Ex-Post Project Evaluation 2022:

Package Ⅱ-4 (Nepal・Philippines・Timor-Leste)

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Nepal

FY2022 Ex-Post Evaluation of Grant Aid Project

Grant Aid “The Program for Rehabilitation and Recovery from Nepal Earthquake”

External Evaluator: Mitsue Mishima, Ryo Matsumaru[1], OPMAC Corporation

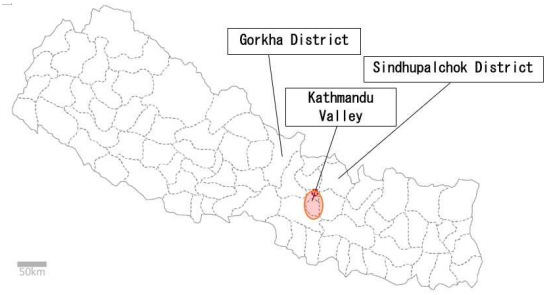
0. Summary

The project aimed to achieve "Build Back Better" by reconstructing the National Bir Hospital and the Paropakar Obstetrics and Gynecology Hospital in the Kathmandu Valley, reconstructing a water pipeline in Sindhupalchok District, which suffered the greatest earthquake damage, and constructing bridges in Gorkha District which was the epicenter of the earthquake, thereby contributing to the development of social infrastructure and institutions for sustainable and balanced economic growth. These were the prioritized facilities selected from among the ones that were demolished by the earthquake in Nepal for the grant aid program in Technical Cooperation for Development Planning "Nepal Earthquake Rehabilitation and Reconstruction Project". The project was consistent with the development policy and the development needs of earthquake recovery and reconstruction in Nepal and was also consistent internally with Japan's development cooperation policy and related technical cooperation projects. However, there are some issues regarding the relevancy of the water pipeline construction project in Chautara, as the project plan was not agreed upon by the local community in target area. Therefore, its relevance and coherence are moderately low. Although the project period exceeded the plan, the project cost was within the plan, thus efficiency of the project is high. The effectiveness and impact of the project are high because the expected outcomes and impacts were generally achieved through the reconstruction of the buildings of the two hospitals, the construction of the water pipeline in Chautara, and the construction of the bridges on the Barhakilo-Barpak road, and no negative social impacts were observed. Although there were some issues in the organization and structure, financial aspects, and the response to risks related to each subproject, improvements are expected and therefore, the sustainability of the effects achieved by the project is high.

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

[1] Professor, Department of International and Regional Studies, Faculty of International Studies, Toyo University, Japan. In charge of evaluating the technical aspects of the Chautara Water Transmission System and the Barhakilo-Barpak Road Bridge Project. Conducted on-site inspection of the projects and evaluated the current status of each facility and its operation and maintenance status. Mishima of OPMAC Corporation was in charge of compiling the overall evaluation report.

1. Project Description



Project Location Map

The Rangrung River Bridge
Subject to Barhakilo-Barpak Road Bridge Project

(Source: external evaluator)

1.1 Background

On April 25, 2015, a magnitude 7.8 (U.S. Geological Survey) earthquake occurred, with its epicenter about 80 km northwest of the capital Kathmandu. The subsequent aftershocks caused extensive damage, with 8,702 people killed, 22,303 injured, approximately 500,000 houses completely destroyed and 260,000 half destroyed.[2]

According to estimates by the United Nations, the Nepalese government, and others, 20% of the total population lives in the 14 Districts designated as particularly hard-hit areas[3], and more than 90% of all casualties and serious damage to both public facilities and private residences from the recent earthquake was concentrated in these 14 Districts. [4] In addition, many roads and bridges across the country were damaged by landslides and other disasters caused by the earthquake, which hampered the recovery and reconstruction of the affected areas, including these 14 Districts.

JICA implemented the "Nepal Earthquake Recovery and Rehabilitation Project" (2015-2019), a development planning survey type technical cooperation project, under the policy of seamless implementation from emergency and humanitarian assistance to development by the International Emergency Relief Team. In this technical cooperation, based on the complete list of damaged facilities, a long list of 66 facilities with significant damage and potential for grant assistance was prepared through interviews with government agencies. The list, excluding cases with other donor support, was reviewed based on 19 criteria, including the degree of damage, contribution to earthquake recovery, and beneficiary population. Grant aid target projects were then selected: reconstruction of two hospital buildings, reconstruction of the Chautara water transmission

[2] Source "Ex-ante Evaluation Sheet " (2015); original source “PDNA Survey Report”.
[3] Dolakha, Sindhupalchok, Gorkha, Nuwakot, Rasuwa, Dhading, Karvreparanchowk, Ramechharp, Bhaktapur, Okhaldhunga, Sindhuri, Lalipur, Kathmandu and Makawanpur districts.
[4] Source " Ex-ante Evaluation Sheet " (2015); original source "Nepal Disaster Risk Reduction Portal" (as of December 18, 2015).

system and the construction of bridges on the Barhakilo-Barpak Road which were higher priority projects. A schematic design for these projects was conducted. This program was implemented as a program grant assistance for several projects planned under the technical cooperation project.

1.2 Project Outline

The objective of the program was to realize "Build Back Better (BBB)" by rebuilding the National Bir Hospital and the Paropakar Obstetrics and Gynecology Hospital in the Kathmandu Valley, reconstructing a water transmission system in Sindhupalchok District, which suffered the greatest damage, and building bridges in Gorkha District, the epicenter of the earthquake, thereby contributing to the development of social infrastructure and institutions for sustainable and balanced economic growth.

According to ex-ante evaluation sheet of the program, the goals for realizing BBB for each project were as follows:

① Hospital reconstruction (2 projects): The goal was to reconstruct a more earthquake-resistant building than the pre-disaster facility (which was completely destroyed by the earthquake), to make the hospital safer and thus able to function in the event of a disaster, and by doing so to increase the number of patients and surgeries, with or without a disaster.

② Construction of Chautara Water Transmission System: The goal was to restore and improve the water supply service by upgrading to a seismic resistant water pipeline.

③ Bridge construction: Construction of bridges to enable year-round traffic, including the rainy season, and to accelerate the rehabilitation and reconstruction of the northern Gorkha region through enhanced public service outreach.

Grant Limit/Actual Grant Amount	4,000 million /3,936 million yen
Exchange of Notes Date/Grant Agreement Date	December 2015/February 2016
Executing Agencies	Ministry of Finance, National Planning Commission. Organizations responsible for each project are listed below. ① Hospital Reconstruction (2 projects) Ministry of Health & Population*. ② Construction of Chautara Water Transmission System Department of Water Supply and Sewerage Management, Ministry of Water Supply (herein after referred to as "DWSSM") ③ Bridge Construction Department of Road, Ministry of Physical Infrastructure and Transport
Project Completion	May 2019
Target Area	Kathmandu City, Gorkha District, Sindhupalchok District

Contractors	Main Consultants	① Hospital reconstruction (2 projects): Oriental Consultants Global Co., Ltd., K.ITO Architects & Engineers Inc., and International Techno Center Co., Ltd. ② Construction of a water pipeline to Chautara: CTI Engineering International Co., Ltd. ③ Bridge construction: Oriental Consultants Global Co., Ltd.
	Contractor	Hazama Ando Corporation
Basic Design/Preparatory Survey**		July 2015 - February 2016
Related Projects		JICA Technical Cooperation Development Plan Study Type Technical Cooperation "Nepal Earthquake Rehabilitation and Reconstruction Project" (2015-2019)

*At the time the program was initiated, Ministry of Health and the Department of Water and Sewerage under Ministry of Water Supply and Sanitation, respectively.
**A schematic design study was conducted under Outcome 3 of the development planning survey type "Nepal Earthquake Rehabilitation and Reconstruction Project".

2. Outline of the Evaluation Study

2.1 External Evaluator

Mitsue Mishima, Ryo Matsumaru (OPMAC Corporation)

2.2 Duration of Evaluation Study

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

Survey period: October 2022 –February 2024

Field Studies: March 19 - April 9, 2023 and July 22 - 28, 2023

2.3 Constraints during the Evaluation Study

The details of the situation in each ministry in Nepal at the time of implementation could not be confirmed directly because it was not possible to contact the person in charge at the time of implementation in each ministry. As for the documents related to the environmental and social considerations of the water transmission system construction project, the documents such as those regarding monitoring at the time of implementation could not be obtained from JICA and the implementing agency and could not be finally confirmed in a written form. Thus, the evaluation was based on other existing documents and the results of interviews with the relevant persons. Since the details of the financial statements of the two hospitals could not be obtained, the analysis was mainly based on the results of observation on site visits, information from interviews with hospital officials, and the evaluation of the financial management of each hospital by the Ministry of Health and Population.

2.4 Scope of evaluation of the Project

QIP-24 “Majuwa No. 1 and No. 2 Water Supply Headrace Improvement Project” (hereinafter referred to as "QIP-24 Majuwa Headrace Improvement"), one of the Quick Impact Projects (QIP) of the Development Planning Study Type Technical Assistance “Nepal Earthquake Recovery and Rehabilitation Project” (2015-2019), was considered for the implementation of this program at the design stage of the grant assistance outline. Since the total project cost was capped at 4 billion yen to be implemented as grant assistance, this headrace component was implemented as QIP separate from this program. This was also the case with one part of the bridge construction project. QIP-24 Majuwa Headrace Improvement consisted of one section of the Majuwa Water Transmission System (connecting from the water source in Majuwa to the Municipality of Chautara) designed as part of this program. This directly affected the relevancy, effectiveness/impact, and sustainability of the project under this program. Therefore, QIP-24 Majuwa Headrace improvement is included in this report in the analysis of (1) appropriateness of the project plan, approach, etc., for plan change and consensus building under “Relevance,” (2) effect in water supply to the Chautara municipality under “Effectiveness and Impact,” and (3) organizational structure, etc., under “Sustainability”. The analysis of “Efficiency” and “Sustainability” of the QIP-24 Majuwa Headrace Improvement as a project alone is included in the scope of the ex-post evaluation of the Development Planning Study Type Technical Assistance “Nepal Earthquake Recovery and Rehabilitation Project”.

Since this program was for rehabilitation and reconstruction, the focus of evaluation of “Effectiveness/Impact” and “Sustainability” of the target projects of hospitals, water transmission system, and bridges was particularly on the evaluation of the effectiveness and sustainability in terms of realizing BBB. The two hospitals are reconstructions of damaged hospital buildings, thus the evaluation focuses on whether the buildings are more resilient to earthquakes and other disasters than they were before the disaster, and whether the recovery of medical services is ensured as it was before the disaster.

3. Results of the Evaluation (Overall Rating: B[5])

3.1 Relevance and Coherence(Rating: ②[6])

3.1.1 Relevance (Rating ②)

3.1.1.1 Consistency with the Development Plan of Nepal

At the time of project planning, *13th Development Plan (2013/14-2015/16)* of Nepal stated that mainstreaming disaster management in development was indispensable to reduce the damage caused by disasters, and that the development of legal and administrative systems, information and communication systems, and capacity building for disaster preparedness and response were

[5] A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory
[6] ④:Very high, ③: High, ②: Fair, ①: Low

essential to achieve this. This program supported the improvement of disaster response capacities. The *National Disaster Risk Management Strategy (2009)* was also to mainstream disaster mitigation in the development process, in line with sectoral development plans and poverty reduction plans. The project plans in this program included consideration of future disaster mitigation in the design as well as the rehabilitation of individual infrastructures.

As for subsequent efforts regarding disaster response capacity up to the completion of the project are as follows, The *14th Development Plan (2016/17-2018/19)*, which aimed at early recovery and reconstruction from disasters, called for strengthening the capacity of government agencies and mainstreaming disaster risk reduction in all aspects of development. The current *15th Development Plan (2019/20-2023/24)* also prioritizes resilience to natural disasters and climate change. Furthermore, the *Disaster Risk Reduction Policy (2018)* states that the country will work to promote the concept of better recovery (BBB) through the construction of disaster resilient infrastructure.

Based on the above, the project is judged to have been in line with the development policy of Nepal from the time of the project planning to the time of the ex-post evaluation.

3.1.1.2 Consistency with development needs

In recovery and reconstruction assistance from disasters, it is necessary to respond quickly and flexibly to the ever-changing and diverse needs of the affected areas. This program grant aid supported the response to the needs of various sectors in the form of the flexible implementation of multiple projects under a single grant aid program.

The target areas were those where the damage was relatively severe: a hospital in the Kathmandu Basin of the metropolitan area, the reconstruction of a water transmission system in Sindhupalchok District, which suffered the greatest damage, and bridge construction on roads in Gorkha District leading to the epicenter of the earthquake in Balpak. The beneficiaries of all these projects were a wide range of local residents. The hospital was a facility that needed immediate reconstruction, Chautara water transmission system construction was to meet immediate water supply needs to an existing pipeline, and the three bridges were important for access to the affected areas.

As grant aid program eligible projects, the priority of the target projects was considered to be high and consistent with the needs in the earthquake response.

3.1.1.3 Appropriateness of the Project Plan and Approach

Among the lessons learned from the grant aid program “The Program for Rehabilitation and Recovery from Typhoon Yolanda” in the Philippines and others, the establishment and regular meetings of a progress management committee consisting of relevant agencies in the recipient country, centered on the National Reconstruction Agency (NRA), is an indispensable step to

plan and work on progress management. It is essential to plan and work on such progress management through regular coordination with each relevant agency led by the National Reconstruction Agency (NRA), and this has been done. In addition, it was also stated as a lesson learned that, in order to realize the BBB for "reconstruction assistance considering disaster risk" reconstruction assistance that takes into account disaster risks other than earthquakes should be implemented. As a countermeasure to disaster risks, the detailed design of each facility and infrastructure in the program included high earthquake resistance and measures against landslides.

However, it was observed that the plan should have reflected residents' opinions on the construction of the Chautara Water Transmission System. The intention of the project was to lay the water pipeline in a route with low disaster risk, rather than in the original one, replacing it with a new water pipeline using ductile iron pipes with high resistance to earthquake and landslide impact. However, the old pipeline route continued to be used thereafter. That is, the water transmission system was essentially expanded since the pipeline route was not replaced. In addition, the Water Users Committee (formally known as the Jugal Thalkhola Drinking Water User and Sanitation Committee, hereinafter referred to as "WUC") also changed the route of the Majuwa system water pipeline after project completion. The reason for this was that the WUC in the target area had not agreed on the new route of the project. When this was confirmed with the WUC at the time of the ex-post evaluation, the WUC stated the following reasons for not agreeing: (1) the WUC hoped to continue to use old pipeline, and (2) for the Majuwa pipeline, the new pipeline route for the project was not deemed sufficient to ensure the volume of water delivered. Regarding the Majuwa water pipe route constructed by the project, it was found that the WUC re-routed it two years after project completion (the details of the changes to the water pipe route and their impact are described in section "3.3.1 Effectiveness").

In this regard, the project plan should have been officially agreed with local residents before finalization as part of the process of social consideration at the time of project planning. Furthermore, documents should have been exchanged on the results of this process. At that time, the process of environmental and social considerations was simplified more than usual on the Japanese and Nepalese sides because the project was an urgent reconstruction and rehabilitation work. The planning of the project outline was conducted under the technical cooperation for development planning “Nepal Earthquake Reconstruction and Rehabilitation Project” and because of the urgent situation of this technical cooperation, the procedures in Section 3.4.1 (Review Stage of Proposed Projects) and Section 3.4.2 (Detailed Plan Preparatory Study Stage) of the JICA Guidelines for Environmental and Social Considerations were skipped[7]. The JICA

[7] JICA Advisory Committee on Environmental and Social Considerations, 60th Plenary Meeting, p.2 (URL address: https://www.jica.go.jp/Resource/environment/advice/ku57pq00000ngjcu-att/advice60_data.pdf, accessed December 14, 2023)

side was to monitor environmental and social considerations at the scoping stage after the commencement of the project. According to interviews with a party involved[8] on the Japanese side, at the scoping phase, it was confirmed that there was the agreement with DWSSM. According to DWSSM, the normal procedure on the Nepalese side is for DWSSM to confirm the agreement of local stakeholders on the project design. However, in this case, there was no written confirmation as to whether or not agreement had been reached.

3.1.2 Coherence(Rating: ③)

3.1.2.1 Consistency with Japan's ODA Policy

In the Country Assistance Policy for Nepal, "development of social infrastructure and institutions for sustainable and balanced economic growth" was stated as one of the priority areas, and this project was in line with the "sustainable development that takes into consideration the natural environment and disaster prevention" as a development issue in this priority area.

The project was also consistent in its contribution to the priority actions of the *Sendai Framework for Disaster Reduction 2015-2030 (April 2015)* adopted at the Third United Nations World Conference on Disaster Reduction: "Investing in Disaster Reduction for Resilience" and "Understanding Disaster Risk". With a view to contributing to the Japanese government's policy "*Sendai Disaster Reduction Cooperation Initiative" (March 2015)*, this program was consistent with Japan's development cooperation policy, aiming at strengthening the national resilience of Nepal under the concept of "Build Back Better".

3.1.2.2 Internal Coherence

This project was selected and designed based on Output 3 of the Development Planning Study Type Technical Cooperation "Nepal Earthquake Rehabilitation and Reconstruction Project" prior to this program, promoting rapid implementation. Furthermore, the road bridge project and water transmission system projects under the technical cooperation were to be implemented simultaneously with this program to have high impact on the target areas. The selection and schematic design of the project for grant assistance under the technical cooperation were conducted, and this was recognized as an achievement that led to the speedy implementation of the project.

[8] Based on the response to our inquiry to the consultant in charge of project implementation. Attempts were also made to contact the consultant in charge of environmental and social considerations, however the person in charge had already resigned and could not be contacted, and thus could not be confirmed.

3.1.2.3 External Coherence

Duplication of other donors' projects was avoided since one of the selection criteria was not to repeat other donor projects. However, there were no specific achievements, such as efforts to increase effectiveness in collaboration with other donors.

Based on the above, the relevance and coherence are moderately low due to some issues on "Appropriateness of the Project Plan and Approach" with relevancy.

3.2 Efficiency (Rating: ③)

3.2.1 Project Outputs

The planned and actual outputs of the project are shown in Table 1 (outputs are shown in Photos 1-6). As for the actual results at the time of completion of each project, although the number of chambered sections had increased compared to the plan for the Chautara water pipeline project, according to JICA data, this was due to changes in the pipeline route and to facilitate maintenance and management. The addition of water collection chambers and flow meters was also considered to be necessary. The outputs of each project were generally as planned.

Table 1: Planned and Actual Outputs

(Data) Item	Plan (February 2016)	Actual (as of completion)
1. Reconstruction of the National Bir Hospital (refer to Photo 1)	● Building: Reconstruction of one building in the third ward ● Equipment procurement: Patient central monitoring system, ventilator, blood gas analysis, video endoscope, dialysis machine. etc.	As planned
2. Reconstruction of Paropakar Obstetrics and Gynecology Hospital (refer to Photo 2)	● Building: reconstruction of one building in main ward ● Equipment procurement: ultrasound equipment, patient monitors, delivery tables, operating tables, incubators, sterilizers, ventilators, etc.	As planned
3. Reconstruction of the Chautara water pipeline (refer to photos 3 and 4)	● Water pipeline construction: Shaure confluence to Chautara water treatment plant (C1 line), Holche intake chamber to Shaure confluence (C2 line point), Chitre pressure breaking chamber to Shaure confluence (C3 line), Phusre pressure breaking chamber to Chitre pressure breaking chamber (C4 line)	As planned

(Data) Item	Plan (February 2016)	Actual (as of completion)
	● Chamber construction: ・C2 line 3 pressure breaking chambers ・C3 line 4 pressure breaking chambers ・C4 route One pressure breaking chamber	● Chamber construction: as follows. ・C2 route 4 pressure breaking chambers /collecting chambers ・C3 route 5 pressure breaking chambers ・C4 route 3 pressure breaking chambers /collecting chambers ・1 repair of a water collection chamber in Thalkharka ・1 flow meter chamber
4. Barhakilo -Barpak Road and bridge construction (refer to photos 5 and 6)	● Gatte Khola Bridge, Rangrung Khola Bridge, Daraudi Khola Bridge and attached road extension to each bridge, revetment, riverbank/ riverbed field protection works, etc.	As planned

Source: "Outline of Grant Aid for Nepal Earthquake Recovery and Rehabilitation Project, Nepal" (February 2016) for the time of planning. Actual results are from materials provided by JICA.

Photo 1: National Bir Hospital (left: building at the time of the 2015 disaster, right: at the time of the 2023 post-evaluation)
(Source: left provided by implementing consultant; right by external evaluator)

Photo 2: Paropakar Obstetrics and Gynecology Hospital (left: building at the time of the 2015 disaster; right: as of the 2023 post-evaluation)
(Source: left provided by implementing consultant; right by external evaluator)

Photo 3: Chitre pressure breaking chamber
(At the time of the post-evaluation,
source: external evaluator)

Photo 4: Holche system water pipeline
(At the time of the post-evaluation,
source: external evaluator)

Photo 5: Daraudi Khola Bridge
(At the time of the post-evaluation,
source: external evaluator)

Photo 6: Gatte Khola Bridge
(At the time of the post-evaluation,
source: external evaluator)

3.2.2 Project Inputs

3.2.2.1 Project Cost

Since the actual project cost on the Nepalese side could not be confirmed, only the comparison of the planned and actual JICA project cost was analyzed. The actual amount was 3,936 million yen compared to the planned 4,000 million yen, which was 99% of the planned amount and within the plan.

3.2.2.2 Project Period

The project period was verified to be from the signing of the grant agreement (G/A) to the delivery of all facilities and equipment; planned for February 2016 to July 2018 (30 months). Actual results exceeded the plan (133% of plan) with a 10-month delay from February 2016 to May 2019 (40 months).

The main reason for the delay was that it took time to construct the hospital buildings. According to the JICA document, time was required to complete the items to be borne by the Nepalese side due to the delay in the building permit procedure within the Nepalese government. Extra time was also needed to complete the tasks for which the project executing agency was responsible due to the discovery of underground buried objects (high-voltage cables, drainage pipes, etc.) that could not have been anticipated at the time of bidding. The consultant in charge

of implementation also pointed out the delay in starting the bidding process and the fact that the Bir hospital had to dig a well and secure a new water source before starting construction because the well was broken and the water supply was no longer available.

