise Transformation Project (2019-2025)” (Danish International Development Agency (DANIDA) also participating), “Smallholder Agricultural Competitiveness Project (2018-2024)”
- World Bank: “National Agricultural Technology Program-Phase II (2015-2023)”

This project aligns with Bangladesh's development policies and development needs, and

⁷ This is an approach to support small-scale horticultural farmers that JICA has introduced and implemented in African and Asian countries. It aims to improve horticultural income of farmers who produce vegetables and fruits by changing their mindset from “grow and sell” to “grow to sell” and improving farming and cultivation skills. (Source: Ex-ante evaluation sheet for Bangla-SHEP in Japanese language

https://www2.jica.go.jp/ja/evaluation/pdf/2020_1903799_1_s.pdf)

is consistent with Japan’s development cooperation policy. Therefore, its relevance and coherence are high.

3.2 Efficiency (Rating: ④)

3.2.1 Project Outputs

This project provides agricultural loans and agricultural technical guidance simultaneously to beneficiary small and marginal farmers, and as outputs, 1. agricultural productivity improvement and diversification promotion loans for small and marginal farmers, and 2. consulting services were planned and implemented. Both outputs were implemented largely as planned.

1) Agricultural Productivity Improvement and Diversification Promotion Loans for Small and Marginal Farmers

Loans (sub-loans) were provided to small and marginal farmers for activities contributing to agricultural productivity improvement and crop diversification through on-lending (two-step loans) from Bangladesh Bank to PMFIs. The loan conditions were as follows:

- Two-step loans: BDT denominated, interest rate below or at official rate, maximum repayment period 2 years
 - Sub-loans: BDT denominated, interest rate 20% or less, repayment period 3 months to 2 years (including grace period of 1 month to half a year) depending on loan purpose
- Loan purposes and repayment periods: Agricultural materials (seeds, fertilizers) 3 months to 2 years, equipment investment funds (irrigation pumps, etc.) 3 months to 2 years, livestock breeding 3 months to 2 years

Two-step loans repaid by PMFIs to Bangladesh Bank are managed in a revolving fund account and reused as sub-loans to small and marginal farmers through PMFIs under the same conditions. In this project, it has been agreed to utilize the revolving fund for at least 15 years, including the project period. By June 2023, a total of 705,000 cases and 38,880 million BDT of agricultural loans have been provided to small and marginal farmers.

Table 3. Annual changes in the number of sub-loans for small and marginal farmers

(Unit: Number in thousand)

	2016	2017	2018	2019	2020	2021	2022	2023
Number of loans per year	83	84	86	86	87	91	92	94
Cumulative number of loans	83	167	253	339	427	519	611	705

Table 4. Annual changes in the amount of sub-loans for small and marginal farmers

(Unit: Million BDT)

	2016	2017	2018	2019	2020	2021	2022	2023
Annual loan amount	2,499	2,721	3,750	4,800	5,980	6,350	6,390	6,390
Cumulative loan	2,499	5,220	8,970	13,770	19,750	26,100	32,490	38,880

	2016	2017	2018	2019	2020	2021	2022	2023
amount								

Source: Documents provided by the implementing agency for both Tables 3 and 4

2) Consulting Services

Consultants provided implementation support for this project, capacity building support for PMFIs etc., and support for implementing impact evaluations in interim monitoring. The details of the support are as follows:

- Project implementation support: Support for loan management and fund management, support for creating loan operation guidelines, etc.
- Capacity building support for PMFIs etc.: Formulation of operational guidelines for Bangladesh Bank staff, capacity building for PMFI staff regarding dissemination of agricultural techniques, etc.
- Support for implementing project progress monitoring: Baseline surveys, support for implementing impact evaluations at project completion (at loan disbursement completion)

PMFIs are NGOs working to solve various social issues, and while some NGOs target the agricultural sector, others do not. For capacity building related to agricultural technical guidance in this project, many PMFIs needed to start by recruiting personnel with agricultural expertise, and through this project, PMFIs secured personnel with agricultural degrees. Through workshops, training, and seminars during the project period, PMFI staff capacity was enhanced in areas such as productivity improvement, modern agriculture, crop diversification, technology dissemination, weather forecasting techniques, and seaweed and flower cultivation. Additionally, the following training materials were created to strengthen PMFIs' agricultural technical capabilities.



Figure 1. Training materials prepared for agricultural technical capacity development

Source: Documents provided by JICA and the implementing agency

3.2.2 Project Inputs

(See “Comparison of the Original and Actual Scope of the Project” on the final page of the report for details)

3.2.2.1 Project Cost

The project cost was 9,798 million yen against the planned 10,805 million yen, falling within the plan (91% of plan). The reason for the project cost on the Bangladesh side being below the plan was that due to the impact of the COVID-19 pandemic, the number of input personnel was less than specified in the operational guidelines.