Although the project period exceeded the plan, the project cost was within the plan. Therefore, efficiency of the project is high.

3.3 Effectiveness and Impact[9] (Rating:③)

3.3.1 Effectiveness

For each of the projects of this program, the actual result against the target values were analyzed and evaluated separately. The operation and effect indicators for the two hospitals at the time of the ex-ante evaluation of this program were the reconstruction of wards that were damaged and no longer available, respectively. Since these operational effectiveness indicators overlap with the output indicators, the effectiveness of this project was evaluated based on whether the BBB had been achieved through the reconstructed facilities, as well as by confirming the operational status of the facilities and referring to data related to operation and effect collected through the field survey. Regarding the operation and effect indicators for the water transmission system in Chautara, the water supply figures provided at the time of the original schematic design were used as target values and compared with the actual results. Regarding the water supply volume, at the time of the schematic design, a water supply of 20 L/sec to the Chautara municipality was planned in the scenario as a result of the implementation of the water pipe with Majuwa as the water source, the water pipe with Thalkharka as the water source, and part of the water conduit with Holche as the water source in the entire water conduit system to Chautara as a JICA project (refer to Attached Diagram in the Appendix). The effect of these water transmission system projects as a whole is the planned figure for water supply, and the effect of the Majuwa system pipeline is also included in the actual results.

3.3.1.1 Quantitative Effects (Operation and Effect Indicators)

As shown in Table 2, generally, the post-project completion figures assumed at the time of the ex-ante evaluation are considered to have been achieved.

[9] Sub-rating for Effectiveness is to be put with Consideration of Impacts.

Table 2: Operational Status of Equipment

Indicators	Standard value (April 2015 post-earthquake situation)	Target value (After completion of the project)[2]	Actual results (as of March 2023)
1. Rebuild National Bir Hospital	Building Ward 3 was damaged and had ceased operation.	Reconstruction of one building	Reconstruction of one building was achieved. On-site survey confirmed that the building was fully operational.
2. Reconstruction of Paropakar Obstetrics and Gynecology Hospital	Main building wards damaged, and operations suspended	Reconstruction of one building	Reconstruction of one building was achieved. On-site survey confirmed that the building was fully operational.
3. Reconstruction of water pipeline: Amount of water transmission to the municipality of Chautara	10 L/sec (assumed value based on hearing)[1]	20 L/sec[3]	Purpose of reconstruction of water pipeline was achieved. Based on the results of interviews with the various parties involved, it appears that the amount of water piped to the Chautara municipality increased after the completion of this project, achieving at least 70%, and this project is considered to have contributed to the increase in the amount of water supplied.
4. Bridge Construction: Period of vehicle disruption on the Barhakilo-Balpak road	4 months (June - September)[4]	0 months	Vehicles can pass along the road all year round, and the indicator was achieved.

Note:
1. At the time of the preliminary evaluation, it was noted that afterwards the flow rate would be measured during the rainy season and the values updated, however, since the updated values could not be confirmed afterwards, this value is used as a reference.
2. Each indicator could be checked at any point after the completion of each project, and no specific year is indicated.
3. 20 L/sec water supply plan to the munucipality of Chautara, as described in the Grant Assistance Summary (February 2016), p. 86. In the ex-ante evaluation sheet, "10% increase over the standard value," is reported. However, in this project, the project contents were changed as the plan for updating the water pipeline became actually an expansion project. Therefore, the 20 L/sec. given as the water transmission scenario for the water supply needs was referred to as a comparative figure.
4. Situation before the disaster.

Source: JICA Documents, Questionnaire answers from executing agencies

The following points are details used to confirm the achievement of the purpose of each project.

① Hospital Reconstruction (2 cases)

The following points were evaluated to determine that both hospitals are fully operational.

【National Bir Hospital Reconstruction】

As of the time of the ex-post evaluation, total number of the beds of the hospital is 960. The building which was constructed by this project was planned to have 94 beds, whereas, according to interviews with the hospital, the actual number of beds was 95. The plan has therefore been achieved. The hospital has important functions such as intensive care (ICU), and is home to the departments of cardiology, nephrology, and gastroenterology. As a top national referral hospital, however, it has a large number of patients from all over the country, and thus its capacity remains

insufficient. The hospital has also been very crowded due to the large number of people accompanying patients.

【Paropakar Obstetrics and Gynecology Hospital Reconstruction】

The total number of beds before the earthquake was 415. This number had increased to 489 as of the post-event assessment. According to the hospital, although 70 to 80 patients were expected to be attended per day, in reality, this is more than 90 to 100 patients, which is more than the capacity of the hospital. As in the case of the National Bir Hospital, this hospital is a top national reference hospital, and during each site visit there were many patients visiting from all over the country, making the main ward building extremely crowded. The hospital is also an education hospital for obstetricians, gynecologists, and nurses, and at the time of the ex-post evaluation, training was being conducted by the National Health Center of the Ministry of Health. It was confirmed that the third floor was being used for such training purposes as planned. Among the equipment procured, the sterilizer was out of order and not in use. However, the rest of the equipment was generally in use. Regarding the design of the hospital facilities, a hospital official commented that it would have been better to plan a slope rather than stairs to transport patients, since elevators were not always available due to frequent power outages at the time of the project planning. It has been recorded that the construction of the slope was planned to be undertaken by the Nepalese side. More care should be taken in the design of hospital facilities in the future, taking into consideration the conditions in the target countries and the conditions of the hospital users within possible scope from the beginning.

② Construction of water transmission system in Chautara

Based on the results of interviews with officials from WUC and the Chautara municipality, it was evaluated that the amount of water supplied has increased since the completion of this project. Although there was no data recorded over time, based on a comprehensive analysis of the interview information from both parties, the water supply was considered to be about 14 L/sec during the dry season and at least about 22 L/sec during the rainy season, which is more than 70% of the planned 20 L/sec water supply. Thus, the objective of restoring and improving water supply services was deemed to have been achieved. Interviews with officials from the Chautara municipality and the Provincial Water Supply Department revealed that water supply security in the target area is very important, and that the project has improved the water supply situation. The project is also supplying water to several small communities along the water pipeline, which is benefiting not only the Chautara municipality but also the residents of these communities.

However, as previously mentioned in section " 3.1.1.3 Appropriateness of the Project Plan and Approach ", WUC had not agreed to the replacement plan and the route of the Majuwa

pipeline after project planning. The current status at the time of the ex-post evaluation, which also takes into account the history of the project, is illustrated in Attached Diagram in the Appendix. There are three water pipelines to the municipality of Chautara, one from Majuwa, one from Thalkharka, and one from Holche. Currently, WUC continues to use the pipeline from Majuwa, which was in use before the disaster, while the Majuwa pipeline, which was constructed under the QIP of the Nepal Earthquake Recovery and Rehabilitation Project, a development planning study type technical cooperation project, was excavated and rerouted, and replaced with a Chitre pressure breaking chamber (hereinafter referred to as “PBC) instead of a Phusre one. According to WUC, that Majuwa pipeline had been operating as is since its completion in July 2018, however a replacement was made two years later, in July 2020, using the budget of WUC. At the time of the post-evaluation, the Phusre PBC constructed under this project and water pipeline from there to the Chitre PBC were not in use. However, according to WUC, there is a plan to construct a water supply facility to supply water to the community near the Phusre PBC in response to a request from the community. After the completion of this facility construction, the currently unused the Phusre PBC and water pipeline from thereto the Chitre PBC is scheduled to have water flow.

③ Bridge Construction

The locations of the roads and bridges between Barhakilo-Barpak targeted in this project are shown in Attached Map in the Appendix. According to information gathered in field visits together with interviews with the Department of Road, Ministry of Physical Infrastructure and Transport (hereinafter referred to as "DOR") and local government officials in the target area, it was determined that the road and bridges were now passable in all weather conditions, and there were no longer any periods of vehicle disruption. Traffic volumes also appear to have increased after implementation of this project.

3.3.1.2 Qualitative Effects (Other Effects)

The contribution to the BBB of the project objective of this program is considered to have been achieved.

The reconstruction of the hospitals (2 cases), the construction of the water transmission system to Chautara municipaliy, and the construction of the bridges have resulted in buildings and facilities with disaster-resistant structures. Each facility was checked during the field survey at the time of the ex-post evaluation, and interviews with the persons in charge of each facility and item of infrastructure indicated that the structures have become more disaster resistant.

As for the hospital, hospital officials commented that the building structure was technically appropriate and strong against earthquakes, and that they felt the foundation had been strengthened compared to other buildings. Regarding water transmission, the water pipeline was

constructed with earthquake-resistant ductile iron pipes as planned to minimize the risk of damage posed by landslides caused by future earthquakes and other natural disasters. The WUC's opinion was that the project water pipes were excellent. Regarding bridge construction, the DOR pointed out that the structural aspects of the bridge improvement project and the revetment work had improved safety.

3.3.2 Impacts

3.3.2.1 Intended Impacts

It is considered that the project has achieved its overall goal of "contributing to the development of social infrastructures and institutions for sustainable and balanced economic growth." The status of achievement for each part of the project is as follows.

① Hospital reconstruction (2 cases)

In < the National Bir Hospital>, interviews with hospital officials showed that the nephrology department performs dialysis on 50 patients per day (35 beds), gastrointestinal endoscopies on an average of 120 patients per week, and colonoscopies on an average of 40-45 patients per week, and biopsies are conducted in about one week[10]. In addition, during the period of widespread COVID-19 infection, the building hospital became the designated hospital to handle infected patients, using the building built through this project. The Project therefore contributed in the above situation as well as to the development of the infrastructure of each hospital.

For < Paropakar Obstetrics and Gynecology Hospital >, according to interviews with hospital staff, while the number of deliveries had been approximately 20,000 per year before the disaster, it is now at 24,000. As reference indicator of impact on operation in the building constructed in this project, there are now 70-80 deliveries per day, with cesarean sections accounting for 37.5% of these. Before the disaster, there were approximately 50 deliveries per day, and cesarean sections accounted for approximately 25% of all deliveries. This indicates an increase compared to the pre-disaster period.

② Construction of water pipeline in Chautara

According to WUC, there were 1,089 residential connections to water supplied from the same conduit, which, assuming an average family size of approximately 4 persons per house, is 4,356 persons. There were 190 water supplies to government and public institutions and organizations. The project is considered to have contributed to securing the water supply for these beneficiaries. In terms of water quality, a representative of the Provincial Water Supply Department pointed out that the water source of the Majuwa system is located in the vicinity of a national park which is rich in nature, and the water is from melting snow, so the project has had an impact in

[10] These data were not available in written form, and the figures were stated through interviews at the time of the ex-post evaluation.

increasing the supply of good quality water. Based on the above, it is recognized that the project has promoted sustainable social infrastructure development for the residents of the target area.

③ Bridge Construction

According to all the interviews with local government officials in the vicinity of the target road, the bridges are now open to traffic all year round, which is considered to have increased traffic volume and led to the promotion of logistics and economic development around the road between Barhakilo and Barpak. The opening of the last bridge on the road to Barpak, the Rangrung Khola Bridge, which was very difficult to access during the rainy season, has been particularly effective in making the road passable all year round. Bridge improvement was reported to have facilitated the operation of ambulances, increased the number of long-distance buses from Kathmandu to Barpak, and increased the number of tourists and accommodation facilities such as hotels compared to before the project was implemented. The project is considered to have contributed to the rehabilitation and reconstruction of Barpak, the northern region of Gorkha.

3.3.2.2 Other Positive and Negative Impacts

1) Impact on the Environment

The project does not fall under the categories of large-scale bridges, the water supply sector, etc., listed in the "JICA Guidelines for Environmental and Social Considerations" (promulgated in April 2010), the undesirable effects on the environment were judged to be insignificant. In addition, the project does not fall under the sensitive characteristics and areas listed in the Guidelines, therefore, it is considered as Category B. At the time of the ex-post evaluation, whether or not there had been environmental impacts after project implementation was confirmed for each project, as follows.

① Hospital reconstruction (2 cases)

The results of the field survey interviews did not reveal any problems that had a serious impact on the environment or complaints from the local residents.

② Construction of water pipeline in Chautara

According to the WUC, there were no specific negative environmental impacts or complaints from the local residents.

③ Bridge Construction

The Initial Environment Examination (IEE) was available for the bridges except for the Jale Khola Bridge, and a review of its contents indicated that no particularly serious problems were anticipated. According to the interview with the director in charge of roads in the target area, there have been no serious impacts on the natural and social environment or complaints from the local residents during the construction period or up to the present.

2) Resettlement and site acquisition

According to the data provided by JICA, during the construction of the "Barhakilo -Barpak Road Bridge Construction," it was found that there was private land within the construction site. According to the document provided after the completion of the project, the land acquisition procedures had generally been resolved by the completion of the project. At the time of defect inspection in July 2019, however, it was pointed out by consultant in charge of project implementation that there were still several sites for the Daraudi Khola Bridge construction where the formal procedures for land transfer to DOR had not been completed. After viewing the site during the ex-post evaluation site visit and interviewing the representative of the Roads Bureau in charge of the subject area, it was confirmed that the owner agreed that they would donate the necessary portion as the site for this project.

3) Gender, people inhibited from equitable social participation, social systems and norms, people's well-being, human rights

There is nothing to note about the facilities under the program, as confirmed by the existing documents and the ex-post evaluation survey.

As mentioned above, this project has mostly achieved its objectives. Therefore, effectiveness and impacts of the project are high.

3.4 Sustainability (Rating:③)

3.4.1 Policy and System

The implementation of BBB in disaster recovery, restoration, and reconstruction is one of the priority areas in the *National Disaster Risk Reduction Action Plan (2018-2033)*. The plan also states that the strategy of the mid-term goal is to follow the principles of green development and BBB in recovery, and that the structure of facilities recovering from the disaster should be more resilient and environmentally friendly in each of the relevant ministries and agencies. Thus, policy and institutional sustainability is ensured.

3.4.2 Institutional/Organization Aspect

Regarding the organization and system for operation and maintenance of the facilities of the two hospitals, the water pipeline in Chautara, and the bridges constructed, the system for maintenance and management of the facilities of the water pipeline in Chautara is in place, and it is expected that the ownership of the project facilities will be transferred to WUC in the future. Although there are some improvements to be made in the current staffing for the bridges and the

two hospitals, the sustainability of the organization and system is assessed as having been secured for the day-to-day operation and maintenance of facilities to the same level as before the disaster. The analysis for each project is as follows.

① Hospital reconstruction (2 cases)

In the case of the two hospitals, where two ward buildings which had stopped operations due to the disaster, it was confirmed through interviews that personnel to perform basic services had been secured and that an organization and system had been restored and operated as it did before the disaster. Both hospitals have personnel assigned to building maintenance. In addition, as far as equipment is concerned, both hospitals have one Biomedical Engineer, a technician with expertise in medical equipment, who coordinates repair procedures within the hospital and with manufacturers and distributors in the event of equipment malfunctions and problems. In the Bir hospital, it was pointed out that Biomedical Engineers who can handle the new equipment installed by this project were necessary, and that both hospitals have a shortage of medical personnel, especially nurses, to handle the number of patients. However, the organizations are at least capable of operating the same medical services as before the disaster.

② Construction of Water Transmission System to Chautara

As for Water Transmission System to Chautara, as WUC is in charge of the operation and maintenance of the water supply facility from water source to users, they conduct operation and maintenance of the facilities constructed by the project. According to the interview with WUC, the organizational structure is divided into a Board of Directors, which is a decision-making body consisting of members elected by the residents, and an Executive Team, which is actually in charge of operations. 23 personnel belong to the Executive Team, 4 of whom are technicians[11] in charge of operation and maintenance.

Although the project facilities had been turned over to DWSSM[12], the formal handover of the facilities of this project from DWSSM to WUC had not yet occurred. According to explanation of WUC, WUC had rejected an official handing over of the facilities from DWSSM from the completion of this project to the time of the ex-post evaluation survey, because the water pipeline plan of this project had been different from WUC's intention, as described above. However, WUC has operated and maintained the facilities since the completion of this project, and has rerouted the Majuwa pipeline with its own funds. In addition, there is a plan to resume the use

[11] Generally, a technician is defined as a person with less than a college degree, while an engineer is defined as a person with a college degree or higher.

[12] The Department of Water and Sewerage, Ministry of Water Supply and Sanitation at the time of project implementation is currently the Department of Water Supply and Sewerage Management, Ministry of Water Supply (DWSSM). There are separate organizations such as the Federal Water Supply and Sewerage Management Project Office, which is responsible for the federal project planning and the Provincial Water Supply Department, which is in charge of supporting water supply projects in the province with relatively smaller budgets than those of the federal government.

of the water pipeline between the Phusre and Chitre PBC, which was not in use at the time of the ex-post evaluation survey, once improvement of the water supply system in the area surrounding the Phusre PBC was completed. WUC therefore plans to complete the handover procedures in the near future.

③ Bridge Construction

At the time of the ex-post evaluation, the operation and maintenance of the bridges was being handled by the Maintenance Unit of the road project (11kilo Chhepetar Bhaluswara Barpak Road Project), whose project office is located near the center of Gorkha District. This road project is included in the Barhakilo-Barpak road. The Maintenance Unit is staffed with 4 engineers and 2 sub-engineers. Of these, one engineer and one sub-engineer are also in charge of the construction of new roads in the target area. When the director of the project office was interviewed by the evaluation team to confirm any issues with the organizational structure, he stated that although the number of sub-engineers is not sufficient, it is not at a level that would cause significant problems with basic maintenance and management.

After completion of the road project, the Damauli Division Office of the Federal Road Supervision and Monitoring Office (FRSMO) in Pokhara, DOR will take over operation and maintenance of the bridges. The Division Office has 30 to 40 employees, including management staff, who are responsible for the operation and maintenance of the roads under their jurisdiction.

3.4.3 Technical Aspect

No technical problems were identified in any of the projects that would significantly interfere with basic operations, and no serious technical issues affecting sustainability were identified. In the case of the two hospitals, the problems with building maintenance have already been addressed, and there are no problems with the basic operation of the majority of the equipment provided. For the water transmission system in Chautara and bridges, there are no technical problems that affect the sustainability of the project effects, and the technical sustainability of the project is considered as satisfactory. The status of each project is as follows.

① Hospital reconstruction (2 cases)

In both hospitals, some of the equipment (e.g., sterilizers) installed in this project had malfunctions due to improper operation of the equipment or lack of knowledge on how to deal with malfunctions. However, most of the other equipment was in continual use and there were few technical problems. Although both hospitals had a problem with the water treatment part of their water supply system, which was no longer usable, they were able to construct a separate water supply system. Based on the above circumstances, it was evaluated that the hospitals' services were not significantly in a worse state compared to before the disaster, and that there

were no serious technical issues that could affect overall operations.

② Construction of Water Transmission System to Chautara

The self-assessment of WUC was that the technical level of operation and maintenance of the water pipe was adequate. Based on the status of repair and maintenance work related to this project to date, it was determined during the site visit that WUC's technicians are at a level that allows them to perform basic operation and maintenance of the facilities subject to this project. When repairs requiring more advanced technology or substantial civil works are required, WUC consults with the DWSSM, a central government agency, or the Provincial Water Supply Department for technical assistance. With regard to the water pipe, there is almost no possibility of water supply disruptions due to lack of operation and maintenance technology.

③ Bridge Construction

According to interviews with the DOR regional branch managers in charge of target bridges, DOR has a manual for bridge inspection and maintenance, and no problems affecting the sustainability of bridges and roads have been identified to date, especially not due to the technical level of the staff at Maintenance Unit.

3.4.4 Financial Aspect[13]

The budget necessary to perform the minimum daily operation and maintenance requirements for the facilities and infrastructure of each project has been allocated. Although the two hospitals do not appear to have an adequate operation and maintenance budget for the hospitals as a whole, we assess that there is no serious impact in terms of the safety improvements achieved in the reconstruction of the hospitals and their maintenance.

① Hospital reconstruction (2 cases)

Bir Hospital and Paropakar Obstetrics and Gynecology Hospital have relatively high scores of 82% and 70%, respectively on the Ministry of Health and Population's assessment of each hospital's financial management (FY2022), and are thus considered to have sound financial management. [14] According to interviews with both hospitals, approximately Rs. 10 million (approximately 10 million yen) was earmarked for maintenance and management expenses in fiscal year 2022 for Bir Hospital and in fiscal year 2023 for Paropakar Obstetrics and Gynecology Hospital. According to interviews with both hospitals, the budget is not sufficient for maintenance

[13] Since financial data documents could not be obtained from Bir Hospital and Paropakar Obstetrics and Gynecology Hospital, financial evaluation was conducted through a hearing with the Director General of Bir hospital and administration representatives of Paropakar Obstetrics and Gynecology Hospital.

[14] Results of the assessment of Minimum Service Standards (MSS) by the Quality Standards and Regulation Division of the Ministry of Health and Population. Financial management is indicated by the percentage of items that meet the standards out of 17 checkpoints.

of facilities and equipment, and therefore it is not always possible to promptly address problems with facilities. However, once the budget becomes available, urgent issues were handled. In the Paropakar Obstetrics and Gynecology Hospital, maintenance contracts (e.g., for elevators) that were not concluded after the completion of this project due to lack of budget have subsequently been concluded. Therefore, there are no financial problems that would seriously affect the sustainability of the goal of BBB for this project, which is to make the hospital safer and more capable of functioning even in the event of a disaster.

② Construction of Water Transmission System to Chautara

According to WUC, there is no fixed amount of maintenance budget each year, and the daily maintenance budget is almost entirely covered by water charge revenues. No problems with the collection of water charges have been pointed out to date. In some cases, maintenance work, such as those involving civil works, are also carried out with financial contributions from agencies such as the federal government DWSSM and provincial water departments. According to the responses to the questionnaire with WUC, for example, maintenance expenditure was 3.8 million rupees last year, and a subsidy of 1.8 million rupees was received from the federal government for the construction of a water tank.

③ Bridge Construction

Verifying the data on the actual maintenance budgets of DOR, the budgets for the maintenance of the bridges in this project were requested as needed each year, at approximately 900,000 rupees in FY 2020, approximately 19.93 million rupees in FY 2021, and approximately 8.94 million rupees in FY 2022. It was confirmed that the maintenance and management of the bridges on the target road has been carried out and is considered to be financially sound. Since the maintenance and management details vary from year to year, there are large fluctuations in the maintenance and management costs. For example, in 2021, maintenance costs increased significantly because levee protection works were also implemented on several bridges, and in 2022, maintenance of the entire target road and the painting of bridges was conducted.