Table 5. Comparison of the planned and actual project cost

(Unit: Million yen)

	Plan			Actual			Ratio against the plan
	Foreign currency	Local currency	Total	Foreign currency	Local currency	Total	%
Japanese side	9,573	357	9,930	9,643	32	9,675	97
Bangladesh side	3	872	875	-	123	123	14
Total	9,576	1,229	10,805	9,643	155	9,798	91

Source: Documents provided by JICA and the implementing agency

3.2.2.2 Project Period

The project period was planned for 79 months (June 2014 to December 2020) from L/A signing month to loan disbursement completion month. The actual period was 88 months (June 2014 to September 2021), but this overlapped with the global COVID-19 pandemic that began in late 2019, and in this project as well, consulting services were forced to stop for about 10 months. Considering this impact as an external factor, the actual project period of 78 months is judged to have fallen within the plan (99% of plan).

Both the project cost and period fell within the plan. Therefore, efficiency of the project is very high.

3.3 Effectiveness and Impacts⁸ (Rating: ②)

3.3.1. Effectiveness

3.3.1.1 Quantitative Effects (Operation and Effect Indicators)

The quantitative effect indicators for agricultural financing in this project are the loan collection rate and the proportion of female loan recipients, both of which have achieved their target values. On the other hand, while the cumulative number of agricultural training

⁸ When providing the sub-rating, Effectiveness and Impacts are to be considered together.

participants is shown as “number of loans = number of agricultural training participants” and therefore it has achieved in a formal sense, as discussed later in 3.3.1.2 Qualitative Effects, it does not meet the requirements for agricultural technical support services provided to borrowing farmers and has not resulted in effective training for them. In this ex-post evaluation, considering that only part of the training that should have been provided to borrowing farmers was implemented and considering the substantive aspects of effect manifestation, the achievement level of cumulative agricultural training participants is judged to be limited.

The achievement status of quantitative effect indicators is shown in Table 6. In addition to the three indicators set at the time of appraisal, the proportion of women in the “cumulative number of agricultural training participants” was added to the indicators in light of the project’s objectives, and information was collected. Similarly to the proportion of female loan recipients, the proportion of female agricultural training participants is high.

Table 6. Achievement of the effect indicators

Indicator	Baseline value	Target value	Actual value	
	2014	2022	2022	2023
		2 years after completion	2 years after completion	3 years after completion
Indicator 1: Loan collection ratio (%)	0	98% or higher	99%	99%
Indicator 2: Ratio of female borrowers (%)	0	50% or higher	82%	85%
Indicator 3: Cumulative agricultural training participants (persons)	0	200,000 or more	611,299	705,557
Additional indicator				
Number of female agricultural training participants (persons in one year)	-	No setting	75,637	80,496
Percentage of female agricultural training participants (%)	-	No setting	81%	87%

Source: Documents provided by JICA and the implementing agency

3.3.1.2 Qualitative Effects (Other Effects)

The qualitative effect “deepening of agricultural finance and development of the agricultural sector” mentioned in the ex-ante evaluation sheet is organized as a qualitative effect of the impact in this ex-post evaluation. From the perspective of facilitating PMFIs’ financial intermediation function for agricultural finance, verification of effect manifestation

was conducted through hearing surveys⁹ with PMFIs and beneficiary surveys with borrowing farmers regarding the following two perspectives.

1) Improvement in agricultural loan operational and management capabilities

According to the hearing survey, each PMFI branch had been providing agricultural financing to small and marginal farmers prior to this project, and the operation and management of agricultural loans in this project is carried out in the same way as conventional operations. The implementation of this project had no particular effect on improving the operational and management capabilities of PMFIs in their agricultural loan operations.

2) Improvement in agricultural technical guidance capabilities

The agricultural technical guidance provided by PMFIs to borrowing farmers was established as Technical Support Service (hereinafter referred to as “TSS”) under the supervision and management of ACD of Bangladesh Bank through the project implementation process, with the following content.

- Orientation at PMFI branch offices at the time of loan contracts
- Five-stage training aligned with the agricultural production cycle (1. Agricultural production planning, 2. Growing, 3. Maturation, 4. Harvesting, 5. Post-harvest)
- Response to inquiries by call center
- Sharing experiences through mobile apps, documentary videos, and presentations
- Technical support for borrowing farmers through cooperation with relevant ministries

PMFIs are supposed to implement orientation at the time of loan agreement with the borrowing farmer and then conduct the five-stage training according to the agricultural production cycle described above. Regarding the TSS implementation status at the time of ex-post evaluation, stages 2 and beyond are not implemented in many cases, and effective training is not being provided to borrowing farmers, according to interviews with PMFIs. PMFI branch staff are not sufficiently equipped with TSS-related capabilities, and borrowing farmers need support related to more practical techniques and responses to specific individual problems (such as livestock vaccination).

3.3.2 Impacts

3.3.2.1 Intended Impacts

1) Quantitative Impact

1. Deepening of Agricultural Finance

In terms of deepening agricultural finance, Bangladesh’s overall agricultural loan amount

⁹ In this ex-post evaluation’s field survey, three locations were selected - Narsingdi District in Dhaka Division, Rajshahi District in Rajshahi Division, and Lalmonirhat District in Rangpur Division - and hearing surveys were conducted at branches of 7 institutions out of 11 PMFIs.

has increased significantly when comparing before and after project implementation, and particularly, with microfinance institutions' agricultural loan amounts have increased nearly five times since the commencement of the project in 2015 to 2023. Within these changes, the proportion of PMFIs in agricultural loans shows a declining trend, and this project's loan amount accounts for only about 2-3% of PMFIs' agricultural loans, maintaining a low level. Therefore, from the perspective of "increasing the proportion of PMFIs in loans" and "reducing the funding supply-demand gap," this project's contribution can be considered limited.

Table 7. Comparison of agricultural loans by microfinance institutions before and after the project

(Unit: Million BDT)

	Before the project (2015)	After the project (2023)
Amount of Agricultural Loans by the Project	0	6,390
Other Agricultural Loans by the PMFIs	119,895	223,305
Amount of agricultural loans by other microfinance institutions	146,355	1,018,485
Total	266,250	1,248,180

Source: Documents provided by JICA and the implementing agency

Table 8. Agricultural loans of PMFIs
(Comparison of this project and other agricultural loans)

	This project	Other agricultural loans
Interest rate	19%	About 24%
Loan Amount (BDT)	Up to 200,000	Up to 200,000
Repayment period	12 months	About 45 weeks
Grace period	1 month	None
Repayment frequency	Monthly	Weekly
Security	Unnecessary	Unnecessary
Agricultural training	Provided	Not provided

Source: Interviews with PMFIs and borrower farmers

2. Development of Agricultural Sector

As part of this project's consulting services, an impact evaluation was conducted as interim monitoring at the completion of two-step loan disbursement. According to the evaluation report, the gross agricultural revenue per household and per-area crop yield for each main crop have generally been achieved. However, the number of crop types produced per household increased by an average of 0.5 types, falling short of the target.

Complementing the impact evaluation report's contents with the beneficiary survey

results¹⁰ from this ex-post evaluation, the contribution to agricultural sector development is summarized as follows. The main factors for increased crop production are increased fertilizer use through loans and use of quality seeds, and factors for increased milk production include additional or new purchase of dairy cows and purchase of dairy cows with higher milk productivity. Due to increased production, many borrowing farmers have increased their agricultural income. On the other hand, diversification of crops produced by borrowing farmers has not led to effect manifestation due to the limited effect of PMFIs' TSS.

Table 9. Achievement of the targets of quantitative impact indicators

Indicator	Target value	Actual value
	2022	2021
	2 years after completion	At the time of project completion
Agricultural gross profit per farming household (BDT/household/year):		
Profit from crop production	Increased by 30%	23%
Profit from livestock breeding	or more	53%
Per-area crop yields for each main crop:		
Increase in rice production (kg/ha/year)	Increased by 20% or more	13%
Increase in vegetable production (kg/ha/year)		31%
Increase in milk production (liter/household/year)		347%
Variety of agricultural products produced per household (number of varieties/year)	Increased by two varieties	Average increase of 0.5 varieties

Source: Documents provided by JICA and the implementing agency

2) Qualitative Impact

1. Deepening of Agricultural Finance

Improved recognition and satisfaction regarding loans for small and marginal farmers:

As mentioned in 1) Quantitative Impact “1. Deepening of Agricultural Finance” section above, microfinance institutions’ agricultural loan amounts have increased significantly when comparing before and after project implementation. PMFIs’ agricultural loans for small and marginal farmers are operated with little substantial differentiation from this project. Furthermore, particularly since fiscal 2022, loan amounts from microfinance institutions other than PMFIs have increased significantly, and the proportion of PMFIs in agricultural loans shows a declining trend.