3.4.5 Environmental and Social Aspect

No environmental or social considerations that could affect sustainability in the future were found in the review of available data or in the field survey at the time of the ex-post evaluation.

3.4.6 Preventive Measures to Risks

During the field survey at the time of the post-evaluation, it was found that the approach road and part of the retaining wall for the Rangrung Khola Bridge had collapsed (see Photo 7) because of a heavy rainfall in June 2022 that had exceeded the designed water level of the river. At the time of the post-evaluation, there were no problems with vehicle traffic. However, cracks can be seen in the areas where the road collapsed, and there is a high risk of further road collapse if another flood event of the level that caused the collapse were to occur.

Photo 7: Location of collapsed approach road and a portion of the retaining wall at the Rangrung Khola Bridge.
(Source: external evaluator)

3.4.7 Status of Operation and Maintenance

① Hospital reconstruction (2 cases)

There were no major maintenance issues with the buildings of either hospitals, and no concerns about the continuation of current medical services.

② Construction of Water Transmission System to Chautara

The field survey at the time of the post-evaluation did not reveal any particular areas in need of immediate repair, except for the water pipe of the Holche system, which is already being repaired by WUC.

③ Bridge Construction

As mentioned in section "3.4.6 Preventive Measures to Risks", the levee of Rangrung Khola Bridge needs to be repaired as soon as possible, and a budget request has been made for FY2023 for the cost of the work.

For the two hospitals in the project, there are some issues with the organizational structure, system, and financial situation related to the operation and maintenance of the buildings and equipment, however. there is no serious impact on the sustainability of the effects of the project. For the water transmission system and the bridges, there are no issues affecting sustainability in terms of the organizational structure, technology, and finances for operation and maintenance management. As of the time of the ex-post evaluation, it was planned that the unused portion of the water pipe would be used in the future. Regarding the bridges, the DOR project office requested the necessary budget for the parts which require repair to respond to risks in the future. Thus there is a high possibility that improvements will be made and issues resolved. Considering

the above, slight issues have been observed in the institutional/organizational and financial aspects and in preventative measures against risks. 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

The project aimed to achieve "Build Back Better" by reconstructing the National Bir Hospital and Paropakar Obstetrics and Gynecology Hospital in the Kathmandu Valley, reconstructing a water transmission system in Sindhupalchok District which suffered the greatest damage, and constructing bridges in Gorkha District which was the epicenter of the earthquake. This targeted prioritized facilities that were selected from buildings and facilities that were demolished by the earthquake in Nepal and designated as a grant aid program in Development Planning Survey Type Technical Cooperation "Nepal Earthquake Rehabilitation and Reconstruction Project", thereby contributing to the development of social infrastructure and institutions for sustainable and balanced economic growth. The project was consistent with the development policy and the development needs of earthquake recovery and reconstruction in Nepal and was consistent internally with Japan's development cooperation policy and related technical cooperation projects. However, there are some issues regarding the relevancy of the water transmission system construction to Chautara, as the project plan was not agreed upon by the local community in the target area. Therefore, its relevance and coherence are moderately low. Although the project period exceeded the plan, the project cost was within the plan, thus efficiency of the project is high. The effectiveness and impact of the project are high because the expected outcomes and impacts were generally achieved through the reconstruction of the buildings of the two hospitals, the construction of the water transmission system to Chautara, and the construction of the bridges on the Barhakilo-Barpak road. No negative social impacts were observed. Although there are some issues related to each project in the organization and structure, financial aspects, and response to risk, those are expected to be improved and therefore the sustainability of the effects achieved by the project is high.

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

4.2 Recommendations

4.2.1 Recommendations to the Executing Agency

Immediate response to damage on part of the road and levee at the Rangrung Khola Bridge.

In June 2022, there was heavy rainfall that exceeded the designed water level, causing and the approach road and retaining wall of the Rangrung Khola Bridge to partially collapse. This had not been repaired at the time of the post-evaluation. There is a high risk that similar heavy rainfall in the future could cause further road collapse in this area. Therefore, it is recommended that

repairs are conducted as soon as possible. As planned at the time of the ex-post evaluation (August 2023), a budget should be secured during the 2023 fiscal year to ensure that the measures are implemented.

4.2.2 Recommendations to JICA

None

4.3 Lessons Learned

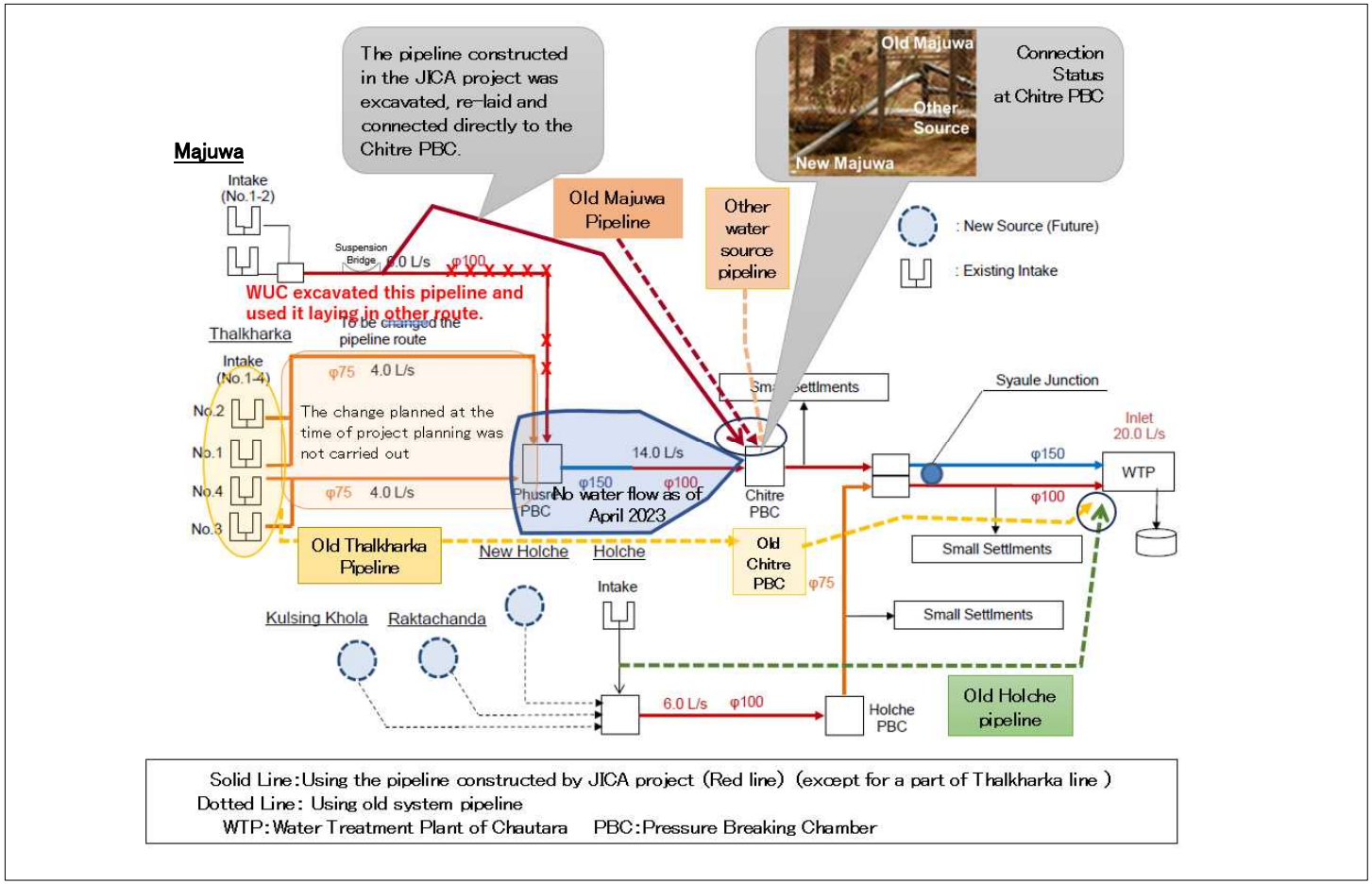
Incorporation of local residents' opinions on the design of the water transmission system

The construction of the water transmission system to Chautara was undertaken with the goal of restoring and improving water supply services by upgrading the water pipe to a seismic resistant one. The consultant proposed the replacement of the old water pipe in Majuwa, by laying a new water pipe along a route with lower disaster risk than the route of the old water pipe. However, WUC did not agree to the proposal and was continuing to use the old water pipe at the time of the ex-post evaluation, with no plans to discontinue its use in the future.

For the Majuwa water pipe constructed under the project, WUC had re-laid the water pipe route in July 2020, two years after completion in July 2018, changing the connection point from the Phusre PBC to the Chitre PBC. In addition, it was found that the water pipe between Phusre and Chitre was not being used at the time of the post-evaluation.

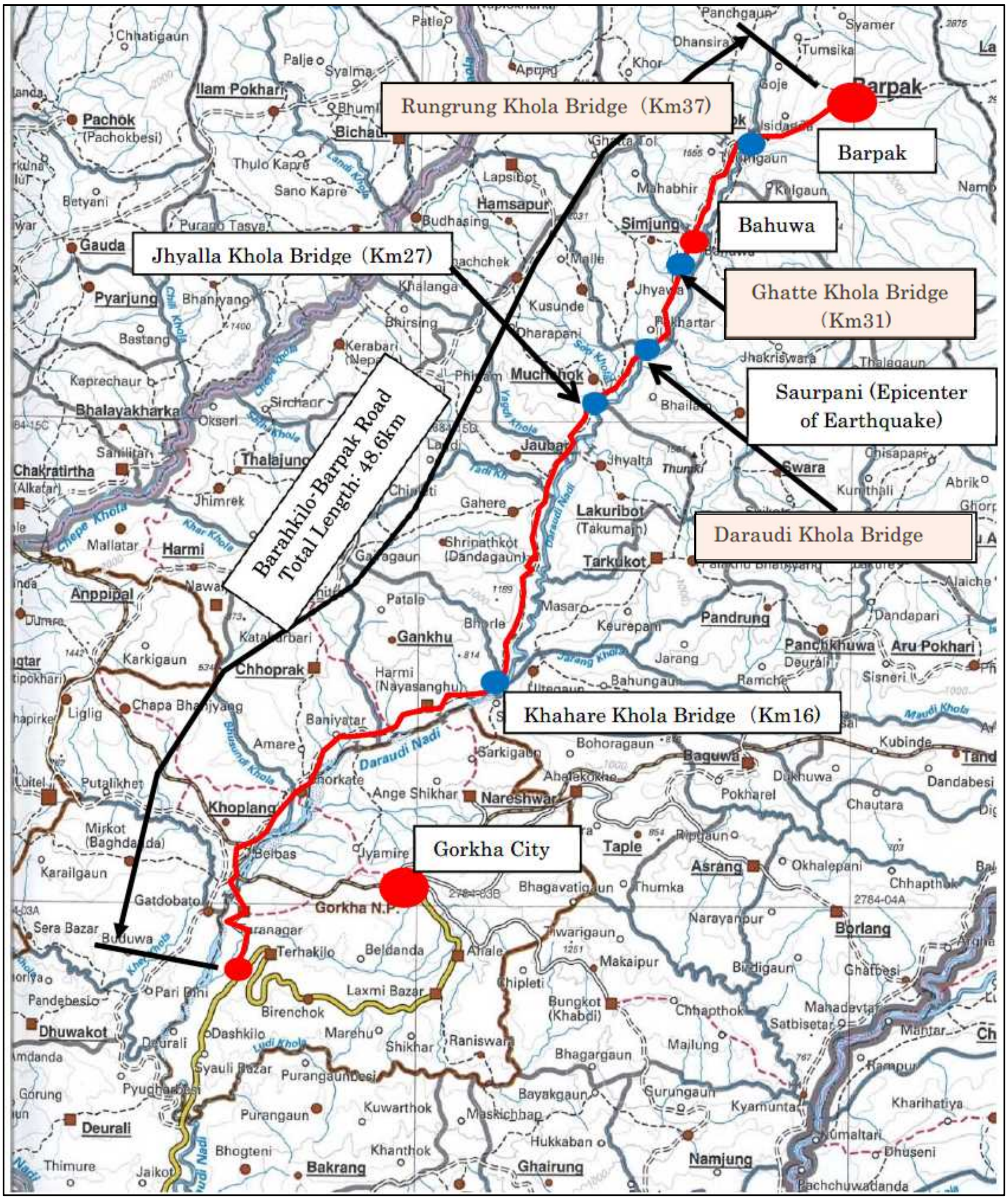
The above factors stem from the fact that no agreement was obtained from the local WUC at the time of project planning. It is thought that one of the reasons why the project plan was carried out without obtaining agreement was because the procedures for environmental and social considerations were simplified due to the project being a rehabilitation/reconstruction project. In general, water supply-related projects can cause disputes among beneficiaries regarding the allocation of water supply, etc. Therefore, it should have been important to confirm the intentions of local residents to the extent possible and to obtain their official consent for the design, even for restoration/reconstruction projects where immediate actions are desirable.

End



Source: Prepared by external evaluator from JICA, "Nepal Earthquake Recovery and Rehabilitation Project, Nepal: Grant Aid Outline Document" (February 2016), p. 86, Figure 4-3 Planned Water Transmission Scenario.

Attached Diagram: Chautara Water Transmission System (as of April 2023)



Source: JICA, "Nepal Earthquake Rehabilitation and Reconstruction Project, Nepal: Grant Aid Outline Document" (February 2016), p. 63, Figure 3-37 Location map of target bridges

☐ Bridges covered by the project

Attached Map: Bridges on the Barhakilo-Bapak Road

Nepal

FY2022 Ex-Post Evaluation of Technical Cooperation Project for Development Planning

"Project on Rehabilitation and Recovery from Nepal Earthquake"

External Evaluator: Mitsue Mishima, Ryo Matsumaru[1], OPMAC Corporation

0. Summary

The project aimed to promote rehabilitation and recovery in the target areas in the Kathmandu Valley, Gorkha District, and Sindhupalchok District, which were affected by the April 2015 Nepal Earthquake, through ① development of a Kathmandu Valley Resilience Plan and District Rehabilitation and Recovery Plans, ② promotion of the dissemination of earthquake-resistant buildings and structures, ③ formulation of priority recovery projects (grant program) [2], and ④ implementation of priority urgent rehabilitation projects (Quick Impact Projects, hereinafter referred to as "QIPs"), thereby contributing to the development of a more disaster-resistant nation and society, particularly in the target areas. This project was consistent with Nepal's development policy, the development needs of Nepal's earthquake rehabilitation and recovery, and Japan's ODA policy. In addition, there was both internal and external coherence: activities were carried out in collaboration with related JICA technical cooperation and grant aid, and the formulation of earthquake-resistant building guidelines contributed to the World Bank and Asian Development Bank's housing and school construction loans. The outputs of these projects were obtained and synergy effects with inside and outside projects of JICA were verified; thus, relevancy and coherence are high. By the end of cooperation through the project the outcomes had generally been achieved, with no negative impact. The project is considered to have had an impact on gender perspectives and on people whose equitable participation in society has been impeded. In terms of achievement of the overall goal after project completion, there was ②a promotion of use of guidelines for earthquake-resistant buildings and structures. However, ①the plans developed were not linked to utilization, and ③ it cannot be said that, as a part of livelihood recovery, QIPs had sufficient effect to commensurate with the inputs. Thus, effectiveness and impact are moderately low. although project cost exceeded the original plan, it corresponded with the increase in output, and the project period was within the plan of the revised R/D. Therefore, the efficiency of the project is high. Sustainability of the effects of the Project is expected for the continued use of the earthquake resistant building guidelines, the related materials and QIPs related to public facilities and infrastructure. However, regarding the Kathmandu Resilience Plan developed by the Project, rehabilitation and recovery plans for Gorkha and Sindhupalchok

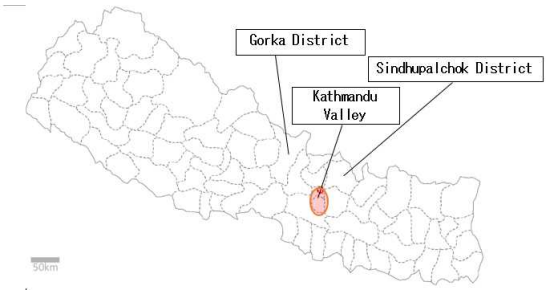
[1] Professor, Department of International and Regional Studies, Faculty of International Studies, Toyo University. Mainly in charge of the technical evaluation of the water pipeline to the Chautara Municipality and the Barhakilo-Barpak road bridge project. Conducted a field visit to the subject project, evaluated the current status and operation and maintenance of each facility, and provided advice on evaluation analysis on each output, conclusion, lessons learned, etc. . The overall evaluation report was compiled by OPMAC Mishima.

[2] Grant aid cooperation which implements several subprojects flexibly as one program

districts, wherein agriculture related QIPs aimed at restoring livelihoods and seed storage facilities, etc., some minor issues were observed in terms of the organizational, technical, and financial aspects and the continuation of the effect by the project was more limited than originally expected. These issues are not expected to be improved/resolved. Therefore, the sustainability of the project effects is moderately low.

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

1. Project Description



Project Location Map

Barpak, Gorkha District.
Local Government (Ward) Office
(Source: external evaluator)

1.1 Background

On April 25, 2015, a magnitude 7.8 (U.S. Geological Survey) earthquake occurred, with its epicenter about 80 km northwest of the capital Kathmandu. The subsequent aftershocks caused extensive damage, with 8,790 people killed, 22,300 injured, approximately 500,000 houses completely destroyed and 260,000 houses half destroyed.[3]

According to estimates by the United Nations, the Nepalese government, and others, while 20% of the total population lives in the 14 Districts designated as particularly hard-hit areas[4], more than 90% of all casualties and serious damage to both public facilities and private residences from the recent earthquake were concentrated in these 14 Districts. In addition, many roads and bridges across the country were damaged by the landslides that were occurred approximately 3,300 and more sites including those in the Tibetan side, and other disasters caused by the earthquake, which hampered the recovery and reconstruction of the affected areas, including these 14 Districts.

Under these circumstances, the Japan International Cooperation Agency (JICA) dispatched a survey mission to Nepal from April 26, 2015, to gather information in order to conduct a needs

[3] *Nepal Earthquake 2015 Post Disaster Needs Assessment-Executive Summary* Government of Nepal Planning Commission, 2015, Kathmandu.
[4] Dolakha, Sindhupalchok, Gorkha, Nuwakot, Rasuwa, Dhading, Karvreparanchowk, Ramechharp, Bhaktapur, Okhaldhunga, Sindhuri, Lalipur, Kathmandu and Makawanpur districts.

assessment on rehabilitation and recovery assistance and to identify specific projects that should be urgently addressed. In addition, on May 25, 2015, a seminar was held in Kathmandu under the joint sponsorship of the Nepalese government and JICA to share Japan's experience in earthquake recovery to date and to introduce examples of future recovery planning and specific recovery projects. In this context, taking into account the "Sendai Framework for Disaster Reduction 2015-2030" adopted at the Third United Nations World Conference on Disaster Reduction held in Sendai in March 2015 and the "Sendai Disaster Reduction Cooperation Initiative" announced by the Japanese government, the need to create a more disaster-resilient national reconstruction policy that reflects the concept of Build Back Better (hereinafter referred to as "BBB") was emphasized as an opportunity to build a society that is more resilient to disasters than it was before the disaster occurred, as the country moves from emergency response immediately after the earthquake to recovery and reconstruction. The Nepalese side also expressed their support for this concept. Under these circumstances, the Japanese government decided to provide support for the formulation of a rehabilitation and recovery plan and the promotion of earthquake-resistant construction as part of the "Rehabilitation and Recovery Support Program" undertaken by the Nepalese government.

1.2 Project Outline

Since this project was a Technical Cooperation Project for Development Planning, no Project Design Matrix was prepared. Based on the statement in "(2) Purpose to be achieved through utilization" in "Purpose expected to be achieved after the completion of the cooperation" in the ex-ante evaluation paper, "In Kathmandu, resilience in preparation for further earthquake disaster will be promoted, and in the local districts, rehabilitation and reconstruction will be promoted by utilizing the resources and strengths of the districts concerned to create a more disaster-resistant nation and society," the table below summarizes the purpose expected to be achieved after completion of the cooperation. In the case of the technical cooperation for development planning, the main purpose was to produce outputs (results) to be achieved within the project period, thus, "rehabilitation and recovery are promoted in the target areas." was considered as the purpose to be achieved by the end of the cooperation.

Purpose expected to be achieved after the end of cooperation		To contribute to the formation of a more disaster resilient nation and society in the Kathmandu Valley and Districts.
Purpose to be achieved by the end of cooperation		Rehabilitation and recovery are promoted in the target areas.
Outputs	Output 1	Formulation of Kathmandu Valley Resilience Plan and the Grand Design for Rehabilitation and Recovery of Target Districts
	Output 2	Promotion of the dissemination of earthquake-resistant buildings and structures

	Output 3	Formation of priority reconstruction projects (Grant Program)
	Output 4	Implementation of Priority Quick Impact Projects (QIPs)
Total cost (Japanese Side)		2.23 billion yen
Period of Cooperation		July 2015 - December 2019 (of which extension period: July 2017 - December 2019)
Target Areas		Kathmandu Valley (Kathmandu District, Lalitpur District, Bhaktapur District), Sindhupalchok District, Gorkha District
Implementing Agency		National Planning Commission (NPC) (Initially NPC, and most of the time during the project implementation, National Reconstruction Authority *1/National Disaster Risk Reduction Management Agency)
Other Relevant Agencies / Organizations		・ Ministry of Urban Development ・ Ministry of Federal Affairs and Local Development ・ Ministry of Finance ・ Ministry of Home Affairs ・ Ministry of Physical Infrastructure and Transport ・ Ministry of Education ・ Kathmandu Valley Development Authority ・ Sindhupalchok and Gorkha District Governments
Consultant/Organization in Japan		Oriental Consultants Global Co., Ltd., Pacific Consultants Co., Ltd., Mohri Architect & Associates, Inc., CTI Engineering International Co., Ltd., Pasco Corporation
Related Projects		【JICA Technical Cooperation】 < Existing projects at the time where the earthquake response was implemented > "The Project on Urban Transport Improvement for Kathmandu Valley" (July 2014-December 2015) "The Project for Integrated Research on Great Earthquakes and Disaster Mitigation in Nepal Himalaya (SATREPS)" (July 2016 - July 2021) "The Project for the Operation and Maintenance of Sindhuli Road" (December 2011 - January 2016) "Project for Assessment of Earthquake Disaster Risk for the Kathmandu Valley" (2015-2018) <Related projects after implementation of this project> "The Project for Strengthening Disaster Risk Governance for Resilience in the Kathmandu Valley" (planned for 2021-2025) "The Project on Participatory Rural Recovery" (2019-2023) 【JICA Grant Aid】 "The Program for Rehabilitation and Recovery from Nepal Earthquake" (G/A signed in February 2016) 【JICA Technical Assistance Project related to ODA Loan】 "Nepal Technical Assistance for Emergency Reconstruction Support Project" (Housing Project, School Project) (December 2015 - March 2019) 【JICA ODA Loan Projects】 "Emergency School Reconstruction Project"(signed in 2015) "Emergency Housing Reconstruction Project" (signed in 2015) 【Other donors】

	ADB “Nepal: Earthquake Emergency Assistance Project” (signed in August 2015) WB “Earthquake Housing Reconstruction Project”(signed in June 2015)

* Dissolved at the end of 2021.

2. Outline of the Evaluation Study

2.1 External Evaluator

Mitsue Mishima, Ryo Matsumaru (OPMAC Corporation)

2.2 Duration of the Evaluation Study

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

Duration of the Study: October 2022 –February 2024

Duration of the Field Study: March 19–April 9, 2023, July 22–28, 2023

2.3 Constraints during the Evaluation Study

The National Reconstruction Agency (hereinafter referred as “NRA”) was dissolved in 2021; the National Disaster Risk Reduction Management Agency (hereinafter referred as “NDRRMA”), which was established at the end of 2019, took over some of the NRA's operations and was the contact for the ex-post evaluation study. However, NDRRMA does not have any former NRA officials and it was impossible to conduct interviews regarding this project. As for the ministries, Nepalese counterparts who were directly involved in the implementation of the project could not be contacted, except for the staff of the Ministry of Urban Development, and could not be interviewed directly.

In addition, the Project's Outcome 2, “Promotion of the dissemination of earthquake-resistant buildings and structures”, overlaps in content with two technical assistance projects for ODA loan projects, which were implemented almost simultaneously with this project. Since those projects were implemented concurrently, Outcome 2 of the Project includes the results of the activities of the technical assistance for ODA loan projects.

2.4 Scope of Evaluation of the Project

For Outcome 3 “Formation of Priority Reconstruction Projects (Grant Program)” of the project, the project was evaluated up to the outputs of project selection and outline formulation as the scope of the project, and the six criteria evaluation of the priority reconstruction projects under Outcome 3 will be verified by the grant aid “Program for Rehabilitation and Recovery from Nepal Earthquake” (2016-2019).

“Majuwa No. 1 and No. 2 Water Supply Headrace Improvement Project” (refer to Table 1 QIP list in Attachment) implemented as QIP-24 of this project, contains part of the water transmission

system to Chautara Municipality[5] and was originally included in the Grant Aid. The installation of the water pipeline in the Majuwa system has directly affected the Relevance, Effectiveness/Impact, and Sustainability of the Chautara water transmission system project under the Grant Aid Program, and therefore it was included in the ex-post evaluation of the project of Grant Aid Program and analyzed in an integrated manner. 6 The ex-post evaluation of this project covers the analysis of the Efficiency and sustainability of the Majuwa system water pipeline installation as a single project, while the other evaluation item is within the scope of the ex-post evaluation of the grant aid.

In addition, two bridge projects along the Barhakilo-Barpak road (QIP-25 "Khare Khola Bridge Construction Project" and QIP-26 "Jhyalla Khola Bridge Construction Project" in Attachment Table 1), which were implemented as QIPs of this project, were originally included in the grant aid. In the ex-post evaluation of this project, interviews were conducted with stakeholders in the areas surrounding the bridges that were the target projects of the QIPs, and the impact was confirmed as an integral part of the entire area along the road between Barhakilo-Barpak, including the bridges that were also the target of the grant aid.

3. Results of the Evaluation (Overall Rating: C[7])

3.1 Relevance / Coherence (Rating: ③[8])

3.1.1 Relevance (Rating: ③)

3.1.1.1 Consistency with the Development Plan of Nepal

In 2009, the Government of Nepal formulated the *National Strategy for Disaster Risk Management*, which provided a roadmap for the preparation of disaster management programs in all sectors and policy decisions for mainstreaming disaster management in each development plan. Subsequently, the Ministry of Home Affairs prepared the *National Disaster Response Framework* in July 2013, organizing the roles of each agency during and before disasters. In this framework, the Ministry of Urban Development was designated as the organization in charge of seismic risk assessment, and the Ministry of Home Affairs, Ministry of Federal Affairs and Local Development, and local governments were designated as implementing cooperation agencies.

Nepal's *13th Development Plan* (2013-2016) at the time of the earthquake also aimed at mainstreaming disaster management in the development process. It stated the development and

[5] As of the ex-post evaluation in 2023, Chautara Sangachowkgadi Municipality was the formal name, however, it is hereinafter referred to as Chautara Municipality, which was the name used at the time of project planning.

[6] Specifically, the ex-post evaluation of the grant aid examines ① In "Relevance", the project plan, approach, etc. for the change of plan and consensus building regarding the construction of the water pipeline in the Majuwa system, ② In "Effectiveness and Impact", effect of the water supply in Chautara, and ③ In "Sustainability", the organizational structure and so on.

[7] A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

[8] ④:Very high, ③: High, ②: Moderately Low, ①: Low

implementation of legislation that would enable effective implementation of the disaster management cycle at various stages, together with capacity building for disaster management and disaster response activities. The "*National Strategy for Disaster Risk Management*" (2009) was reviewed.

Efforts to address disaster response capacity has been continued in the 15th Development Plan (2019/20-2023/24) since 2019, the year of completion of the Project. Increasing resilience to natural disasters and climate change has been one of the priority areas.

The *Disaster Risk Reduction Policy* (2018) addressed the enhancement of disaster information and awareness at the community level, the development of disaster risk assessment and mapping systems, the strengthening of disaster management capacity at the federal and local government levels, and promotion of the BBB concept. The content of this project was to support these efforts.

As can be seen in the above, this project was consistent with the development policy of the Nepalese government from the time of planning to the time of completion.

3.1.1.2 Consistency with the Development Needs of Nepal

After the massive earthquake, the Nepalese government assessed the damage, temporarily suspending new construction and reviewing building standards, as most of the damage took the form of collapsed buildings. In addition, as government policy, the government requested that donors take prompt action to restore damaged schools, government buildings, and other public facilities as soon as possible. This project, which included the promotion of earthquake-resistant houses and schools, and the restoration of public facilities from planning to construction, considering their durability and earthquake resistance, was in line with these efforts.

Project outputs were: 1. formulation of the Kathmandu Valley Resilience Plan and the Grand Design for Rehabilitation and Recovery of Target Districts, which were long-term plans that set the direction for rehabilitation and reconstruction; 2. promotion of the dissemination of earthquake-resistant buildings and structures for the future of the most serious collapsed buildings; 3. formation of priority rehabilitation projects (grant program) for critical infrastructure that had suffered damage; and 4. implementation of priority Quick Impact Projects (QIPs), which required a rapid reconstruction response. As described above, all of these were highly necessary in Nepal. The reflection of the BBB concept in rehabilitation and recovery was embodied in the various project components. The project components were consistent with the development needs for rehabilitation and reconstruction in Nepal.

3.1.1.3 Appropriateness of Project Plan and Approach

As emergency disaster assistance, the "Fast Track System" was applied to this project, which expedited and simplified the implementation procedures. The selection and planning of the grant

program and QIPs were to be conducted in this project at the time of ex-ante evaluation. From the perspective of expediting project implementation and facilitating project management, the approach of this project plan is considered appropriate with the following two points in mind.

The first point is that, at the time of the ex-ante evaluation of this project, it was planned that QIPs would be implemented immediately with an awareness of the need for speed in realizing the effects, and with a focus on projects with minor damage from past Japanese grant aid projects, and projects with high priority, such as the construction of earthquake resistant model houses and schools, which were to be implemented as soon as possible. This approach came as a result of utilizing the lessons learned from "The Project on Rehabilitation and Recovery from Typhoon Yolanda," a technical cooperation project in the Philippines. (see Attachment Table 1 for the 24 QIPs). In the ex-post evaluation of this point, the existing documents were reviewed and interviews with relevant parties were conducted during the field survey, through which it was found that the "QIP-23 Construction Safety Improvement Project for Housing Reconstruction," which was related to the implementation of the Japanese ODA loan project "Emergency Housing Reconstruction Project", was implemented early in 2016, in Chautara, Sindhupalchok District. Also, rapid implementation of many other QIPs had been planned and completed by 2017-2018.

The second point was that, again based on the experience of "The Project on Rehabilitation and Recovery from Typhoon Yolanda", the lesson had been learned that the JICA side should take the initiative in forming projects while conducting surveys based on requests from the Nepalese government, and that the appropriate number of projects and number of ministries concerned should be taken into consideration. According to interviews with JICA officials, the target area was limited to two districts and the number of projects was limited to three projects (hospital reconstruction, bridge construction, and water pipeline reconstruction) in order to avoid bidding with no bidder and to facilitate project management.

3.1.2 Coherence (Rating:③)

3.1.2.1 Consistency with Japan's ODA Policy

JICA, under the four priority actions[9] of the Sendai Framework for Disaster Reduction 2015-2030 (April 2015) adopted at the Third United Nations World Conference on Disaster Reduction and the Japanese government's policy of contributing to the Sendai Disaster Reduction Cooperation Initiative (March 2015), was to contribute to BBB by providing seamless services from emergency and humanitarian assistance by the International Emergency Relief Team to

[9] 1.Understanding disaster risk; 2.Strengthening disaster risk governance to manage disaster risk; 3. Investing in disaster reduction for resilience, and 4. Enhancing disaster preparedness for effective response, and to "Build Back Better" in recovery, rehabilitation and reconstruction.

development in order to improve Nepal's National Resilience. This project was in line with Japan's ODA policy.

3.1.2.2 Internal Coherence

Projects for the grant aid " Program for Rehabilitation and Recovery from Nepal Earthquake" (2016-2019) were selected under Outcome 3 of this project, and the preliminary plan was prepared to expedite the implementation of the grant aid. Of the projects designed as grant aid projects in the preliminary plan, the areas that could not be included within the ceiling of the grant aid program budget were implemented as QIPs for the project. Specifically, among the five bridges along the Barhakilo-Barpak road, three bridges (Gatte, Rangrung, and Daraudi) near the epicenter of the earthquake (Barpak) were selected for grant aid, while the remaining two bridges (Khahare and Jhayalla) were implemented as QIP-25 and QIP-26 of this project. A part of the Chautara water transmission system construction project was also covered by the grant aid project, and the Majuwa water pipeline, which is part of the water pipeline system, was implemented as QIP-24 of the project. It is recognized that the implementation of the above, together with the grant aid project, resulted in the enhancement of effectiveness and impact on the target area. In particular, for the bridge construction, the Khahare and Jhayalla Khola bridges were targeted in the QIPs of this project, and bridges became usable at all river crossing points on the road between Barhakilo and Barpak, which was expected to have a significant impact on the areas along the road.

Furthermore, school and housing construction guidelines, design examples, etc. to support the "Emergency School Reconstruction Project" (signed in 2015) and the "Emergency Housing Reconstruction Project" (signed in 2015) were formulated in the Project's Outcome 2 and used as explanatory materials for technical assistance for this ODA loan. It can be said that the project contributed to the promotion and achievement of these projects whose implementation period overlaps with that of this project.

Analysis results of the technical cooperation "Project for Assessment of Earthquake Disaster Risk for the Kathmandu Valley" (2015-2018), which was being implemented during the same period, were reflected in the Kathmandu Valley Resilience Plan under Outcome 1. Thus Outcome 1 was achieved through collaboration with other technical cooperation.

3.1.2.3 External Coherence

As was anticipated at the time of planning, the World Bank (WB) provided housing reconstruction loans and the Asian Development Bank (ADB) school reconstruction loans, with JICA, WB, and ADB closely exchanging information and opinions on the formulation of guidelines for the earthquake-resistant construction of houses and schools as well as on the formulation of design and other materials for the construction of houses and schools. The

guidelines for earthquake-resistant construction prepared under this project were referred to by other projects supported by WB and ADB, and contributed greatly to their effective implementation.

Based on the above, the project is highly relevant since it was consistent with Nepal's development policy and development needs. It was also consistent with Japan's ODA policy, and synergy effects with other JICA projects and other donor projects were also confirmed. Therefore, its relevance and coherence are high.

3.2 Effectiveness and Impact[10] (Rating:②)

3.2.1 Effectiveness

3.2.1.1 Achievement of Project Purpose by the End of Cooperation

No indicators were set for outcomes 1-4 of the project at the time of the ex-ante evaluation, and in the ex-post evaluation, the indicators shown in Table 1 were proposed and their achievement verified from those perspectives. As a result, it was found that all were achieved.

The project-specific results of the QIPs (24 projects) of Outcome 4 are shown in Attachment Table 1, and were selected based on the QIPs' formation policy: 1. Connect Japan's lessons and technologies to rehabilitation and recovery; 2. Contribute to the reconstruction of socially vulnerable groups; and 3. Rebuild stronger administrative and community facilities and strengthen disaster prevention capacity. Examining the implementation of each QIP, facilities such as community centers, hospitals, regional police stations, and local government offices were constructed to be more earthquake resistant than the pre-earthquake buildings. Bridges and the Majuwa water pipeline were designed to escape damaged by disaster. For the agriculture-related livelihood restoration QIPs, the selection of beneficiaries was conducted to include widowed female heads of households or Dalit[11] people, and those considered socially vulnerable were prioritized as targets. Therefore, each QIP appears to have contributed to any one of the formation policies 1-3 except for QIP-24's Majuwa headrace and QIP-22's seed storage facility, which had not been confirmed to be effective after completion at the time of final report of the project. Meanwhile, 10% of farming had already stopped for QIP-19 goat farming, and effectiveness was partial for QIP-22 seed production training. However, by the end of the project, effectiveness had been generally confirmed (see Attachment Table 1 for details).

[10] When providing the sub-rating, Effectiveness and Impacts are to be considered together.
[11] The term “Dalit” refers to a group of people who are considered to be outcasts or untouchable in the caste system and are excluded from fair participation in society. In Nepal, the term “Dalit” is used to describe a group of people whose characteristics vary from region to region and are not uniform. For example, the degree of social participation varies from region to region.

Table 1: Achievement of Outcomes

Outcome	Indicators (suggestions at the time of ex-post evaluation)	Achievement
Outcome 1: Development of Kathmandu Valley Resilience Plan and the Grand Design for Rehabilitation and Recovery of Target Districts	Specific priority projects are proposed in the Kathmandu Resilience Plan and the Rehabilitation and Reconstruction Plan for Gorkha and Sindhupalchok districts.	**Achieved** The Kathmandu Valley Resilience Plan and the Gorkha and Sindhupalchok District Rehabilitation and Recovery Plans, including specific priority project proposals, were developed and shared with the National Reconstruction Authority and the two district governments and municipal government officials within the two counties. The staff of the Survey Department, which served as a counterpart in the preparation of landslide hazard maps for the target area, said that they acquired knowledge through participation in workshops related to the preparation of such maps.
Outcome 2: Promotion of dissemination of earthquake-resistant buildings and structures	· Guidelines for earthquake-resistant construction of houses and schools are established. · Measures to disseminate guidelines for earthquake-resistant buildings are implemented.	**Achieved** · As seen through the project-related documents and interviews with JICA officials and Nepalese officials, a series of deliverables (guidelines for earthquake-resistant houses/schools, posters related to the dissemination of the guidelines, and minimal requirements) were compiled into a booklet and training materials, including a guidebook for masons and residents. · Curricula and teaching materials developed in this project were used to conduct training for residents and masons in the technical assistance for implementation of ODA loan projects "Emergency Reconstruction Assistance Project (Housing Project and School Project)".
Outcome 3: Formation of Priority Reconstruction Projects (Grant Program)	· Priority rehabilitation projects are selected based on priority needs. · The selected priority rehabilitation projects are designed, and a preliminary cost estimate is made.	**Achieved** · Three projects were selected as priority reconstruction projects: reconstruction of buildings at the National Bir Hospital and Paropakar Obstetrics and Gynecology Hospital in the capital, construction of a water pipeline to Chautara Municipality, and construction of bridges on the Barhakilo-Barpak road. · The project included a hospital and water pipeline system project, which were related to basic human needs, and the bridge project was crucial for access to the area needing support. The projects were selected in line with priority needs, and each project was designed, project cost estimated, and summaries provided in a preliminary report.
Outcome 4: Implementation of Priority Quick Impact Projects (QIPs)	· Plans for implementation of the QIP are developed. · At least five QIPs are implemented.	**Achieved**

Outcome	Indicators (suggestions at the time of ex-post evaluation)	Achievement
		· 24 QIPs were selected and implementation plans were developed. At the time of selection, it is considered that the beneficiaries' requests were considered, while at the same time, those requiring rapid rehabilitation and those considered as highly contributing to women and socially vulnerable groups were selected. · The number of QIPs actually increased nearly five-fold to 24 from the planned minimum of five. Of these, the bridge project and the headrace improvement project were planned as grant aid project, but due to the cap on cooperation funds, they were implemented as QIPs.

Sources: JICA documents, interviews with relevant organizations and Japanese experts

The achievement of Outcomes 1-4 is considered to have facilitated rehabilitation and recovery from the earthquake disaster in the target areas in the following respects.

- Under Outcome 1, the Kathmandu Valley Resilience Plan and the Gorkha and Sindhupalchok District Rehabilitation and Reconstruction Plan were developed, which included an assessment of the damage in each target area and the priority areas for rehabilitation and reconstruction efforts, together with the positioning of the QIP in the plans. The plan was shared with various local government officials and other donors on the Nepalese side during the development process and this is considered to have contributed to the facilitation of rehabilitation and recovery. According to the consultant's final report, the plan was approved by the Sindhupalchok District Government in 2017 at the end of the plan development.
- Setting the minimum requirements and guidebooks that embodied the implementation of the earthquake-resistant building guidelines in Outcome 2 were utilized in the implementation of technical assistance for ODA loan projects implemented in parallel to this project which contributed to the promotion of the reconstruction projects of houses and schools. The guidebooks were also referred to, and highly appreciated by, the Nepalese counterparts and other donors including WB and ADB, which were aiding in their target areas. Therefore, it can be said that the project contributed to the promotion of rehabilitation and recovery in the target areas of the project and other areas.
- The selection of grant aid for Outcome 3 and a preliminary plan including the design and estimate for each project had been prepared by February 2016, and the program grant aid project was initiated. Construction of the projects were completed by May 2019 during the implementation of this project, which facilitated the rehabilitation and recovery of the target areas.

- Regarding the effectiveness of the implementation of the 24 QIPs in Outcome 4, except for two projects, the seed storage facility and the Majuwa water pipeline, where not much time has passed since project completion, effectiveness had generally been confirmed by the end of the project, and the rehabilitation and recovery of facilities and livelihoods in the target areas were promoted.

3.2.2 Impacts

3.2.2.1 Review and Resetting on Evaluation Indicators at the time of Ex-Ante Evaluation

The indicators in the ex-ante evaluation paper for this project were reviewed in accordance with the actual activity results after the time of the ex-ante evaluation and organized as shown in Table 2. Alternative indicators were reconsidered. The evaluation of technical cooperation for development planning will be conducted in accordance with the evaluation policy, which states that at the time of the ex-post evaluation, three years after the completion of the project[12], the main focus will be on monitoring the utilization of the proposed plans. Regarding the status of utilization of the developed plans, it was decided that verification would take place of whether or not the plans were approved, budgeted, and implemented, and for the earthquake resistant building guidelines, etc., whether the guidelines were referred to in the construction of houses and schools. As for QIPs, they can be broadly classified into two types: (1) facilities or infrastructure projects and (2) livelihood recovery projects (agriculture-related projects). The level of progress of each project by the end of the project differed, with some QIPs having achieved effectiveness and others not having reached that stage. Considering the contents of each QIP project and the level of progress, QIPs are evaluated from the viewpoint of the effects or impact expected at the time of the ex-post evaluation. (1) facility or infrastructure projects are evaluated and verified in terms of the realization and continuation of effects, and (2) livelihood restoration projects are verified from the point of view of whether or not the effects were observed corresponding to the inputs, and whether there were any points for improvement to enhance the effects.

[12] JICA, "FY2022 External Evaluation Reference," p. 5 (Only in Japanese). For the Project, the rehabilitation and recovery plans for the two districts and the Kathmandu Valley Resilience Plan in Outcome 1 were completed in 2017, two years after the start of the Project (i.e., two years before the Project completion in 2019), so their subsequent utilization is not after the Project completion. The utilization of the plans is considered to start during the implementation of the Project.