In the beneficiary survey, interviews with borrowers regarding their satisfaction with the project showed that all respondents were satisfied with the loan, and many respondents were

¹⁰ Conducted interview surveys with 30 borrowing farmers (including 1 case of borrowing from outside this project for comparison) in Narsingdi District in Dhaka Division, Rajshahi District in Rajshahi Division, Lalmonirhat and Gaibandha Districts in Rangpur Division, and Khulna and Jhenaidah Districts in Khulna Division. Interview breakdown: 25 women, 4 men, 1 couple. Age distribution: 2 in their 20s, 9 in their 30s, 13 in their 40s, 6 in their 50s.

not satisfied with the TSS¹¹.

2. Development of Agricultural Sector

Based on the beneficiary survey results conducted in this ex-post evaluation, the benefits to borrowing farmers are summarized below.

Improvement in agricultural production and livelihoods: Changes in cultivated area, main crop types, per-capita crop yields, gross agricultural revenue, cultivation techniques and methods, income sources, etc.

- Agricultural production has improved through increased fertilizer use and quality seed use, additional or new purchase of dairy cows, and purchase of dairy cows with higher milk productivity funded by loans, as mentioned in 1) Quantitative Impact “2. Development of Agricultural Sector” section. In most cases, there are no particularly significant changes in other cultivation techniques and methods.

Life improvement: Changes in nutritional status, household budget management, income levels, etc.

- In Bangladesh, many farmers keep dairy cows, and milk is used both for sale and home consumption. In interviews about improved nutrition status with borrowing farmers, many particularly mentioned that children’s nutritional status improved through home consumption of milk.
- None of the interviewed loan recipients were conducting household budget management.
- Almost all interviewed borrowing farmers responded that their income levels had increased along with increased production.



Photo 1. Dairy cow rearing by a smallholder farmer who borrowed a loan by the project (Source: Evaluator, May 2024)

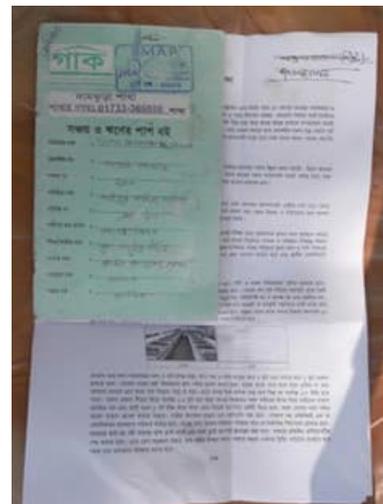


Photo 2. Smallholder farmer’s loan handbook and attached livestock guide (Source: Evaluator, May 2024)

¹¹ Regarding loans, all 29 cases that received loans from this project responded as satisfied for reasons such as contributing to improved agricultural production. Regarding TSS, 5 out of 29 cases that received loans from this project recognize the meaningfulness of receiving technical advice and introductions to agricultural experts.

3.3.2.2 Other Positive and Negative Impacts

1) Impact on the Environment

At the time of appraisal, this project was judged to have minimal undesirable environmental impacts and was classified as environmental and social consideration Category C under the “JICA Guidelines for Environmental and Social Considerations” (promulgated in April 2010). Even at the time of ex-post evaluation, based on interviews with the implementing agency and PMFIs, and interview results with borrowing farmers, it is judged that no undesirable environmental impacts have occurred.

2) Resettlement and Land Acquisition

Not applicable

3) Gender Equality

In this project, an average of 85% of borrowers are women¹², and most of them are low-income individuals. Their productivity in agriculture and livestock farming has increased, leading to an increase in income.

4) Marginalized People, Social Systems and Norms, People’s Well-being and Human Rights, Other

Their productivity in agriculture and livestock farming has increased, leading to an increase in income. This has led to an increase in employment opportunities for seasonal farmers by small and marginal farmers.

Table 10. Survey results on LNOB¹³ for women who received loans

Item	Main questions/Survey results
At the time of project formation	<p>Were the needs of women small and marginal farmers considered and appropriately reflected in setting sub-loan conditions? Microfinance institutions have traditionally considered women, and existing loans also target women. SMAP is also planned with women as the main loan target.</p> <p>Was the plan designed to cover areas with high poverty levels? While this project covers all of Bangladesh, it also covers particularly the rural areas in poor districts such as Gaibandha, Jhenaidah, and Khulna.</p>
During project implementation	<p>Was agricultural technical guidance prepared and appropriately implemented for agricultural production and work performed by women? Agricultural technical guidance is mostly limited to first-stage agricultural production planning orientation and distribution of agricultural and livestock technique leaflets, resulting in insufficient content regardless of gender.</p> <p>Were there cases where women farmers who wanted loans were unable to receive them, and what were the factors? There were no such cases, and loans are primarily provided to women. The reason borrowers are primarily women is that in farming households, husbands are often out working for wages etc., and since microfinance basically involves weekly repayments, loans are made in women’s names as they are at home during collection times.</p>

¹² According to PMFIs and the borrowing farmers, microfinance institutions, including PMFIs, mainly solicit borrowers for agricultural loans through a group of women called Samity. In microfinance, which repays weekly payments, the wife is almost always the holder of the loan, not the husband, who is often absent due to work or work away from home.