Table 2: Indicators at the time of the Ex-ante Evaluation and Alternatives

Indicators at time of the ex-post evaluation (3 years after completion)	Utilization of the proposed plan after the end of cooperation and effect indicators of project implementation (alternatives at the time of ex-post evaluation)
(1) Progress in utilization ・ The Kathmandu Valley Resilience Plan and the Grand Design for Rehabilitation and Recovery of Target Districts formulated in this project will be approved as a policy of the Nepalese government. ・ The guidelines for earthquake resistant buildings were approved as guidelines by the Nepalese government. ・ Summary of QIPs to be implemented in this project are prepared.	**【The status of utilization of established plans and guidelines for earthquake-resistant construction, etc. 】** ・ The Kathmandu Valley Resilience Plan was approved, budgeted, and implemented by the Nepalese government. ・ Rehabilitation and reconstruction plans for Gorkha and Sindhupalchok districts are approved, budgeted, and implemented. ・ Houses and schools will be constructed with reference to earthquake-resistant building guidelines, etc. (For the specific number of construction projects, indicators for the ODA loan projects "Emergency School Reconstruction Project" and "Emergency Housing Reconstruction Project" are shown as reference figures.) **【QIP Effects or Impacts】** ・ The effects of the QIP implementation are realized/sustained or the impacts are realized after QIPs is completed.(Among QIPs, evaluation is conducted on ① in case of facilities and infrastructures, realization and continuation of effects, ② in case of livelihood recovery, realization of effect to meet the inputs.) (*The number of QIPs implemented was used as an outcome indicator.)
(2) Indicators of achievement targets through utilization ・ Number of projects proposed and initiated under the Kathmandu Valley Resilience Plan and the Grand Design for Rehabilitation and Recovery of Target Districts. ・ The number of houses and schools constructed in accordance with the earthquake-resistant building guidelines (for the specific number, refer to the indicators proposed in the "Emergency School Reconstruction Project" and "Emergency Housing Reconstruction Project" to be implemented separately). ・ Number of QIPs to be implemented (5 at least).	
(3) Capacity development ・ Number of participants in country-specific training programs or invited to Japan ・ Number of participants trained in earthquake-resistant housing construction	The number of participants in country-specific training programs or Japanese invitations is an input figure for the capacity-building indicator shown on the left. The number itself of participants in training courses on earthquake-resistant housing construction, is not exactly an indicator to show the effectiveness of capacity development. Although capacity development was presented as an indicator during the ex-ante evaluation, it was not set as an outcome of the project. Since many of the participants at that time could not be contacted during the ex-post-evaluation, this figure is given as reference for where opinions could be directly confirmed by those involved.

Source: Ex-post evaluation indicators at the time of the ex-ante evaluation are from the project ex-ante evaluation paper.

3.2.2.2 Achievement of Project Purpose After the End of Cooperation

<Status of utilization of the Kathmandu Valley Resilience Plan and Gorkha and Sindhupalchok District Rehabilitation and Recovery Plans >

The Kathmandu Valley Resilience Plan has not been approved by the government[13] as a separate volume of the Kathmandu Valley Strategic Plan as originally planned. The rehabilitation and recovery plans for Gorkha and Sindhupalchok districts were scheduled to be positioned as part of the Periodic District Development Plan, which is a statutory plan. However, the administrative structure was shifted to the federal system immediately after the completion of the planning for this project. Accordingly, the implementation of the plans then ceased as the budgetary authority for the Five-Year District Development Plan and Annual District Development Plan was shifted from the Districts to the Municipalities.

During the ex-post evaluation, it was confirmed that, due to the above-mentioned changes in the authority of the local government structure, the District Coordination Committees in Gorkha and Sindhupalchok Districts became in charge of coordination of the municipalities in the district only and staffing numbers decreased together with the reduction of authority. As a result of this neither of the district coordination committees was aware of the rehabilitation and recovery plans prepared by the Project, and no documents remained.

The description in the Final Report[14] of the Project recognized that the budgetary authority of the District government would be discontinued in 2017, when the outputs of this project were handed over, and that each District recovery and reconstruction plan developed under the project would be distributed to each Municipality[15] in the District. The project also conducted briefings on the contents of the plans. In the ex-post evaluation study, it was found that none of the heads or deputy heads of the 11 municipalities that conducted the QIPs knew if the recovery/restoration plans had been referred to afterwards. Indeed, none of them knew the existence of the rehabilitation/recovery plans and there were no evidence that they referred to the plans. The reason that they were unaware of the project's reconstruction/recovery plan was given to be because the head of each municipality had changed since the implementation of the project. The plans as project outputs were therefore not shared within the organization and were not referenced formally as a guideline.

<Utilization of Earthquake-resistant Building Guidelines, etc. >

This output of the project was utilized in technical assistance for the Emergency School Reconstruction Project (signed in 2015) and the Emergency Housing Reconstruction Project

[13] Although the plan was considered to be referenced in a related JICA technical cooperation "The Project for Strengthening Disaster Risk Governance for Resilience in the Kathmandu Valley" (scheduled from 2021 to 2025), the project is not necessarily and entirely based on Kathmandu Valley Resilience Plan of the Project. Therefore, it is not evaluated that this project has made a progress in the utilization of the plan.

[14] JICA Technical Cooperation "The Project on Rehabilitation and Recovery from Nepal Earthquake Final Report" (October 2017) Output1-Output 3. p.7-10, p7-12, p7-37.

[15] Since March 2017, local administrative division in Napal has consisted of Provinces, Districts included within the Provinces, Municipalities as local government authorities (depending on population size and other factors, there are metropolitan municipalities, sub-metropolitan municipalities, and rural municipalities) and Wards as the next administrative division. Under the wards, there are villages.

(signed in 2015), which were implemented in parallel with this project. In addition, utilization took place during implementation of the loan disbursement of these two projects. The review of earthquake-resistant building standards through this project component also led to the realization of the review of the Nepal Building Code (hereinafter referred to as "NBC"). As described above, the project made a large contribution to the promotion of disaster-resistant buildings in terms of the goals after completion of the cooperation.

< Effectiveness and Impact of QIPs>

The status at the time of the ex-post evaluation is shown in Attachment Table 1: QIPs Survey Results at the time of project completion and ex-post evaluation.

Reconstruction of public facilities such as community and women's training center related (QIP-01(02), QIP-01(04), QIP-02, QIP-13), local government (village development committee at the time of planning, administrative unit called "Ward" at the time of ex-post evaluation) offices (QIP-05, QIP-09, QIP-12, QIP-16, QIP-17), hospital (QIP-03), health post (QIP-14), police station (QIP-4), agricultural facilities (QIP-06, QIP-07), and disaster prevention park (QIP-27) contributed to the construction of more earthquake resistant and durable facilities and the rapid restoration of local community services. According to interviews with local government officials in the target areas in Nepal, two bridges (QIP-25 and QIP-26) are considered to have contributed to the revitalization of logistics and economic activities in the target areas. According to the target area's water use committee (formally known as the Jugal Thalkhola Drinking Water User and Sanitation Committee, hereinafter referred to as "WUC"), the Majuwa pipeline (headrace) (QIP-24) was constructed without the agreement of WUC for the planned pipeline route, and after its completion, the WUC rerouted and re-laid the Majuwa pipeline with its own funds.[16] The ex-post evaluation survey confirmed that the water supply had been secured and was effective from after the re-laying until the time of the ex-post evaluation.

The QIPs related to livelihood restoration in the agricultural sector include projects whose sustainability has been declining since the end of the project. On this point, however, given that the technical guidance training for the participants in these QIPs was provided only once, or for only one year, and that the inputs (fertilizer and other inputs) for each QIP were provided only once at the beginning of the project, the sustainability of the effect of the plan was limited in the plan itself. While the QIP-20 Vegetable Cultivation project had a relatively rapid and sustained effect even after training only once, the QIP-21 Maize Production Improvement and QIP-22

[16] This is due to reasons such as the inability to secure sufficient water volume with the water pipe route planned in this QIP. For details, please refer to the FY2022 External Ex-post Evaluation of Grant Aid "Program for Rehabilitation and Recovery from Nepal Earthquake" which was conducted simultaneously with this ex-post evaluation. It has not been verified which has a larger volume of water, the QIP plan of this project or the water pipe rerouted by WUC.

Quality Seed Production Improvement projects required several years of technical guidance and support to achieve a certain level of sustainable results.

Among the QIPs related to livelihood restoration, qualitative research was conducted on the formation of women's cooperatives in QIP-18, goat farming for targeted women in QIP-19, and a project to improve vegetable production techniques for women in QIP-20, which targeted women and aimed to benefit them. Results showed that the projects had a certain level of benefit effects for women (refer to the column for details). However, as for the support for goat farming, out of 78 cases supported, 6 had closed down at the end of this QIP, and the number had increased to at least 16 by the time of the ex-post evaluation. All Dalit women who participated in the QIP activities are included in these cases. As with the QIP-21 Improving Maize Production and QIP-22 Improving Quality Seed Production projects, the duration of support and inputs for QIP-19 Goat farming were limited in order to obtain higher effects or a more fixed effect. In particular, more careful and continuous support was needed for a certain period of time, especially for target people who were not accustomed to goat farming.

Table 3: Achievement of Project Purpose after the End of the Cooperation

After the end of the cooperation Achievement Targets	Indicators (suggestions at the time of the ex-post evaluation)	Achievement
Contribute to the formation of a more disaster resilient nation and society in Kathmandu and the Districts.	**<Status of utilization of the Kathmandu Valley Resilience Plan and the Rehabilitation and Reconstruction Plan of the two provincial counties>** ・The Kathmandu Resilience Plan was approved, budgeted, and implemented by the Nepalese government. ・Rehabilitation and reconstruction plans for Gorkha and Sindhupalchok districts are approved, budgeted, and implemented.	Not achieved ・The “Kathmandu Valley Resilience Plan” has not been approved as a government plan. The project's Final Report indicated that it was planned that it would be a separate volume of the “Kathmandu Valley Strategic Plan”. However, that strategic plan itself has not been approved by the government. ・As for the rehabilitation and recovery plans for the two districts, for Sindhupalchok District, the plan was approved at the time of completion of the plan, however, no approval has been confirmed for Gorkha District. In any case, as the authority for the development budget was transferred from the District to Municipalities in both of the two Districts with the transition to the federal system. After the plan was prepared, its position as a public plan on the part of the Nepalese government in the initial plan became unclear, and it was not used as a public plan.
	<Use of earthquake-resistant building guidelines and resources> ・Houses and schools are constructed with reference to earthquake-resistant building guidelines, etc.	Achieved ・The use of the earthquake-resistant building guidelines had a high impact, as it was referenced in the parallel implementation of technical assistance for ODA loan projects and other donor loans, and also led to a review of Nepal's national building standards. The number of houses constructed under the “Emergency Housing Reconstruction Project” was 87.9% for

		recipients who received housing reconstruction funds and 85,005 for recipients who received full housing reconstruction funds. Under the "Emergency School Reconstruction Project", 274 elementary, junior high, and high schools were constructed.
	<Effect and Impact of QIPs ・Effect and sustained effects or impact of QIP implementation after its completion.	Partially achieved ・At the time of the post-evaluation, there were 5 cases out of the total of 24 projects that had not been used (some of the QIP-22 seed storage facilities), and others that had not shown any effect or continuation of effects.

Source: JICA documents, interviews with relevant organizations, interviews with Japanese experts

Achievement of purpose after the end of cooperation is summarized in Table 3. As described above, the Project is considered to have contributed to a certain extent to the formation of a more disaster-resistant nation and society in Kathmandu and the districts through the use of the earthquake-resistant building guidelines and the implementation of QIPs. However, the achievement of the purpose of the project after the end of the cooperation is evaluated as being rather limited, because the plans developed by the project were not utilized as government plans due to unclear positioning, and there were some issues in the implementation of some of the QIPs, that is, there are not sufficient effects considering the inputs. These points are considered as important in evaluation.

3.2.2.3 Other Positive and Negative Impacts

(1) Impacts on the Environment

This project was considered to fall under Category B of the "JICA Guidelines for Environmental and Social Considerations" (formulated in April 2010), as it was judged that the undesirable effects on the environment were not significant in light of the characteristics of the sector, project and region. In addition, due to the high urgency of this project, some procedures of the JICA Guidelines for Environmental and Social Considerations - in Section 3.4.1 (Review Stage of Proposed Projects) and Section 3.4.2 (Detailed Plan Preparatory Study Stage) were skipped and necessary environment and social consideration procedure was to be conducted upon full-scale survey.[17] Based on the review of the existing documents and hearing from person in charge in implementation agency, in the implementation of the QIPs, no negative impacts on the natural and social environment were reported upon full-scale survey[18] and after

[17]Document of the 60th Meeting of the JICA Advisory Committee on Environmental and Social Considerations, p.2, URL address https://www.jica.go.jp/Resource/environment/advice/ku57pq00000ngjcu-att/advice60_data.pdf (Accessed December 14, 2023)

[18] "JICA Environment and Social Consideration Guidelines Review Survey Final Report" p.4-5, URL address: https://www.jica.go.jp/Resource/environment/guideline/ku57pq00002izi45-att/final_report.pdf (Accessed December 26, 2023)

completion[19], and also complaints from the local residents were not confirmed. As for the bridge project, the results of the Initial Environment Examination (IEE) and the interview with the director of the road department project office in the target area showed that no serious impacts on the natural and social environment had been found during the construction period and up to the present.

(2) Resettlement and Land Acquisition

There were no projects that required the relocation of residents. As for QIPs, no particular problems were reported. In reviewing existing documents, no land acquisition of private property occurred.

(3) Gender equality, Marginalized People, Social Systems and Norms, Human Well-being and Human Rights

In the QIPs, there were projects implemented that included those connected with gender, people who are inhibited from equitable social participation, and support for social systems and norms. In particular, the QIP targeting women, contributed to women's empowerment and showed an impact (refer to the column for details). Interviews with JICA officials in charge of project implementation at the time confirmed that they had encouraged the inclusion of Dalit women among the beneficiaries. In the project completion report of Good Neighbors, the NGO in charge of implementation, the criteria for selecting the participants for each project were set as female heads of households, Dalits, and low-income groups, all attempts were made to include these people. Interviews with women association managers in Barpak indicated that they basically made sure that those who wanted to participate were given a fair opportunity to do so. The results of interviews with Dalit people also indicated that they felt that the benefits of the QIPs were fairly distributed. From these circumstances, it was recognized that the project promoted the equitable participation of various ethnic and social groups, and that there were benefits. On the other hand, there were areas for further improvement in the implementation of the projects. In order to make the project more effective for Dalit and other groups, it was considered necessary to provide more tailored support to target groups based on their means of livelihood, the characteristics of their lives, their educational level, and other factors.

For the formation of the women's association in QIP-18, JICA gender advisors were dispatched from the early stages of the project formation to conduct a survey of the current situation, gather

[19] National Reconstruction Authority "Confirmation letter on the Environmental and Social Impact of the Pro ject on Rehabilitation and Recovery from Nepal Earthquake", URL address: https://www.jica.go.jp/Resource/english/our_work/social_environmental/id/asia/south/nepal/c8h0vm0000bh46ou-att/c8h0vm0000f60sd7.pdf (Acces sed December 26, 2023)

information from the relevant ministries and agencies, and strengthen it in line with the existing system in BALPAC. Therefore, unlike in other regions, one aspect of the project that contributed to enhancing its impact and sustainability was the support for goat farming by women in QIP-19 and the improvement of vegetable production skills for women in QIP-20 through the women's association.

Column: Results of Qualitative Research on QIP for Women: Leave No One Behind (LNOB)

To determine whether or not the implementation of QIPs contributed to the recovery of women, the poor, and others who are prevented from participating in society fairly from the perspective of "Leave No One Behind (LNOB)", qualitative evaluation was conducted through detailed analysis of QIP-18 "Formation of Women's Association" targeting women, QIP-19 "Goat Farming for Women", and QIP-20 "Improvement of Vegetable Production Techniques for Women" by interviewing the people involved in these projects.

1. Interview targets and methods

① Beneficiaries: 11 participants from each QIP in and around the center of Barpak, Gorkha District, including 4 Dalit persons, selected based on caste and ethnicity, etc., 6 participants from Sindhupalchok District.
② Three members of the Women's Association Representative Committee, including a Dalit representative
③ Representatives of key informants related to Gorkha and Sindhupalchok district government offices (Districts, Municipalities, Ward, an administrative division under Municipality, which includes the areas covered by the QIP)
④ Representative of the NGO Good Neighbors (head office in South Korea) in charge of QIPs implementation

①, ②, and ④ were conducted as individual interviews, while ③ was a group interview with several Ward government officials.

2. Main questions

- Outcomes of QIP implementation (from the time of completion to the time of the post-evaluation)
- Results of awareness workshops and training by women's association
- Other findings (e.g., were benefits fairly distributed?)

QIP-19 Goat Farming
(Source: External evaluator's photo)

3. Survey Results

In the results of interviews ① through ④, common issues were that the respondents said that the effectiveness of women's empowerment in supporting the strengthening of women's association in Barpak and the effectiveness of supporting vegetable cultivation were highly evaluated and benefits were equitably distributed. On the other hand, the effectiveness and continued activities of goat farming were rather limited.

Based on the results of the interviews, from the perspective of gender and LNOB, it was considered that the formation of the QIP-18 women's association created groundwork for women from various social class to participate and discuss together, and that the approach of providing support through the women's association may have been effective. In interviews, all Dalit women commented on the benefits of joining the women's association, being able to express their opinions more clearly after participating in the workshops, gaining knowledge on household budget management such as how to save, and how to borrow money. All of the Dalit women also stated that the benefits of the project were fairly distributed.

QIP-20 Improvement of Vegetable Production Technology (beneficiary in the center of Balpak) (Source: External evaluator's photo)

In terms of individual projects, QIP-19 had an impact on the empowerment of women. However, in some cases the goats died before they give birth, while in others a certain effect was observed after they were successfully raised and sold. During the interviews at the time of the ex-post evaluation, it appeared that careful support may have been necessary, especially for those who had no experience in goat farming. In general, the illiteracy rate among Dalit women tends to be high, and thus hands-on support is more important than the preparation of manuals.

Many cases of the QIP-20 projects to improve vegetable production technologies were effective overall, and effectiveness was still continuing at the time of the ex- post evaluation. However, in the case of Dalit women, most were not interested in growing vegetables in the vicinity of their houses and therefore they were not included in the beneficiary list. These women exclusively cultivated maize and other grains on their rented land.

Purpose by the end of cooperation was generally achieved, however, as for purpose after the end of the project, the official status of the plans was unclear and it did not lead necessarily to utilization and the effectiveness and impact of a part of the QIPs such as maize cultivation and seed storage facilities were somewhat insufficient compared with the inputs, although some effects were observed partially. Evaluation on this issue was placed importance, thus the effectiveness and impact are moderately low.

3.3 Efficiency (Rating: ③)

The fast-track system was applied to this project because of the urgent need for reconstruction and recovery after the disaster, the project being launched three months after the earthquake. It was anticipated from the beginning that the project cost and project period at the time of the ex-ante evaluation would be reviewed at a time when the contents of the QIPs were determined. At the outset of the project, there was no counterpart in the central government of Nepal that was a specialized agency for rehabilitation and recovery, and the project started with the National Planning Commission as the implementing agency. However, after the establishment of the NRA in December 2015, the NRA was added as the counterpart for the project. In the original plan, the QIP plan had not been decided, and the selection of QIPs and the formulation of the plan were included in the Project's activities; in April 2017, the Record of Discussion (hereinafter referred to as “R/D”) was revised, and at that stage, the project period was extended and the man-months (MM) work process volume significantly revised. Therefore, a comparison with the revised R/D is deemed appropriate for the project cost and project period. However, since the project cost at the time of the R/D revision could not be confirmed, the project cost at the start of the project was used as the plan, and although it was difficult to conduct a rigorous analysis to determine whether the increased project cost is commensurate with the increased

output, and therefore the outcome to promote rehabilitation and recovery, the evaluation was made to the extent that was possible using existing information.

3.3.1 Inputs

3.3.1.1 Elements of Inputs

During the implementation of this project, the R/D was revised in 2017 when the contents of the QIP plan were clarified. There were additional man-months (MM) due to an increase in the number of work days, resulting in more than double compared to the plan and nearly doubling the total number of experts dispatched. Initially, the minimum number of QIPs was set at 5, but this number was increased to 24, more than four times that number. The input of man-months (MM) by outcome in Table 5 also shows a significant increase in the input of QIPs for Outcome 4, and the overall increase is considered to have been mainly due to the increased workload of the QIPs.

Table 4: Inputs of the Project

Inputs		Original plan (2015)	Actual (at the time of project completion)
Japanese input	**Experts**	54 persons, 150 MM	Total 95 persons, 344.69 MM
	Trainees received	30 people (Invited by Japan, 10 persons x 3 times)	35 persons (5 training sessions in Japan)
	Total project cost on the Japanese side	Approx. 1.5 billion yen	Approx. 2.23 billion yen
Input on Nepal side*		Counterpart Assignment Project Team Office	Counterpart Assignment Project Team Office

Source: Location: Initial plan is based on the project's ex-ante evaluation paper, actual results are based on JICA documents, and documents provided by the implementing consultant.
Note: *There were no documents available to confirm the planned and actual project cost on the side of the partner country.

Table 5: Workload of short-term specialists

Unit: ma MM

Item	Original plan (July 2015)	Actual (at the time of project completion)*
Output 1	76.57	88.08
Output 2	17.34	35.06
Output 3	26.38	59.53
Output 4	28.81	162.02
total amount	149.10	344.69

Source: Initial plan was calculated by the evaluator based on MM by outputs at the time of the work implementation plan from JICA documents. Actual results are based on JICA data and data provided by the implementing consultant.
Note: *MM that do not strictly fall into each outcome category, such as leader MM, are assigned to each outcome for the sake of convenience.
The MM of 150MM in the project ex-ante evaluation paper and the MM in the consultant work implementation plan differ slightly in decimal places.

3.3.1.2 Project Cost

As mentioned at the beginning of the Efficiency section, it was considered appropriate to compare the project cost at the time of the R/D revision with the actual project cost. However, the project cost at the time of the R/D revision could not be verified and therefore could not be compared. The total project cost for Japan was approximately 1.5 billion yen in the original plan, while the actual cost was 2.23 billion yen, or about 149% of the plan. However, as already mentioned in the elements of inputs, the increase in QIPs mainly led to an increase in man-months (MM) of about 230% over the plan, which is the reason for the large increase in project cost. Although the increase in man-months (MM) and the increase in project cost cannot be simply compared by examining at the respective figures, the increase in project cost is fully commensurate with the increase in QIPs, i.e., the construction of public facilities that are more earthquake resistant than before the earthquake and the increase in the number of outputs such as livelihood recovery. Although the project cost exceeded the original plan, the increase in project cost was evaluated to be linked to outcomes that promote rehabilitation and recovery from the earthquake.

3.3.1.3 Project Period

Regarding the project period, the original R/D plan was from July 2015 to June 2017 (24 months), however, the revised R/D (April 2017) was from July 2015 to December 2019 (54 months), and the actual results were from July 2015 to December 2019 (54 months) within the schedule in the revised R/D. The project period was therefore in line with the plan.

As mentioned above, although project cost exceeded the original plan, it corresponded with the increase in output, and the project period was within the plan of the revised R/D. Therefore, the efficiency of the project is high.