¹³ The survey was conducted with questions set from the perspective of “Leave No One Behind” (LNOB).

Item	Main questions/Survey results
Project effects	Was the proportion of female loan recipients achieved at 50% or more (effect indicator)? As above, loans are primarily provided to women (about 85% of loan recipients are women).
Other impacts	<p>Did the project contribute to women’s empowerment (improved financial access through account opening, etc.)? Most women borrowing farmers had savings accounts with microfinance institutions or banks even before SMAP loans. They have had financial access through microfinance institutions for some time.</p> <p>Has women’s agricultural activity increased, causing an imbalance in workload? Are they able to achieve work balance between spouses and receive support from their husbands and family? Changes in the environment surrounding women who benefited from this activity (whether there were changes in behavior/awareness such as sharing training results, etc.): Most borrowing farmers hire seasonal workers during busy periods such as harvest time, and there has not been an increase in women’s agricultural labor burden. In many cases of small and marginal farmers, husbands engage in business or wage labor to secure income from non-agricultural sources.</p>
Spillover effects and sustainability	Is the funding supply-demand gap for women (who make up the majority of agricultural workers) expected to narrow: Regardless of this project, microfinance for farmers has expanded significantly in recent years, and the funding supply-demand gap for women is expected to narrow.

Source: Interviews with the implementing agency, PMFIs, and interviews with borrowers

Effectiveness/Impact sub-rating evaluation judgment:

In the effectiveness/impact sub-rating evaluation judgment, greater weight is placed on the achievement level of the main objectives: improving agricultural productivity of small and marginal farmers and diversifying crops. The “Deepening of Agricultural Finance and Development of Agricultural Sector” expected as spillover effects of this project are considered appropriate to be recognized as effects on Bangladesh’s overall agricultural financing, and in the sub-rating evaluation judgment, it is considered positive that this project’s loans have led to life improvements for small and marginal farmers.

This project planned to provide loans to small and marginal farmers along with agricultural technical guidance contributing to improved agricultural productivity and crop diversification, but the manifestation of project effects through this combination is limited. The actual project effects are mainly from providing agricultural loans, with particularly notable effects in productivity improvement, income increase, and life improvement in livestock farming utilizing loans. The effects of agricultural technical guidance are not sufficient, and the achievement level of crop diversification is low. This project has achieved its objectives only to a certain extent. Therefore, effectiveness and impacts of the project are moderately low.

3.4 Sustainability (Rating: ③)

3.4.1 Policy and System

From the time of project appraisal to ex-post evaluation, there have been no changes in policies and systems regarding agricultural financing through microfinance institutions, and Bangladesh Bank continues agricultural financing under the *Agricultural and Rural Credit Policy and Programme*. In this project, it has been agreed that agricultural financing for small and marginal farmers utilizing two-step loans will be implemented for at least 15 years, including the project period until loan disbursement completion. At the time of ex-post evaluation, as a revolving fund, this project's agricultural financing will continue for the remaining approximately 5 years.

3.4.2 Institutional/Organizational Aspect

1) Bangladesh Bank

The overall implementation structure of this project is designed such that Bangladesh Bank is entrusted with project implementation from the Banking and Financial Institutions Division of the Ministry of Finance, which is the executing agency, and provides agricultural financing and technical guidance to small and marginal farmers through PMFIs. At the time of ex-post evaluation, Bangladesh Bank's implementation structure involves the SMAP/Bangla-SHEP Section within the Agricultural Credit Department mentioned in 3.1.2.2 Internal Coherence, managing the revolving fund and monitoring PMFIs' agricultural financing and TSS. The Bangla-SHEP Section consists of 1 Director, 1 Additional Director, 2 Joint Directors, 2 Deputy Directors, and 2 Assistant Directors.

2) PMFIs

1. Agricultural financing

Each PMFI has been providing microfinance to farmers traditionally, and agricultural financing for small and marginal farmers in this project is conducted under the overall operational management system of microfinance that each PMFI branch conducts as regular business.

2. Agricultural technical guidance

Each PMFI has agricultural technical instructors with agricultural degrees as shown in Table 11. Agricultural technical instructors provide guidance so that branch staff can provide training and support in agricultural techniques to borrowing farmers.