3.4 Sustainability (Rating: ②)

3.4.1 Policy and System

The promotion of the BBB concept and strengthening of disaster risk management in the 15th Development Plan (2019/20-2023/24), mentioned in the adequacy section, was still within the plan's coverage period at the time of the ex-post evaluation and still being continuing. BBB is also addressed as one of the priority areas in the Disaster Risk Reduction and Management Action Plan (2018-2030).

On the other hand, during the implementation of this project, there was a major institutional reform in 2017, when the administrative structure of the government shifted to a federal system, which significantly changed the budgetary authority of the local governments. As described in <The status of utilization of the Kathmandu Valley Resilience Plan and Rehabilitation and

Reconstruction Plans of Two Districts > in “Table 3: Achievement of Purpose after the End of the Cooperation”, the Kathmandu Valley Resilience Plan and the rehabilitation and reconstruction plans for Gorkha and Sindhupalchok districts were not incorporated into the plans of the Kathmandu Valley Development Authority and respective district governments, as had originally been planned for the implementation of each plan.

As for the earthquake-resistant building guidelines, the review of the lNBC105 law and regulations, a seismic resistance standard initiated by this project, led to the revision of the standard in August 2020.

As described above, it can be said that although the project is highly sustainable in terms of policy and in terms of the legal system of seismic standards, it is not sustainable in terms of the institutional system that allows the continuation of the plans developed under the project.

3.4.2 Institutional/Organizational Aspect

The NRA was dissolved at the end of 2021, and the task of disaster response was taken over by the National Disaster Management Agency (NDRRMA), which had been established at the end of 2019. However, the National Disaster Management Agency was not staffed by former NRA employees, and almost none of them had been involved in the implementation of this project. Therefore, there was no continuity from the Project activities in the counterpart staff working in the organization. As mentioned in “3.4.1 Policy and System”, with the transition to a federal system, the implementation of the rehabilitation and recovery plan for the two districts became the responsibility of each municipality within the district, and the municipalities did not have a system to take over and implement the Project plan.

At the time of the ex-post evaluation, the organization in charge of the earthquake-resistant building guidelines was the Ministry of Urban Development, Department of Urban Development and Housing and Building, and the results of this project continued to be referenced.

Operation and maintenance of the facilities reconstructed under the QIPs is basically the responsibility of each local government where the facilities are located. On visiting each facility, it was found that maintenance and management personnel had been secured and were properly implemented. In the case of the municipality hospital and health post, the Ministry of Health also monitors operations. For the bridges, the Department of the Road is in charge of operation and maintenance, and for the Majuwa water pipeline, the Water Users Committee (WUC) of the target area is in charge of operation and maintenance.[20] For each QIP, it was confirmed through interviews with relevant organizations whether or not the personnel for operation and

[20] For details on the organizational structure, technical and financial aspects of the targeted road bridges and the water pipeline in Chautara, please refer to the External Ex-post Evaluation for FY2022 Grant Aid “ Program for Rehabilitation and Recovery from Nepal Earthquake” conducted concurrently with this ex-post evaluation.

maintenance management had been allocated, that the implementation system is in place for appropriate maintenance management.

For QIPs related to livelihood restoration, it was assumed that the District Agriculture Development Office (DADO) of the Ministry of Agriculture would support the project after project implementation for the quality seed production project and the maize production project, and that the training of target DADO staff would be included in the training program. However, after the completion of these QIPs (2017-2018), the Ministry of Agriculture abolished the DADO, which resulted in no organizational structure for the support of these quality seed production and maize production projects. Regarding the management of women's cooperative activities, it was confirmed that the organizational structure remains in place, with management by personnel selected from local community participants.

To sum up, it can be said that the organizational and institutional sustainability of the effects related to the QIPs of many of the facilities and much of the infrastructure constructed under the project and of women's cooperative activities is high, while the organizational and institutional sustainability of the effects related to the QIPs of agricultural-related projects, on which DADO's activities were based, was lost.

3.4.3 Technical Aspect

For the Kathmandu Valley Resilience Plan and the Rehabilitation and Recovery Plan for the two districts, the main implementation entity became the municipalities, not the districts as originally envisioned. The capacity of the municipalities to budget and implement the plan cannot be described at this moment. However, the technical cooperation “The Project for Strengthening Disaster Risk Governance for Resilience in the Kathmandu Valley” (2021-2025), which started after the completion of this project, is currently providing support for the promotion of disaster management activities in the Kathmandu Valley with the National Disaster Management Agency as the main counterpart. In addition, under the technical cooperation “The Project on Participatory Rural Recovery” (2019-2023), support has been provided for the preparation and implementation of the plans including reconstruction following the earthquake disaster in four local government areas in the Gorkha and Sindhupalchok districts targeted by this project. As mentioned above, technical assistance for the implementation of the plans developed in this project is still being provided in some areas in subsequent JICA projects.

Since facility-related maintenance does not require very advanced technology, there are no technical issues for the sustainability of the effects. The results of the field survey did not reveal any operation and maintenance technical issues that would hinder the sustainability of the effectiveness of the infrastructure related to the bridges and water pipe.

Regarding support for continuing the implementation of QIPs related to livelihood recovery, the technical effectiveness of the project declined in the quality seed production and maize

production projects where DADO technical assistance had been expected, except in cases where farmers voluntarily established a system through local farmers' cooperatives. In the case of vegetable farming, it was evident that farmers continued to apply the knowledge they had received from the training. However, in the case of goat farming, the period of time and inputs supported by the project were limited, and in the absence of continuous support through technical extension workers, there were some cases where the farming techniques did not take root sufficiently among the participants. Even though considering that the main focus of the project was emergency recovery and that the period of support was not long, it can be said that it was relatively limited compared to the expected continuation of the technical effects.

To sum up, while the technical aspects of the effects of many utilities and infrastructure-related QIPs are sustainable, the sustainability of the effects of agriculture-related facilities and projects have some issues and is limited.

3.4.4 Financial Aspect

Since written financial data was not available for QIPs other than for the bridges and water pipe, the following analysis is based on interview information.

Most of the QIPs in public facilities are under the jurisdiction of local governments, etc., and budgets for operation and maintenance are allocated for them. Some community centers charge a fee for the use of their facilities, and the revenue is used for the operation and maintenance budget.

The maintenance budget for bridges is allocated by the Department of Road on an as-needed basis, and data confirmed that maintenance of the bridges on the target roads is being carried out. For the water pipe, it was confirmed that the budget allowance for operation and maintenance is made from the water rate revenues of WUC etc., and that maintenance works that involve civil works are also operated and maintained with contributions from agencies such as the Water and Sewerage Management Bureau of the federal government's Department of Water Supply and state government water agencies, depending on the situation.

For agriculture-related QIPs, other than vegetable farming targeting women, it was observed that local governments do not have a budget that can adequately allocate technical extension staff who can support the continuation of project effectiveness, and that some seed storage facilities need to be repaired due to flood damage. It was observed that there is no budget for this.

In the case of the women's cooperative, operating costs consist of participation fees and investments in the cooperative by its members. To date, the number of members has increased, operating expenses and the amount of loans to members have increased. Problems in financial sustainability have not been observed.

As described above, there is financial sustainability of the effects of many public facilities and infrastructure-related projects, and the women's cooperatives. However, the financial sustainability of the effects of agriculture-related facilities and projects is limited.

3.4.5 Environmental and Social Aspect

No particular description was identified in the existing documents. No particular concerns were noted in the post-evaluation survey.

3.4.6 Preventative Measures to Risks

No particular description in the existing documents. No particular concerns were noted in the ex-post evaluation survey.

3.4.7 Status of Operation and Maintenance

Regarding QIPs related to public facilities, no operation and maintenance issues affecting sustainability were identified for local government offices, community centers, police stations, hospitals, or other buildings. On the other hand, for QIP-22, seed storage facilities, there were two locations that had not achieved their initial intended effect after completion, and the Women's Interaction and Training Center in Sindhupalchok District in QIP-2 was being used as staff quarters which was not its intended original purpose. There were some cases where goats had died and farming stopped. There were also cases where the QIP-21 improvement of maize production was not sufficiently effective. Regarding these cases, there was a lack of financial and technical support systems until sufficient effects had been produced. The unused seed storage facilities were also damaged by flooding and need to be repaired. None of these issues were expected to be resolved as of the time of the ex-post evaluation.

For the QIPs of the bridges, although some rehabilitation work is required for the gabions and embankment to protect the main structure of the bridges, this will not affect the sustainability of the project effects.

Based on the above, the effects of the Project are expected to be sustained in the case of the earthquake-resistant building guidelines and public facilities including local government offices, police stations, community centers, hospitals, and health centers, as well as QIPs for bridges and water pipelines. On the other hand, in the Kathmandu Valley Resilience Plan, the Rehabilitation and Recovery Plans for Gorkha and Sindhupalchok districts, and QIPs related to agriculture aimed at recovery of livelihoods, there have been some minor issues in terms of the institutional/organizational, technical and financial aspects for some participants in goat farming, and in the improvement of maize production, seed conservation facilities, and seed conservation

techniques in some areas. It is not expected that these will be resolved/improved. Therefore, sustainability of the project effects is moderately low.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

The project aimed to promote rehabilitation and recovery in the target areas in the Kathmandu Valley, Gorkha District, and Sindhupalchok District, which were affected by the April 2015 Nepal Earthquake, through ① development of a Kathmandu Valley Resilience Plan and District Rehabilitation and Recovery Plans, ② promotion of the dissemination of earthquake-resistant buildings and structures, ③ formulation of priority recovery projects (grant program), and ④ implementation of priority QIPs, thereby contributing to the development of a more disaster-resistant nation and society, particularly in the target areas. This project was consistent with Nepal's development policy, the development needs of Nepal's earthquake rehabilitation and recovery, and Japan's ODA policy. In addition, there was both internal and external coherence: activities were carried out in collaboration with related JICA technical cooperation and grant aid, and the formulation of earthquake-resistant building guidelines contributed to the World Bank and Asian Development Bank's housing and school construction loans. The outputs of these projects were obtained and synergy effects with inside and outside projects of JICA were verified; thus s, relevancy and coherence are high. By the end of cooperation through the project the outcomes had generally been achieved, with no negative impact. The project is considered to have had an impact on gender perspectives and on people whose equitable participation in society has been impeded. In terms of achievement of the overall goal after project completion, there was ② a promotion of use of guidelines for earthquake-resistant buildings and structures. However, ① the plans developed were not linked to utilization, and ③ it cannot be said that, as a part of livelihood recovery, QIPs had sufficient effect to commensurate with the inputs. Thus, effectiveness and impact are moderately low. although project cost exceeded the original plan, it corresponded with the increase in output, and the project period was within the plan of the revised R/D. Therefore, the efficiency of the project is high. Sustainability of the effects of the Project is expected for the continued use of the earthquake resistant building guidelines, the related materials and QIPs related to public facilities and infrastructure. However, regarding the Kathmandu Resilience Plan developed by the Project, rehabilitation and recovery plans for Gorkha and Sindhupalchok districts, wherein agriculture related QIPs aimed at restoring livelihoods and seed storage facilities, etc., some minor issues were observed in terms of the organizational, technical, and financial aspects and the continuation of the effect by the project was more limited than originally expected. These issues are not expected to be improved/resolved. Therefore, the sustainability of the project effects is moderately low.

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

4.2 Recommendations

4.2.1 Recommendations to the Implementing Agency

None

4.2.2 Recommendations to JICA

None

4.3 Lessons Learned

1) Support in line with the type of disaster and the capacity of the target country's administrative structure

In disaster recovery and reconstruction assistance, the method of preparing rehabilitation and recovery plans, formulating grant aid program assistance, and implementing priority QIPs in a development planning technical cooperation project, and, in parallel, implementing projects formed through this technical cooperation in grant aid program assistance, was used in the emergency rehabilitation and recovery assistance following the Typhoon Yolanda disaster in the Philippines. While the Philippines experience was helpful in some points, such as in the way projects were selected, there were two major differences. In planning for future earthquake disaster rehabilitation and recovery, it is important to fully consider the following two points at the planning stage, taking into account the existing systems in, and capacities of, the target countries, in order to ensure the effectiveness and its continuation.

The first point is the difference in capacity of the administrative structures in the Philippines and Nepal. Nepal's administrative structure had historically been unstable and had limited capacity. In addition, it was a time when the country was moving toward the promulgation of a new constitution, which included a reorganization of the administrative structure. The new constitution was promulgated in September 2015, so the possibility of a reorganization of the administrative structure had been foreseeable immediately after the start of this project. In addition, whereas in the Philippines it was possible to prepare rehabilitation and recovery plans in accordance with existing comprehensive land use plans, in the case of Nepal there was no such established existing planning system. Furthermore, there was no existing coordination between the central and local governments, as there had been in the Philippines, in terms of disaster recovery and reconstruction systems. Although the project was premised on a district development plan, the possibility of a change to district government-led implementation could have been considered at an early stage at the start of the project. External factors that have a high risk of occurring, such as the reorganization of administrative structures, should be taken into account in the project as early as possible, either during project planning or after the start of the project, and activities should be reviewed as appropriate to the situation.

In cases where the local government structure of the implementing entity of the rehabilitation and recovery plan is weak, or the implementing entity itself can be unclear, for the time being, damage assessment and the preparation of the policy paper for the recovery and restoration plan, which are usually included in the planning process, could be considered as outputs. Once the NRA was established in December 2015 after this project started, reexamination could have taken place as to how district rehabilitation and recovery planning should be placed within the central government, and the direction and activity plan for Output 1 could have been revised significantly in the first year of the project. In a country like Nepal, where the rehabilitation and recovery system from disasters was not well-functioning and the administrative structure was weak, it is important that the recovery and reconstruction plan for the target areas is positioned within the central government, with a view to promoting a central government-led system first.

The second point is the difference between typhoon damage and massive earthquake damage. In the case of Typhoon Yolanda, although the area affected by the strong winds was extensive, the extent of the extensive damage was limited to coastal areas, and the scope of reconstruction assistance was relatively clear. On the other hand, in the case of Nepal, the earthquake damage was extensive and severe, and many of the areas were inaccessible, requiring a long period of time for rehabilitation and recovery. In addition, extensive assistance was provided from the objectives of BBB, including a review of the earthquake-resistant building code system. Therefore, it is important to keep in mind that the contents of recovery/reconstruction plans and the period of support may differ depending on the type of disaster.

Considering the above two points, if the target countries have weak administrative structures and the disaster recovery support is expected to cover a wide range of areas, it would have been possible to first send a wide range of experts, including consultants, to target countries to develop recovery support in the first phase of a fast-track project, and then to implement the plan developed in the second phase.

2) Selection and implementation management of priority QIPs for livelihood recovery

Based on requests from the target areas, agriculture-related QIPs were implemented as QIPs for livelihood restoration, and it can be said that the projects were effective for vegetable farming, which is relatively easy to effect in a short period of time. On the other hand, other projects such as those for goat farming, the production of quality seeds, and the improvement of maize production would be less effective if support was not continued for at least three years, and if the status of the trainees was not monitored, the implementation methods reviewed, and follow-up for a certain period was also included in the plan. If agricultural livelihood restoration projects were to be included in the QIPs at the time of project formation, it would be better to focus on projects that are expected to have a quick impact, or to plan for a longer support period

from the beginning and divide the project into phases, evaluating each phase and implementing it step by step.

3) Formation of livelihood recovery QIPs that encourage broad social participation

In this project, from the early stages of project formation, JICA's team worked to formulate projects from a gender perspective, and collected information not only from local government agencies but also from the relevant ministries and agencies (Ministry of Women, Children and Senior Citizens, etc.). As a result, in Barbak, a project targeting women was implemented as well as the strengthening of the formation of women's cooperatives. This has contributed to the participation of women of various social statuses as well as to women's empowerment, which in turn contributed to promoting the effectiveness of the livelihood restoration project. In order to formulate projects that promote broad-based social participation, it is important to collect information from a wide range of relevant government and private organizations from the initial stages of project formation, and to formulate livelihood restoration projects in line with the existing organizational and social systems in the target country, combined with a strengthening of the organizational systems in the target region, which may be the key to enhancing the effectiveness of the project.

5. Non-score Criteria

5.1 Performance

5.1.1 Objective Perspective

JICA has been conducting earthquake risk assessment and disaster preparedness studies in the Kathmandu Valley of Nepal since the early 2000s, and was in the process of launching a project on earthquake disaster risk assessment in the Kathmandu Valley just before the Nepal earthquake in April 2015. Therefore, it can be considered that Japan was able to contribute to the risk assessment of the Kathmandu Valley ahead of other donors.

The concept of BBB proposed by the Japanese government in the “Sendai Disaster Reduction Cooperation Initiative” includes not only infrastructure but also economic recovery, and this was reflected in the livelihood improvement support of this project, which was effective in some respects. While there are points that need to be improved in the future, this was a significant example of an early adoption of the BBB concept of economic recovery to improve livelihoods as part of reconstruction assistance.

5.1.2 Subjective Perspectives (retrospective)

In order to make use of Japan's long-standing knowledge and technical expertise in earthquake-resistant construction, a support committee for building standards in Japan was formed to formulate guidelines for earthquake-resistant construction, with the support of

domestic experts, while Nepal's building standards were reviewed and discussion took place about various aspects of what kind of housing and school construction should be promoted.

Housing in Nepal consists of reinforced concrete apartment buildings, frame masonry (masonry walls are built first and RC frames are cast later) and unreinforced masonry (masonry consists of locally available materials such as fired bricks, stones (schist), sun-dried bricks, and concrete blocks, and joint materials are cement mortar and mud mortar). Since the most construction in rural areas is non-engineered construction, which is construction by local masons or residents themselves without the involvement of engineers, locally available materials and construction methods that local residents and masons can understand and respond to are required, and it was necessary to meet such needs.

It is noteworthy that a highly feasible proposal that considers local building methods and locally available materials and people's needs, while using Japanese expertise in earthquake-resistant building technology was made after repeated exchanges of opinions with various stakeholders, including the Nepalese government agencies, other donor agencies, and NGOs. Specifically, the project proposed a policy based on the concept of Minimum Requirement, and the project specifically showcased houses and schools with higher earthquake resistance. Drawings and guidebooks were prepared in an ingenious manner, thereby contributing to the promotion of understanding of earthquake-resistant architecture among the people concerned.

In this process, the Japanese domestic support committee expressed the opinion that, from the perspective of achieving the objectives of BBB, the earthquake resistance standards should not be relaxed without any technical basis. On the other hand, on the Nepalese side, there was the problem of the limited availability of locally available building materials and the resistance of local residents to changing the brick structures that had taken root in their daily lives. Under these circumstances, it was necessary to propose an earthquake-resistant construction method that would integrate the opinions of both sides and be suitable for Nepal.

In interviews with JICA and Nepalese officials, it was discovered that the guidelines proposed in this project were subsequently reviewed and revised many times to meet the actual situation. In particular, for housing reconstruction, a revised building plan was proposed to meet the guidelines of the ODA loan “Nepal Technical Assistance for Emergency Reconstruction Support Project (Housing Project)”, which was being implemented in parallel with the technical assistance. The guidelines compiled by the project were a useful first step toward raising residents' awareness of earthquake-resistant buildings and promoting their use. According to NSET[21], a Nepalese NGO, the fact that Japan proposed the revision of earthquake-resistant building standards was in itself of great significance. They commented that because it was a

[21] Officially known as the National Society for Earthquake Technology-Nepal, it was established in June 1993 to contribute to disaster risk management, and its members include academics and researchers in Nepal. Since its inception, it has had close ties with Japanese research institutions.

Japanese proposal, it was accepted by the Nepalese government with a sense of trust, and that a proposal from within Nepal would not have been accepted.

As a result, understanding of earthquake-resistant buildings has been promoted and contributions made to the dissemination of earthquake-resistant houses and schools that meet Nepal's actual conditions. The above contributed to the promotion of BBB, which was referred to and highly evaluated by WB, ADB, and others. Non-engineered buildings are common in other neighboring countries, and there are elements of these experiences that can be applied to other countries as well.

End

Attachment Table 1: QIPs survey results at the time of project completion and post-evaluation

(○: used/generally effective (the number of participants for whom the effect was confirmed to be about 70-80% or more of the total participants), △: partially used (used differently from the initial purpose)/partially effective (the number of participants for whom the effect was confirmed to be less than about 70% of the total participants), ×: not used at all/not effective at all, or limited effectiveness, n.a.: Effectiveness cannot be confirmed).

No.	QIP No.	Case name	Theme	Location County, place name/village name in parentheses, word No., municipality name	Date of completion	Project Completion Survey Results		Results of the Ex-post evaluation Survey	
						evaluation	remarks	evaluation	remarks
1	QIP-01(02)	Irkhu Community Training Center Construction Project	Building and strengthening community capacity	Sindhupalchok (Irkhu, Ward 8, Chautara Sangachowkgadi Municipality)	March 21, 2018 completion	○		○	
2	QIP-01(04)	Bungkot Community Training Center Construction Project	Building and strengthening community capacity	Gorkha (Bungkot, Ward 7&8, Shahid Lakhan Rural Municipality)	August 31, 2017 completion	○		○	
3	QIP-02	Project to Support Women's Social Participation in Rural Areas through the Reconstruction of a Women Interaction and Training Center	construction	Sindhupalchok (Chautara, Ward 5, Chautara Sangachowkgadi Municipality),	September 6, 2017 completion	○		△	It serves as an accommodation for employees living in rural areas.
4	QIP-03	Project to support the strengthening of health and sanitation services through the reconstruction of the Amppipal Hospital outpatient department Building	construction	Gorkha (Palumgtar Municipality)	December 1, 2018 completion	○		○	
5	QIP-04	Palungtar Community Police Station Reconstruction Project to maintain public safety and improve social services	construction	Gorkha (Palumgtar Municipality)	December 25, 2017 completion	○		○	
6	QIP-05	Project to support the improvement of social services through the reconstruction of the Thokarpa Village Development Committee Office	construction	Sindhupalchok (Thokarpa Ward 1&8, Sunkoshi Rural Municipality)	December 20, 2016 completion	○		○	
7	QIP-06	Project to support agricultural activities in the district through the reconstruction of the Agricultural Development Office	construction	Sindhupalchok (Chautarara, Ward 5, Chautara Sangachowkgadi Municipality),.	November 9, 2017 completion	○		○	

No.	QIP No.	Case name	Theme	Location County, place name/village name in parentheses, word No., municipality name	Date of completion	Project Completion Survey Results		Results of the Ex-post evaluation Survey	
						evaluation	remarks	evaluation	remarks
8	QIP-07	Project to support agricultural activities through the reconstruction of an agricultural products collection center for small farmers	construction	Sindhupalchok (Melamuchi , Ward 1&2, Melamchi Municipality)	August 14, 2017 completion	○		○	The agricultural cooperative organization is well organized, and with the development of its activities, the building is being fully utilized as a sales store for agricultural inputs and as a financial institution, in addition to its original purpose as a rural collection center.
9	QIP-09	Project to support the Bhotechaur Rural Development Committee and Melamchi in restoring the functionality of transport and irrigation facilities through road rehabilitation	public works	Sindhupalchok (Bhotechaur, Ward 1&2, Melamchi Municipality)	March 10, 2017 completion	○		○	As seen in the results of the inspection and interviews with government officials and others, these facilities were being used.
10	QIP-12	Project to support the improvement of social services through the reconstruction of the Barpak Village Development Committee Office	construction	Gorkha (Barpak ,Ward 1&2, Barpak Sulikot Rural Municipality)	October 8, 2018 completion	○		○	
11	QIP-13	Project to Support Women's Social Participation in Rural Areas through the Reconstruction of Women's Community Center	construction	Gorkha (Barpak ,Ward 1&2, Barpak Sulikot Rural Municipality)	December 13, 2018 completion	○		○	
12	QIP-14	Project to support the strengthening of health services through the reconstruction of health posts	construction	Gorkha (Barpak, Ward 1&2, Barpak Sulikot Rural Municipality)	January 7, 2019 completion	○		○	
13	QIP-16	Project to support the improvement of social services through the reconstruction of the Saurpani Village Development Committee Office	construction	Gorkha (Saurpani, Ward 4, Barpak Sulikot Rural Municipality)	Completed November 14, 2017	○		○	Utilization status confirmed by observation
14	QIP-17	Maneshwara Village Development Committee Office Reconstruction Project to Support Improvement of Social Services	construction	Sindhupalchok (Maneshwara, Ward 8, Barabise Municipality)	April 4, 2018 completion	○		○	
15	QIP-18	Project to Strengthen Women's Cooperative Formation	Livelihood Recovery	Gorkha (Barpak, Ward 1&2, Barpak Sulikot Rural Municipality)	January 2018 completion	○		○	

No.	QIP No.	Case name	Theme	Location County, place name/village name in parentheses, word No., municipality name	Date of completion	Project Completion Survey Results		Results of the Ex-post evaluation Survey	
						evaluation	remarks	evaluation	remarks
16	QIP-19	Livelihood recovery project for women through goat farming	Livelihood Recovery	Gorkha (Barpak, Ward 1&2, Barpak Sulikot Rural Municipality)	January 2018 completion	○	As of July 2018, six units were out of business.	△	In addition to the six persons who ended farming at the end of the project, all ten of the Dalit women interviewed had stopped farming.
17	QIP-20 (01)	Project to improve vegetable farming techniques for women	Livelihood Recovery	Gorkha (Barpak, Ward 1&2, Barpak Sulikot Rural Municipality)) (Kharibot, Ward2, Simjung, Ward 4, Muchok, Ward 5, Ajirkot Municipality) (Khoplang, Ward 1&2, Mirkot, Ward 9&10, Palungtar Municipality),	January 2018 completion	○	Both county areas confirmed that vegetable production increased after the project implementation.	○	The results of the stakeholder and beneficiary interviews (15 people in total) showed that the contribution of the project QIP was appreciated, and they confirmed the continued effectiveness of the project.
	QIP-20 (02)			Sindhupalchok (Talamarang Bansbari, , Ward 6 & 12, Melamuchi Municipality) (Irkhu, Ward8, Chautara , Chautara Sangachowkgadi Municipality) (Maneshawara, Ward 8, Barhabise Municipality) (Mangkha, Ward 6 -8, Balefi Rural Municipality) (Thokarpa, Ward 1&2, Sunkoshi Rural Municipality)					same as above
18	QIP-21 (01)	Maize Farming Improvement Project	Livelihood Recovery	Gorkha (Kharibot, Ward 2, Simjung, Ward 4, Muchok, Ward 5, Ajirkot Municipality)	December 2017 completion	○	In both county areas, there was an increase in maize production immediately after the project was completed.	△	The status of implementation of the training content is unchanged from the status at the end of the project.

No.	QIP No.	Case name	Theme	Location County, place name/village name in parentheses, word No., municipality name	Date of completion	Project Completion Survey Results		Results of the Ex-post evaluation Survey	
						evaluation	remarks	evaluation	remarks
				(Khoplang, Ward 1&2, , Mirkot, Ward 9&10, Palungtar Municipality)			However, not all participants are practicing all the techniques they received training in, and the percentage of farmers practicing strip seeding is particularly low. It was also pointed out that many farmers have not yet mastered the technique of self-seeding.		In some cases, such as in Maneshawara,farmers are reducing the production of maize itself because of the damage caused by animals, and in other cases they did not use high variety seeds much because those seeds are prone to have insects and taste inferior to older varieties. A few beneficiaries, some of whom we were able to interview directly during the field survey, also indicated that they initially used high varieties to increase production, however they have not used high varieties much since then.
	QIP-21 (02)			Sindhupalchok (Talamarang Bansbari, , Ward 6 & 12, Melamuchi Municipality) (Irkhu, Ward8, Chautara , Chautara Sangachowkgadi Municipality) (Maneshawara, Ward 8, Barhabise Municipality) (Mangkha, Ward 6 -8, Balefi Rural Municipality) (Thokarpa, Ward 1&2, Sunkoshi Rural Municipality)					
19	QIP-22	Quality Seed Production Improvement Project	Construction, Livelihood Recovery	Sindhupalchok (Ichok, Ward 6&7, Helambu Rural Municipality) (Kiwoo, Ward 2, Helambu Rural Municipality) (Irkhu,Ward 8, Chutara Sangachokgadhi Municipality) (Phulpingdanda, Jethal, Ward 2 -5, Balephi Rural Municipality) Conduct training on superior seed	December 2017 completion	△	Rice, wheat, maize, and potato seed production had increased after the project was implemented. However, maize and potato were sold as food, not seed. In addition, not all farmers necessarily applied the techniques taught in the training.	△	The organization of the District Agricultural Development Office (DADO) ceased after the completion of this project; the status of its subsequent activities' continuation is unknown, as the DADO was the buyer; only in Phulpingdanda. This agricultural cooperative taking over the role of DADO for seed production and the utilization of seed storage facilities.

No.	QIP No.	Case name	Theme	Location County, place name/village name in parentheses, word No., municipality name	Date of completion	Project Completion Survey Results		Results of the Ex-post evaluation Survey	
						evaluation	remarks	evaluation	remarks
				cultivation techniques					
				Sindhupalchok (Ichok, Ward 7&8, Helambu Rural Municipality) , Seed storage facility construction	September 23, 2018 completion	n.a.	Seed certification by the DADO, purchase, and procurement of raw seed from the DADO were assumed, but there was concern that the facility would not be utilized after the dismantling of the DADO. The Ichok and Phulpingdanda facilities had begun seed storage as of December 2018.	×	The property is owned by Annapurna agriculture cooperative but it has not been used by the cooperative since construction was completed. The location of the facility is far from users. It was used by nearby farmers to store paddy rice seeds; however, it was damaged by the flood in 2021 and has been completely unused since then.
				Sindhupalchok Kiwool, Ward 2, ,Helambu Rural Municipality) Seed storage facility construction	February 21, 2018 completion	○		×	It is owned by Ratpul Agriculture Cooperative, but it has not been used because the cooperative was not functioning until recently. The site is also located in an inaccessible location; there are plans to use it for fertilizer storage starting in 2023. However, the farmland was washed away after the flood and it is unclear how many users there will be.
				Sindhupalchok (Irkhu, Ward 8, Chautara Sangachowkgadi Municipality) Seed storage facility construction	June 26, 2018 completion	n.a.		○	Located in a less accessible location away from the center of the municipality, it was used to store seeds for the surrounding farmers.
				Sindhupalchok (Phulpingdanda, Ward 4, ,Balefi Rural Municipality)	August 14, 2018 completion	○		○	From the completion of the project to the present, the agricultural cooperative has taken the lead in seed production, collection, and

No.	QIP No.	Case name	Theme	Location County, place name/village name in parentheses, word No., municipality name	Date of completion	Project Completion Survey Results		Results of the Ex-post evaluation Survey	
						evaluation	remarks	evaluation	remarks
				Seed storage facility construction					distribution using the project facilities.
20	QIP-23	Construction Safety Improvement Project for Housing Reconstruction	Construction	Sindhupalchok (Chautara Sangachowkgadi Municipality)	June 19, 2016 completion	○		—	When interviewed by the municipality, they commented that the seminar was useful at the time because it was a seminar to improve construction safety for residents and mason receiving support for housing reconstruction.
21	QIP-24	Majuwa No.1 & No.2 Water Headrace Improvement Project	public works	Sindhupalchok (Chautara Sangachowkgadi) Municipality)	February 14, 2018 completion	n.a.	Immediately after construction was completed, the community located halfway between the water source and the municipality of Chautara requested that a water supply system be built, and the facility was to be put to use only after that system was in place.	△	According to Water User Committee (WUC) responsible for operation and maintenance of the Project ,Since the planning of the Majuwa pipeline route, the WUC has been opposed to the planned route because proper volume of water could not be secured. WUC rerouted the pipeline and has used it since July 2020.
22	QIP-25	Khahare Khola Bridge Construction Project	public works	Gorkha (Kahare Khola, Ganku Ward 6 Srinathko , Ward7, Siranchowk Rural Municipality)	November 14, 2018 completion	○	Traffic volume increased after the project was completed.	○	Traffic volume data could not be confirmed, but interviews with the municipalities and other officials in the target area confirmed an increase in traffic volume.
23	QIP-26	Jhyalla Khola Bridge Construction Project	Public works	Gorkha (Jhyalla Khola, Muchok, Ward 4&5, Ajirkot Rural Municipality)	November 14, 2018 completion	○	same as above	○	same as above
24	QIP-27	Guita Domar (Gokul Chour) Disaster Prevention Park Development Project	Construction	Lalitpur Metropolitan City (Guita Domar)	January 15, 2019 completion	○		○	

Source: For the project completion, JICA, Nepal Earthquake Recovery and Rehabilitation Project Final Report Deliverable 4 (Japanese summary), April 2019. At the time of ex-post evaluation, it is based on interviews and site checks from each munisipality and ward representative involved.

Note: ☐ QIPs for the qualitative survey

Republic of the Philippines

FY2022 Ex-Post Evaluation Report of Technical Cooperation Project

"Comprehensive Capacity Development Project for the Bangsamoro"

External Evaluator: Takako Haraguchi, OPMAC Corporation

0. Summary

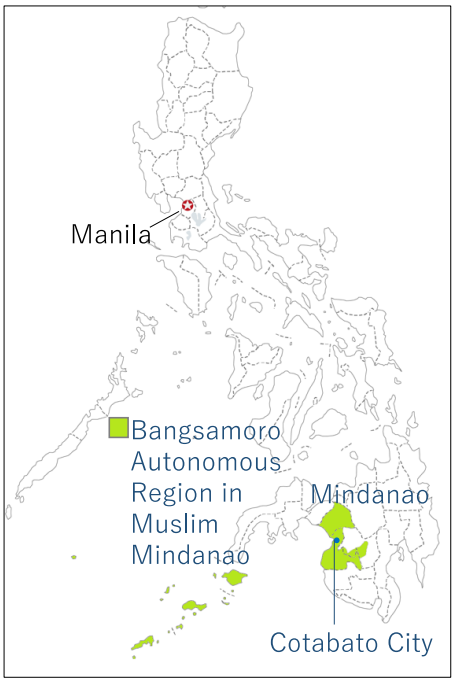
In this project, known as the Comprehensive Capacity Development Project for the Bangsamoro (CCDP), two plans were implemented with the aim of transitioning to the Bangsamoro Government set to be established in Mindanao. The first is the CCDP for the Bangsamoro (hereinafter referred to as "CCDP-B"), implemented by the Bangsamoro Transition Commission (BTC),[1] and the second is the CCDP for the Autonomous Regional Government (hereinafter referred to as "CCDP-A"), implemented by the then-existing Autonomous Region in Muslim Mindanao (ARMM) government. Each plan aimed at foundational construction of governance, enhancement of administrative service provision and community development, and promotion of economic growth. Specifically, CCDP-B aimed to accelerate the transition process to the Bangsamoro Government, and CCDP-A aimed to promote the institutional reform process of the ARMM.

The project plan is relevant and coherent, aligning well with the development policies and needs of the Philippines and the target regions, as well as with Japan's aid policy. It also has synergy and mutual linkage with other projects. As a result of the project implementation, the objectives of both CCDP-B and CCDP-A were mostly achieved. Many of the various activities introduced in the project continue even at the time of the ex-post evaluation, contributing to the preparations for the transition to the Bangsamoro Government, indicating high effectiveness and impacts. Regarding efficiency, although the project cost exceeded the plan due to additional components, the project period remained within the plan revised after extension due to stagnation in the peace process and delays in the transition process. Thus, it is rated as high. Sustainability is high, although there are minor issues in personnel placement and technical acquisition by staff other than the counterpart personnel of this project. The establishment of the Bangsamoro Government has been postponed from what was assumed during the project implementation. There are risks in the peace and transition processes, but as of the time of the ex-post evaluation, both the transitional autonomous government and the Government of the Republic of the Philippines (hereinafter referred to as "the Philippine government") continue to address these issues.

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

[1] The original name at the time of its establishment was the Transition Commission (TC).

1. Project Description



Project Location

Image 1 Upland rice cultivation in a Moro Islamic Liberation Front (MILF) camp (source: Photographed by the local research assistant)

1.1 Background

The southwestern and central regions of Mindanao Island, located in the southern Philippines, grappled with issues such as high poverty rates, lack of basic social services, and insufficient infrastructure due to the impact of a conflict that spanned over 40 years between Islamic forces seeking separation and autonomy and the Philippine government.

Intermittent peace negotiations were conducted between the Moro National Liberation Front (MNLF), which represented Islamic anti-government forces, and the Philippine government. In 1990, the ARMM was established by Philippine legislation, and a final peace agreement was reached with the MNLF in 1996. However, armed conflicts continued between the Moro Islamic Liberation Front (MILF), which separated from the MNLF in 1984, and the Philippine government. As a result of peace negotiations between the MILF, which became a key group of the opposing force, and the Philippine government, a ceasefire agreement known as the *Tripoli Agreement* was signed in 2001, and further progress was made under the Aquino III administration that began in 2010. In October 2012, the *Framework Agreement on the Bangsamoro* (FAB) was signed, aiming for permanent peace and development in the conflict areas of Mindanao. It was agreed to establish a new Bangsamoro Government by 2016 to replace the ARMM government. Various other plans were also scheduled, such as initiating deliberations on the *Bangsamoro Basic Law*, which

would define the framework for the new autonomous government, in 2014, conducting a plebiscite in 2015 to determine the territory of the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM), and holding the first Bangsamoro parliamentary elections in 2016. In December 2012, the BTC was established as a transitional institution to draft the *Bangsamoro Basic Law* (BBL). Under these circumstances, the urgent tasks were the development of systems and institutions for the new autonomous government and the capacity building of administrative personnel.

The Japan International Cooperation Agency (JICA) had been providing support to Mindanao since the 1970s, and numerous activities focusing on peace and development in Mindanao were implemented in the 2000s. While the support was mainly directed toward the Philippine government or the ARMM government, new plans were made in this project to support the BTC, which was responsible for preparing the new autonomous government.

1.2 Project Outline

As mentioned above, this project consisted of two plans: CCDP-B and CCDP-A.

For a better understanding of the project, it is important to note the situation in Mindanao as described in "1.1: Background." After the start of this project, the *Comprehensive Agreement on Bangsamoro* (CAB), which consolidated the FAB signed in 2012 and its accompanying documents, was signed in September 2014. Based on this agreement, the BBL (also known as BBL1) was drafted as planned in 2014 but was abandoned in 2015 due to delays in deliberation and worsening conditions.[2] Following the inauguration of the Duterte administration in 2016, a revised version of the BBL (BBL2) was enacted as Republic Act No. 11054 (commonly known as the *Bangsamoro Organic Law*, or BOL) in 2018. Plebiscites to determine the territory of BARMM were held in 2019, and the first Bangsamoro parliamentary elections were initially scheduled for 2022 but were later postponed to 2025.[3] In February 2019, the Bangsamoro Transition Authority (BTA) was established to govern the BARMM area until the said elections. Consequently, the ARMM government was abolished, and the BTC completed its role in preparing for the establishment of the BTA and was dissolved.

This project was initially planned to run until 2016. However, it became clear that the BBL would not be enacted by that time, leading to an extension until July 2019. (The table below is based on the final version of the project plan, which was revised after the extension.) Additionally, with the establishment of the BTA, both CCDP-B and CCDP-A

[2] See "3.1.1.3 Appropriateness of the Project Plan and Approach" for details.
[3] According to reports, the Philippine government explained that the preparation for the establishment of the new autonomous government was delayed, partly due to the outbreak of COVID-19.

had this body as their new implementing agency. A timeline summarizing these events is included in the Appendix at the end of this report.

<table>
<tr><th colspan="2"></th><th>CCDP-B</th><th>CCDP-A</th></tr>
<tr><td colspan="2">Overall Goal</td><td>Foundation for the Bangsamoro Government is built.</td><td>(Not set)</td></tr>
<tr><td colspan="2">Project Purpose</td><td>Transition process to the Bangsamoro Government is accelerated.</td><td>ARMM institutional reform process is promoted.</td></tr>
<tr><td rowspan="3">Output(s)</td><td>Output 1</td><td>[Building Foundation of Governance] Preparation in governance for transition to Bangsamoro Government is progressed.</td><td>[Building Foundation of Governance] Human resources and institutional capacity of ARMM and Local Government Units (LGUs) are strengthened.</td></tr>
<tr><td>Output 2</td><td>[Strengthening Public Service Delivery and Community Development] Community development activities are implemented in conflict affected areas.</td><td>[Strengthening Public Service Delivery and Community Development] Delivery of public services in specific sectors is improved.</td></tr>
<tr><td>Output 3</td><td>[Economic Enhancement] Formulation of Bangsamoro Development Plan is accelerated.</td><td>[Economic Enhancement] The environment is improved for promotion of local industries through promotion of selected products.</td></tr>
<tr><td colspan="2">Total cost (Japanese Side)</td><td colspan="2">1,607 million yen</td></tr>
<tr><td colspan="2">Period of Cooperation</td><td colspan="2">July 2013 – July 2019
(Extension: July 2016 – July 2019)</td></tr>
<tr><td colspan="2">Target Area</td><td colspan="2">Areas stated in “V. TERRITORY in the Framework Agreement” signed between the Government of the Philippines and the Moro Islamic Liberation Front (MILF) on 15 October 2012</td></tr>
<tr><td colspan="2" rowspan="2">Implementing Agency</td><td>Bangsamoro Transition Commission (BTC)</td><td>Autonomous Regional Government in Muslim Mindanao (ARMM)</td></tr>
<tr><td colspan="2">Bangsamoro Transition Authority (BTA) (Since February 2019)</td></tr>
</table>

	CCDP-B	CCDP-A
Other Relevant Agencies/ Organizations	Moro Islamic Liberation Front (MILF), Bangsamoro Development Agency (BDA), Mindanao Development Authority (MinDA), Bangsamoro Leadership Management Institute (BLMI), Bangsamoro Islamic Armed Forces (BIAF), Department of Agriculture and Fisheries, ARMM (DAF-ARMM), Office of the Presidential Adviser on the Peace Process (OPAPP), Philippine Rice Research Institute (PhilRICE), Development Academy of the Philippines (DAP), and others	Executive Secretary, Office of Regional Governor, ARMM (ORG-ARMM), Department of the Interior and Local Government, ARMM (DILG-ARMM), Department of Public Works and Highways, ARMM (DPWH-ARMM), Department of Agriculture and Fisheries, ARMM (DAF-ARMM), Department of Trade and Industry, ARMM (DTI-ARMM), Local Government Units (LGUs), Agricultural Training Institute (ATI), Development Academy of the Philippines (DAP), and others
Consultant in Japan	RECS International Inc. / Oriental Consultants Global Co., Ltd. / CTI Engineering International Co., Ltd. / IC Net Limited (JV), UNICO International Corporation[4]	
Related Projects[5]	<u>JICA Technical Cooperation</u> • The Study for Socio-Economic Reconstruction and Development of Conflict Areas in Mindanao (SERD-CAAM) (2007–2009) • ARMM Human Resource Development Project (2004–2007) • ARMM Human Capacity Development Project (2008–2013) • Development Study on Promotion of Local Industry in ARMM (2010–2012) • Community Development in the Conflict-Affected Areas in Mindanao (CD-CAAM) (2012–2015) • Capacity Development Project for Bangsamoro (CDPB) (2019–2025)	

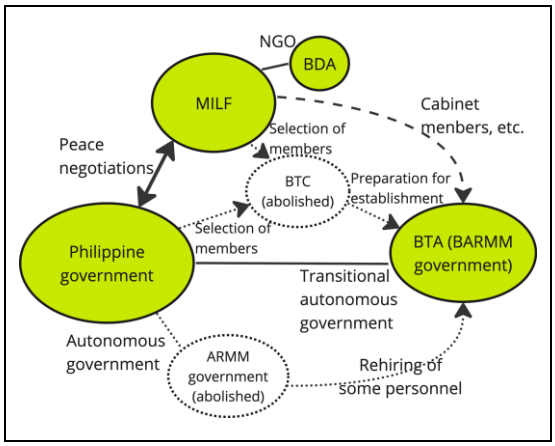
[4] Each of the organizations listed served as contracted entities responsible for executing certain components, while the remaining components were directly managed by JICA.

[5] JICA projects in the target area of this project are numerous (a comprehensive list of JICA projects at the time of implementation of this project can be found on page 12 and elsewhere in the "Comprehensive Review of JICA's Assistance in Mindanao," 2021 [URL: https://openjicareport.jica.go.jp/pdf/1000044367.pdf, accessed on July 9, 2023]). However, in this section, only the projects that are specifically mentioned in the main body of this report, as they have notable relevance to this project, are listed.