Table 11. Number of PMFI staff and agricultural technical instructors
(at the time of ex-post evaluation)

PMFI (Abbreviations in parentheses)	Number of Employees (Hundred persons)	Number of agricultural technical instructors (persons)
ASA Bangladesh (ASA)	259	15
BURO Bangladesh (BURO)	103	16
United Development Initiatives for Programmed Actions (UDDIPAN)	56	19
Jagorani Chakra Foundation (JCF)	80	6
Gram Unnayan Karma (GUK)	56	3
RDRS Bangladesh (RDRS)	36	9
Resource Integration Centre (RIC)	26	5
Centre for Development Innovation and Practices (CDIP)	22	11
Sajida Foundation (SAJIDA)	62	9
Manabik Shahajya Sangstha (MSS)	14	12
SKS Foundation (SKS)	34	6

Source: Documents provided by the implementing agency and the website of each PMFI

3.4.3 Technical Aspect

1) Bangladesh Bank

Bangladesh Bank manages the revolving fund and monitors PMFIs' agricultural financing and TSS according to operational guidelines. Monitoring methods are established, and both off-site and on-site monitoring are conducted annually. Off-site monitoring mainly confirms financing status through documents, and then samples are extracted for on-site monitoring through field visits. In fiscal 2024, 44 off-site monitoring and 16 on-site monitoring visits have been completed. Monitoring also includes direct communication with farmer groups using the WhatsApp messaging app. They also arrange capacity building training for PMFIs.

2) PMFIs

1. Agricultural financing

The PMFIs utilizes the following loan management systems in managing microfinance. This project's agricultural financing is conducted using these systems along with other microfinance.

Table 12. Loan management system of the PMFIs

PMFI	Loan management system
ASA	AMMS Online
BURO	B Banker
UDDIPAN	Infra softtech
JCF	Grameen Communication

PMFI	Loan management system
GUK	g banker
RDRS	Grameen Communication
RIC	Micro-finance Monitor
CDIP	Microfin 360
SAJIDA	Microfin 360
MSS	Microfin 360
SKS	Micro-finance Monitor

Source: Documents provided by the implementing agency

2. Agricultural technical guidance

At each branch, microfinance staff provides TSS to borrowing farmers according to the agricultural technical support service guidelines. Branch staff's main duties are microfinance operations management, and they do not have high agricultural expertise. As mentioned in 3.3.1.2 Qualitative Effects (Other Effects), the TSS provided by PMFI branch staff is not effective for farmers receiving support, and qualitative improvement is required. Regarding this point, as a result of discussions between Bangladesh Bank, PMFIs, DAE, and the Department of Livestock Services (hereinafter "DLS") of the Ministry of Fisheries and Livestock for improving TSS, initiatives shown in 4.2.1 Recommendations to the Implementing Agencies were proposed. Considering that the implementing agency, Banking and Financial Institutions Division of the Ministry of Finance, is also positive about these agencies implementing these initiatives, the prospects for improvement are judged to be high.

3.4.4 Financial Aspect

1) Revolving Fund

The revolving fund operation status at Bangladesh Bank has no serious problems such as non-performing loans, and is in a position to continue two-step loans for 15 years as planned.

Table 13. Status of the revolving fund

(Unit: Million BDT)

	Loan amount	Collection amount	Balance
FY2016	2,499	-	-
FY2017	3,273	2,499	10
FY2018	4,000	3,273	2,553
FY2019	4,800	4,000	1,554
FY2020	6,300	4,800	4
FY2021	6,390	6,300	44
FY2022	6,390	6,390	4
FY2023	6,390	6,390	4

Source: Documents provided by the implementing agency

2) PMFIs' Finances

PMFIs' overall microfinance loan collection rate averages 96% (fiscal 2023), indicating a high level with no problems in debt management. Additionally, according to MRA's annual reports, no particular problems are indicated regarding the sustainability (eligibility requirements and financial soundness) of sub loan management by PMFIs.

Table 14. Loan recovery rate of the PMFIs (FY2023)

PMFI	Loan recovery rate	PMFI	Loan recovery rate
ASA	94%	RIC	98%
BURO	97%	CDIP	98%
UDDIPAN	100%	SAJIDA	98%
JCF	98%	MSS	93%
GUK	87%	SKS	99%
RDRS	96%	Average	96%

Source: PMFIs' website

3.4.5 Environmental and Social Aspect

In this project, it is stipulated that if environmental regulation violations occur in PMFIs' implementation of agricultural financing and technical guidance, Bangladesh Bank can demand loan repayment. Until the time of ex-post evaluation, there have been no reports received regarding violations of environmental regulations in borrowing farmers' farming activities. Also, there are no particular concerns about environmental regulation violations as borrowing farmers receive explanations about compliance with environmental regulations in farming activities when making loan contracts.

3.4.6 Preventative Measures to Risks

At the time of project appraisal, regarding credit risk of two-step loans, it was determined that responses to delayed repayment from PMFIs to Bangladesh Bank would be discussed by the steering committee formed to promote smooth project implementation. Also, if it is judged that there is no repayment capacity, it was stipulated that Bangladesh Bank would suspend financing and the commercial banks contracted as guarantor banks for PMFIs in this project would repay both principal and interest for the delinquent amounts. Until the time of ex-post evaluation, there have been no delays in repayment from PMFIs to Bangladesh Bank.

PMFIs maintain sustainable microfinance operations by achieving both loan collection and borrower livelihood preservation through flexible responses to loan repayment delays and moral hazard due to unsecured loans from borrowing farmers, as follows.

- When borrowers cannot repay due to natural disasters or other climate factors, low-interest disaster loans are provided as needed to regenerate livelihood activities.
- When assets such as crops or livestock are lost and loans cannot be repaid, loans are

rescheduled with flexible terms and interest is waived if necessary.

- For livestock, use of cattle insurance systems that can repay all farmers' loans, etc.

3.4.7 Status of Operation and Maintenance

There are no problems from a sustainability perspective in Bangladesh Bank's revolving fund operation status and PMFIs' agricultural financing operations for small and marginal farmers.

Slight issues have been observed in the technical aspects of agricultural technical guidance, however, there are good prospects for improvement/resolution. Therefore, sustainability of the project effects is high.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

This project was implemented with the aim of by facilitating financial intermediation functions for agricultural finance, improving agricultural productivity of small and marginal farmers, and diversifying crops throughout Bangladesh through the provision of two-step loans to improve agricultural productivity for small and marginal farmers, and agricultural technical guidance to borrowing farmers, as a way to address the constraints on access to funds for agricultural inputs and equipment and lack of agricultural technology faced by small and marginal farmers in Bangladesh, thereby contributing to the deepening of agricultural finance and development of the agricultural sector.

The implementation of this project highly aligns with Bangladesh's policies, development needs, and Japan's development cooperation policy for promoting agricultural productivity improvement and crop diversification for small and marginal farmers in Bangladesh. Therefore, its relevance and coherence are high. The project outputs, including agricultural loans to small and marginal farmers, and consulting services such as implementation support and capacity building support related to agricultural technical guidance, were carried out as planned. Both project cost and period were within the plan, and therefore efficiency of the project is very high. The project effects intended through the combination of loans to small and marginal farmers and agricultural technical guidance for improving agricultural productivity and diversifying crops, which were the objectives of the project, were limited. The actual project effects were mainly from providing agricultural loans, while the effects of agricultural technical guidance were insufficient, and the achievement of crop diversification was low. Therefore, effectiveness and impacts of the project are moderately low. Slight issues have been observed in the technical aspects of agricultural technical guidance in the operation and maintenance of this project, however,

there are good prospects for improvement/resolution. Therefore, the sustainability of the project effects is high.

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

4.2 Recommendations

4.2.1 Recommendations to the Implementing Agencies

Recommendations to Bangladesh Bank and PMFIs

This project's PMFIs are NGOs working to solve various social issues, and each branch conducts farmer microfinance as regular business. On the other hand, agricultural technical guidance is not conducted as regular business, and while capacity strengthening was achieved through project implementation, the TSS provided by PMFI branch staff is not effective for farmers receiving support, and qualitative improvement is required. Based on this understanding, the following are recommended as a result of this ex-post evaluation.

1. Rebuilding partnerships with agriculture ministry-related departments: To provide highly specialized agricultural technical guidance (such as crop diversification and dealing with livestock diseases) that borrowing farmers seek, cooperation with the Department of Agricultural Extension (DAE) of the Ministry of Agriculture and the Department of Livestock Services (DLS) of the Ministry of Fisheries and Livestock is essential. While Bangladesh Bank has memorandums of understanding with DAE, DLS, and the Bangladesh Agricultural Research Institute, cooperation with these related organizations has not been sufficient through project implementation. During the remaining revolving fund period of project implementation, it is desired that Bangladesh Bank and PMFIs rebuild partnerships with these agricultural ministry organizations to provide effective TSS.

Additionally, as an initiative of the SMAP/Bangla-SHEP Section in charge of this project at Bangladesh Bank's Agricultural Credit Department, it is desired to improve the effectiveness of TSS provided by PMFIs through cooperation between this project and the SHEP project.

2. Redefining PMFIs' role in agricultural technical support services: The role of PMFIs in providing TSS should be reviewed from efficiency, effectiveness, and feasibility perspectives. Specifically, highly specialized technical support for farmers should be provided through cooperation with DAE and DLS, while PMFI branch staff provide services possible within their regular duties, such as explaining basic agricultural techniques, agricultural machinery usage methods, and vaccination schedules, and providing deworming camps for livestock. Additionally, activities such as coordination between DAE, DLS and borrowing farmers, working as intermediaries for private companies dealing in agricultural materials, and providing agricultural market

information could also be effective.

3. Strategic project implementation during remaining revolving fund period: As a way of implementing the project in line with its objectives, agricultural financing should be provided for the purpose of funding needs such as crop diversification, high-value crops based on local market demand and climate, and production efficiency improvement through use of technology and innovative inputs, accompanied by effective TSS.

Also, when selecting target support areas, they should be narrowed down, such as targeting low-income areas, from the perspective of more effectively utilizing limited resources.

4. Strengthening project effect monitoring by PMFI branches: Through the above strategic project implementation, PMFIs should take on the role of accompanying support for borrowing farmers and appropriately implement project effect monitoring. Bangladesh Bank should responsibly supervise PMFIs' strategic project implementation.
5. Localizing agricultural technical support services: Aim to expand project effects by widely offering the above-mentioned improved TSS to PMFIs' existing loans to small and marginal farmers. Such initiatives are expected to lead to achievement of this project's impacts.

Such initiatives are also expected to lead to the economic feasibility of TSS. Specifically, when cooperative organizations formed in rural communities (in many Bangladeshi villages, such organizations exist under the name Samity) invite DAE or DLS specialist staff for training etc., it involves transportation and other costs, but by having farmers belonging to Samities other than those who are borrowing under this project participate, it could also lead to lower per-farmer cost burden.

6. Setting loan condition options considering agricultural production cycles and non-agricultural livelihood means: By increasing loan repayment frequency options, it is thought that financing more aligned with borrowing farmers' agricultural production cycles can be provided. It is desired to consider non-agricultural livelihood means in addition to agricultural production cycles such as crop cultivation and livestock farming, and examine monthly repayment frequency along with lump-sum repayment and grace period extension.

4.2.2 Recommendations to JICA

None.

4.3 Lessons Learned

Setting conditions for participating microfinance institutions suitable for project objectives

This project's PMFIs are NGOs working to solve various social issues, and while some

NGOs target the agricultural sector, others do not. In this project, for capacity strengthening related to agricultural technical guidance, many PMFIs needed to start from recruiting personnel with agricultural expertise, essentially beginning initiatives in a new field from the initial stage. As a result, this project's agricultural technical support effect falls short of the objectives and requires improvement.

For future project formation and implementation combining financing and technical guidance through NGOs, it is thought that participating microfinance institutions should meet certain criteria as conditions, such as focusing on the agricultural sector and having sufficient staff with agricultural expertise.

5. Non-Score Criteria

5.1 Performance

5.1.1 Objective Perspective

In this project, there are no particularly noteworthy matters regarding JICA's role and contribution.

5.2 Additionality

None.

(End)

Comparison of the Original and Actual Scope of the Project

Item	Plan	Actual
1. Project Outputs	<p><u>Small and marginal farmer agricultural productivity improvement and diversification promotion financing</u></p> <ul style="list-style-type: none"> Financing to small and marginal farmers through two-step loans from Bangladesh Bank to PMFIs <p><u>Consulting Services</u></p> <ul style="list-style-type: none"> Project implementation support: Support for loan management and fund management, support for creating loan operation guidelines, etc. Content of capacity building support for PMFIs etc.: Formulation of operational guidelines for Bangladesh Bank staff, PMFI staff capacity building for dissemination of agricultural techniques, etc. Impact evaluation implementation support for interim monitoring 	<p><u>Small and marginal farmer agricultural productivity improvement and diversification promotion financing</u></p> <p>As planned</p> <p><u>Consulting Services</u></p> <p>As planned</p>
2. Project Period	June 2014 - December 2020 (79 months)	June 2014 - September 2021 (88 months) (Due to Covid-19 impact, consulting services implementation was interrupted for 10 months.)
3. Project Cost		
Amount Paid in Foreign Currency	9,576 million yen	9,643 million yen
Amount Paid in Local Currency	1,229 million yen (357 million BDT)	155 million yen (112 million BDT)
Total	10,805 million yen	9,798 million yen
ODA Loan Portion	9,930 million yen	9,675 million yen
Exchange Rate	1 BDT = 1.28 yen (As of October 2013)	1 BDT = 1.35 yen (2013-2021 average)
4. Final Disbursement	September 2021	