	CCDP-B	CCDP-A
	• National Industry Cluster Capacity Enhancement Project (2012–2015) <u>Japanese ODA Loan</u> • Road Network Development Project in Conflict Affected Areas in Mindanao (2019) <u>Japanese Grant Aid</u> • The Project for Improvement of Equipment for Power Distribution in Bangsamoro Area (2017) <u>Others (International Organizations, Development Assistance Organizations, etc.)</u> • Facility for Advisory Support for Transition Capacity (FASTRAC) (World Bank / United Nations Development Programme (UNDP), 2013–2016) • Support to Bangsamoro Transition (SUBATRA) (European Commission (EU) and others, 2020–2024)	

<u>About Related Organizations</u>

There are numerous organizations related to this project, but the relationships between the core organizations are organized as shown in the figure on the right. The activities of CCDP-B were mainly carried out by the Bangsamoro Transition Commission (BTC) or the Bangsamoro Development Agency (BDA), which was the socio-economic development agency of the Moro Islamic Liberation Front (MILF). The activities of CCDP-A were mainly carried out by various departments/ministries of the Autonomous Region in Muslim Mindanao (ARMM). While not included in the figure, local government units (LGUs)[6] and communities participated as beneficiaries of some activities. Service providers included domestic Philippine agencies such as the Philippine Rice Research Institute (PhilRICE), the Development Academy of the Philippines (DAP), and the Agricultural Training Institute (ATI), as well as local consultants. From the Philippine government, the Office of the Presidential Adviser on the Peace Process



Source: Created by the ex-post evaluator based on materials provided by JICA
Note: Organizations that exist as of 2023 are indicated in green.

Figure 1 Key Organizations Involved in This Project

[6] In this report, unless otherwise noted, LGU refers to the municipality level.

(OPAPP) was involved, and the Mindanao Development Authority (MinDA), responsible for regional development planning, participated in some activities.

It is important to note what the BTA refers to. The BTA has both a legislative and an executive branch, but in the Philippines, the term "BTA" is often used to refer to the legislative branch (the parliament). The executive branch (the current government governing the BARMM area as confirmed by the 2019 plebiscites as of 2023) is referred to as "BARMM (government)." For the sake of accuracy in this report, the current government is formally referred to as "BTA," but in cases where this could lead to confusion, it will be noted as "Parliament" or "BARMM government."

With the abolition of the ARMM government, staff in sectors other than education, health, and social welfare services, the continuation of which were especially important, were separated,[7] and some former staff applied for and were hired by the BTA. A comparison of related organizations is shown in the table below.

Table 1 Comparison of ARMM and BTA Organizations Related to This Project

ARMM organizations	BTA organizations that took over the functions of the ARMM
Office of Regional Governor, ARMM (ORG-ARMM)	Office of the Chief Minister, BARMM (OCM-BARMM)
Department of the Interior and Local Government, ARMM (DILG-ARMM)	Ministry of Interior and Local Government, BARMM (MILG-BARMM)
Department of Public Works and Highways, ARMM (DPWH-ARMM)	Ministry of Public Works, BARMM (MPW-BARMM)
Department of Agriculture and Fisheries, ARMM (DAF-ARMM)	Ministry of Agriculture, Fisheries, and Agrarian Reforms, BARMM (MAFAR-BARMM)
Department of Trade and Industry, ARMM (DTI-ARMM)	Ministry of Trade, Investment and Tourism, BARMM (MTIT-BARMM)

Source: Materials provided by JICA, BTA website

About Components

The outputs of both CCDP-B and CCDP-A were set along three pillars: "Foundation-building for Governance," "Strengthening Public Services Delivery and Community Development," and "Economic Enhancement." The groups of activities or subprojects included in each output, hereinafter referred to as "components," are as follows. As will be discussed later, all of these components were realized.

[7] According to the BBL, staff in the education, health, and social welfare sectors were to be absorbed and transferred to the Bangsamoro Government. Based on this provision, staff from these sectors were transferred to the BTA, which is the transitional governing body until the establishment of the Bangsamoro Government.

Table 2 List of Project Components

Plan	Output	Component	Main Related Organizations	Remarks
CCDP-B	Output 1 (Governance)	a) Support for drafting the Bangsamoro Basic Law (BBL)	BTC, MILF, OPAPP	
		b) Human Resources Mapping (HRM, Bangsamoro Talent Database)	BTC	
	Output 2 (Strengthening Public Service Delivery and Community Development)	c) Quick Impact Project (QIP)	BTC, BDA	Added in the first half of the project
		d) Upland Rice-based Farming Technology Transfer Program for the Bangsamoro (URTP-B, agricultural extension subproject)	BDA, BLMI, DAF-ARMM, PhilRICE*	Added during the extension period
	Output 3 (Economic Enhancement)	e) Formulation of the Bangsamoro Development Plan (BDP)	BTC, BDA, MinDA	
CCDP-A	Output 1 (Governance)	f) ARMM Government Staff Training	ORG-ARMM, Various Departments, DAP*	
		g) Human Resources Information System (HRIS)	ORG-ARMM	
		h) Revenue Enhancement Assistance for ARMM LGUs (REAL, local revenue enhancement subproject)	DILG-ARMM	Added during the extension period
	Output 2 (Strengthening Public Service Delivery and Community Development)	i) Road maintenance management through the Dynamic Response Intelligent Monitoring System (DRIMS) / Expanded ARMM Roads Mapping and Management (E-ARMM)	DPWH-ARMM	
		j) Livelihood Improvement for the Transformation of Underserved Population (LIFT-UP, agricultural extension subproject)	DAF-ARMM, ATI*	Added during the extension period
	Output 3 (Economic Enhancement)	k) ARMM Regional Industry Cluster Capacity Enhancement Project / Market Driven Local Industry Promotion (AICCEP/MDLIP, local industry development subproject)	DTI-ARMM	

Source: Materials provided by JICA
Note: The asterisk (*) indicates service providers.

1.3 Outline of the Terminal Evaluation

1.3.1 Achievement Status of Project Purpose at the Terminal Evaluation

Both CCDP-B and CCDP-A were assessed to have a high likelihood of achieving their project purposes. For CCDP-B, the outputs of this project were evaluated as having served as a “push factor” for the transition to the Bangsamoro Government. As for CCDP-A, it was assessed at the time that further efforts would be needed for some subprojects that were initiated after the extension of the project period. However, there were already initiatives that had become entrenched in the ARMM organization, and these were evaluated as having facilitated reforms in the ARMM organization that could prove beneficial to the Bangsamoro Government.

1.3.2 Achievement Status of Overall Goal at the Terminal Evaluation

(Including other impacts.)

The likelihood of achieving the overall goal (set only for CCDP-B) was assessed to be high. Although there were uncertainties in the transition process and concerns about the security situation at the time of the assessment, both CCDP-B and CCDP-A were evaluated as having contributed to the foundation-building of the Bangsamoro Government. Caution was advised for future political and security conditions at the project sites.

1.3.3 Recommendations from the Terminal Evaluation

For CCDP-B, the handover and follow-up of the project's activities and outputs from the BTC to the BTA were recommended and addressed. For CCDP-A, the completion of ongoing subprojects was recommended and was largely achieved before the project's completion. Additionally, the handover of assets of this project from the ARMM government to the BTA was recommended and addressed.

2. Outline of the Evaluation Study

2.1 External Evaluator

Takako Haraguchi, OPMAC Corporation[8]

2.2 Duration of Evaluation Study

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

Duration of the Study: October 2022 – November 2023

Duration of the Field Study: February 8 – 22, 2023 and May 28 – June 3, 2023

2.3 Constraints During the Evaluation Study

The target area of this project remained a security concern during the ex-post evaluation, limiting the sites and duration of visits that external evaluators and local research assistants could safely undertake. As a result, information gathering beyond the few sites visited by local research assistants was conducted through interviews in Cotabato City (where various BARMM organizations, including the OCM-BARMM, are located) or online with stakeholders who were involved at the time and are currently involved in the ex-post evaluation. Due to the wide scope of the project compared to the limited evaluation period, there were aspects that could not be fully understood during the ex-post evaluation.

The purpose of this project was to support the transition to the Bangsamoro Government. However, due to the fluid nature of the transition process and its susceptibility to

[8] Reinforcement participation from i2i Communication, Ltd.

significant political influences, the definitions of the project purpose of accelerating "the transition process to the Bangsamoro Government" and the overall goal of building "the foundation of the Bangsamoro Government" under CCDP-B have become unclear. According to materials from JICA, "accelerating the transition process" means that this project contributes to the preparations for establishing the new autonomous government, and "the foundation of the autonomous government" refers to the content specified as indicators for the overall goal in the preparations for the new autonomous government. Based on this explanation, conducting any activity that can be positioned as part of "preparation for establishment" can be evaluated as "the transition process has been accelerated" and "the foundation has been built" (meaning there is a wide scope for interpretation), making the evaluation of goal achievement inevitably vague. In this ex-post evaluation, it was considered difficult to eliminate such ambiguity in a project with many uncertain elements. Therefore, if the outputs of this project mentioned in each indicator could be confirmed to specifically contribute to the progress of preparations for establishing the new autonomous government, it was considered as achieved. Additionally, issues that are not reflected in the rating criteria for JICA's ex-post evaluation were also described.

3. Results of the Evaluation (Overall Rating: A[9])

This ex-post evaluation not only follows the standard JICA ex-post evaluation framework but also aligns with JICA's perspectives of the project evaluation in conflict-affected countries and regions. As many of these perspectives were applicable to this project, they are summarized in a box under each respective section below.

3.1 Relevance/Coherence (Rating: ③[10])

3.1.1 Relevance (Rating: ③)

3.1.1.1 Consistency with the Development Plan of the Philippines

Both at the time of the ex-ante evaluation and upon completion of the project, this project was consistent with the Philippines' development plans and agreements related to the Mindanao peace process and peacebuilding. In terms of national development plans, the Philippine government outlined its commitment to the continuation of the Mindanao peace talks and efforts to address the root causes of conflict in the *Medium-Term Development Plan* (2011–2016) and the *Philippine Development Plan* (2017–2022). The *Philippine Development Plan* also explicitly mentioned the protection and development of communities in conflict-affected and vulnerable areas. As for regional development

[9] A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory
[10] ④: Very High, ③: High, ②: Moderately Low, ①: Low

plans, the priorities set forth in the *Reform Agenda* (2016–2019) by the ARMM Governor at the time of the ex-ante evaluation, such as "functionalization of LGUs," "responsive ARMM government," "development of agriculture and fisheries," and "enterprise and business development," were aligned with the outputs set in CCDP-A.

In terms of agreements related to the peace process and peacebuilding, the FAB (2012), the CAB (2014), and the BOL (2018) can be cited. This project aimed to support the transition process based on these agreements. Notably, the project was implemented immediately after the signing of the FAB and before the conclusion of the CAB. It included providing technical assistance to some of the members drafting the BOL. This had the effect of supporting the political process related to the transition itself, making the timing of the project appropriate.

The project also aligns with JICA's perspectives of project evaluation in conflict-affected countries and regions.

JICA's Perspectives of Project Evaluation in Conflict-Affected Countries and Regions
(1) Consistency with the Development Plan

- ***Timing: Starting the project at an appropriate time, considering the progress of the peace process and the local political, security, and social conditions.***

  Deemed appropriate. Although initiating the project before the conclusion of the CAB poses potential security risks, the timing is considered suitable for supporting peace attainment. This assessment is based on the Aquino III administration's aim to achieve peace during its term since its inception in 2010. A successful high-level meeting between the President and the MILF chairman, facilitated by the Japanese government in 2011, and the signing of the FAB in 2012 further support this judgment.

- ***Political and Policy Significance: Implementing this project in the respective country or region, conferring political and policy relevance as well as policy implications from the perspective of peacebuilding.***

  Deemed appropriate (found to be significant). The project's aim of supporting the transition process under CCDP-B has political and policy contributions, and the overall project carries the nature of supporting peacebuilding in Mindanao, lending it relevance.

3.1.1.2 Consistency with the Development Needs of the Philippines

The project was aligned with the development needs of the Philippines both at the time of the ex-ante evaluation and at project completion. Regarding the challenges mentioned in the "Background," the project as a whole addressed deficiencies in basic social services and infrastructure by focusing on capacity building in administrative and socio-economic development. For the new autonomous government, the MILF, based on the FAB and CAB, needed to transition from an armed group to a governance structure and advance normalization processes such as the demobilization of MILF fighters, disarmament, and socio-economic development. CCDP-B primarily focused on enhancing the capabilities of BTC members related to the transition to the new autonomous government and on socio-economic development led by the BTC's socio-economic office and the BDA, including livelihood improvement for combatant farmers.

Gratitude was repeatedly expressed by former BTC leadership and other former counterparts to JICA for being one of the first donors[11] to support the MILF in its smooth transition to the Bangsamoro Government in collaboration with the Philippine government, always prioritizing dialogue and providing support based on identified needs.

After the project commenced, the transition process to the new autonomous government also changed along with shifts in political administration and the progress status of the peace process. However, the project continuously maintained its alignment with development needs as much as possible through the extension of the project period and the addition of components. It included areas of cooperation that were less susceptible to changes in the structure on the Philippine side and had high needs, such as improving local government revenue, promoting agriculture in communities, and nurturing local industries targeting regional producers and markets.

From the perspective of peacebuilding, this project effectively balanced the needs of both the BTC (an organization comprising the MILF and the Philippine government, leading to a transitional autonomous government) and the ARMM government (the autonomous government that existed at the time). By addressing a wide range of needs, the project aimed to reduce multiple factors of instability and promote factors of stability. Additionally, through the Quick Impact Project (QIP), the development of small-scale facilities in 20 community sites played a significant role in quickly impressing upon people the progress of the peace agreement process. This helped build trust in the MILF, aligning well with the needs for peace not only of the site residents but also of the people in the region. According to former counterparts, local people recognized the QIP criteria and high development priority of the selected villages based on the criteria, and the message that the peace process and peacebuilding were advancing was effectively conveyed throughout the region.

In beneficiary targeting, the perspective of considering those who are hindered from fair social participation was emphasized in the site selection for each component, such as setting the use of selection criteria that consider social inclusivity and regional balance as an indicator of output in QIP. No evidence was found that any specific group suffered a disadvantage.

The project also aligns with JICA's perspectives of project evaluation in conflict-affected countries and regions.

[11] While JICA was not the first donor to provide support to MILF-affected areas, as there are numerous multilateral and bilateral donors, it is a fact that this project was the first donor support to comprehensively address a wide range of capacity building from governance to socio-economic development through the BTC. Although it cannot be said that the project had an effect in encouraging other donor support, it can be considered a forerunner in socio-economic development led by MILF's transitional organizations in terms of timing.

JICA's Perspectives of Project Evaluation in Conflict-Affected Countries and Regions
(2) Consistency with the Development Needs

- ***Clarifying the Relationship Between Instability/Stability Factors and the Project***

  Addressed. Specific factors were identified in the ex-ante evaluation report, clarifying which factors this project aimed to address. Specifically, the identified instability factors affecting the consolidation of peace in the region were: (1) the absence of a final agreement between the Philippine government and the MILF, (2) the possibility that the peace process may not progress in accordance with the FAB, (3) insufficient administrative service delivery capabilities, (4) lack of trust in the government among the people, (5) deterioration of security due to conflicts among clans or MILF factions, (6) the presence of internally displaced persons due to conflict or natural disasters, (7) the potential deterioration of relations between the transitional government and local governments due to revisions in local governance codes, (8) the existence of groups opposing the progress of peace (spoilers). This project was designed to reduce instability factors (2)(3)(4)(7).

- ***Selection of the Target Areas and Beneficiary Groups: Consideration to Minimize Instability Factors, Measures to Avoid Risks that Could Exacerbate Instability Factors***

  Addressed. In selecting activity sites, criteria were set to ensure that not only Muslims but also Christians, indigenous people, and those affected by conflict were appropriately included as beneficiaries.

3.1.1.3 Appropriateness of the Project Plan and Approach

The project plan and approach for this project were generally appropriate. Notably, the decision to divide the project into two planning documents (Project Design Matrices, or PDMs), CCDP-B and CCDP-A, based on the local context, was crucial for smooth project implementation. It is worth noting that the initial plan drafted by JICA headquarters included both the MILF side (the BTC) and the ARMM government in a single PDM, with the BTC leading the implementation. However, after local consultations, an alternative plan was developed to divide the PDM into two. Although the result was ultimately appropriate, the ARMM side strongly opposed the single PDM plan. This prolonged the planning process and temporarily affected trust in JICA, which should be noted from a peacebuilding perspective. According to records and stakeholders at the time,[12] the single PDM plan was considered "unthinkable" by JICA staff on the ground. Although the headquarters was fully aware of the importance of having two PDMs, it was a secondary option for negotiation. The primary approach was to present a single PDM plan that prioritized mitigating divisions between the ARMM and the BTC by jointly strengthening their capabilities (see also "5.1.2 Subjective Perspective (retrospective)"). One contributing factor could be that the latest Peacebuilding Needs and Impact Assessment (PNA)[13] was conducted at the regional level in 2007, and no

[12] In this ex-post evaluation, interviews were conducted with Japanese stakeholders, including former experts (chief advisors and several other experts), as well as staff from the JICA Philippines Office and the Cotabato Project Office.

[13] The definition of JICA's PNA is as follows: It is a process that analyzes the current political, administrative, security, economic, and social conditions, and instability factors. The aim is to minimize and avoid the negative impacts caused by instability in the political, security, and social sectors, as well as to avoid exacerbating

systematic PNA report analyzing the situation at the time of the project's ex-ante evaluation (2012) was produced. At that time, the situation was fluid, and although no formal PNA was conducted, information collection, analysis, and sharing were carried out through regular reports from JICA staff assigned to the Internal Monitoring Team and visits from headquarters. The analysis mainly influenced the consideration of the content of the project. As mentioned above, the initial single PDM plan focused on the objective of reconciling the divisions between the MILF and ARMM sides, but it seems that it did not fully reflect one of the designated reporting items in the PNA, which is whether the proposed implementation structure would exacerbate instability factors.[14]

Changes in the project content due to plan modifications and the extension of the project period are considered appropriate for this project, which started amid significant uncertainties and needed to respond to political and situational changes as they occurred. In the process of these changes, the project purpose at the start of the project (building the foundation for the new autonomous government) shifted to an overall goal, and a lower-level project purpose (accelerating the transition process to the autonomous government) was established. This was due to the delay in transitioning to the new autonomous government caused by the stagnation of the peace process. The direct cause, the Mamasapano incident (an armed engagement between the Philippine National Police Special Forces and the MILF in the MILF-controlled town of Mamasapano on January 15, 2015, where the Philippine government side was said to have violated the ceasefire), can be considered an external factor beyond what was anticipated as a risk at the planning stage, according to interviews with stakeholders.[15]

Lessons learned from past similar projects were utilized, and positive results were obtained. In the ex-ante evaluation report for this project, it was stated that lessons from

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instability factors (consideration for conflict prevention). It also aims to eliminate or reduce instability factors (promotion of peace). This process is implemented in alignment with the management of projects, from the formulation of country assistance plans and individual projects to implementation, monitoring, and evaluation.

[14] Although a survey mission report at the time (provided by JICA) stated that "it is necessary to formulate [this project] while considering the balance and perception between the ARMM and the BDA," no specific proposals for an implementation structure to achieve this were observed. Besides, during the project implementation, even without a formal project-level PNA, experts continuously monitored and analyzed the situation, and monthly reports were submitted to JICA headquarters.

[15] The "preconditions for project implementation" listed in the ex-ante evaluation sheet stated that "the security situation in the conflict-affected areas of Mindanao and relations among stakeholders will not deteriorate due to stagnation in the peace process or other factors." However, there was no specific mention of the extent of "stagnation" or "deterioration" that was anticipated. Interviews with stakeholders revealed that a violent conflict resulting in numerous casualties between the MILF and the national military would have exceeded the assumptions at that time. At the time of planning, the FAB had been concluded, and discussions were actively underway toward the CAB. There were no signs that this would suddenly be overturned. According to the investigation report at the time of planning (provided by JICA), the outlook for security trends stated that "while the possibility of future conflicts remains due to clashes between hardline forces that have branched off from the MILF and the national military, as long as the MILF and the Philippine government are in step, they are not expected to become significant opposing forces to peace." Therefore, it was judged that the large-scale conflict between the MILF and the Philippine government, as occurred in the Mamasapano incident, exceeded the assumptions.

the terminal evaluation of the ARMM Human Resource Development Project (2004–2007) would be utilized to conduct system and institutional building based on the problem analysis on the ARMM government. From the existing documents, it was confirmed that each activity of this project was implemented based on the problem analysis of the target organizations.

The project also aligns with JICA's perspectives of project evaluation in conflict-affected countries and regions.

JICA's Perspectives of Project Evaluation in Conflict-Affected Countries and Regions
(3) Appropriateness of the Project Plan and Approach

- ***Fairness: Consideration for Different/Conflicting Ethnic Groups, Community Groups with Different/Conflicting Political Backgrounds, Residents of Areas Under Effective Control and Other Areas, Differences Among Beneficiaries, Formulation and Implementation of Projects to Achieve Equitable Outcomes, Measures for Risk Avoidance***

  Addressed. As noted in the section "JICA's Perspectives of Project Evaluation in Conflict-Affected Countries and Regions (2) Consistency with Development Needs" above.

- ***Project Content: From the Project's Formation Stage, Consideration of Political and Security Situation Forecasts and Risk Assumptions, Incorporation of Measures to Minimize the Impact of Situational Changes into the Project Plan, Presentation in the Ex-ante Evaluation Report for Sharing with Implementers, Managers, and Evaluators, Clear Explanation of the Relevance and Significance of Implementing the Project Under Such Circumstances, Direct and Indirect Contributions to Reducing Instability Factors Through Project Content (For example, deliberately setting a broad target area for the project, and advancing the project in a multi-sectoral manner across multiple fields)***

  Largely addressed. While explicit strategies for mitigating the impact of situational changes were not outlined during the ex-ante evaluation, regular situational analysis appears to have been conducted. According to experts and JICA personnel at the time, the policy was to adapt flexibly to numerous uncertainties, which was executed (e.g., through multi-sectoral approaches, additional components), and is believed to have led to high effectiveness.

- ***Implementation Structure: By Making the Relevant Institutions the Implementing/Cooperating Institutions, Risks of Negative Political and Social Implications and of Exacerbating Instability Factors, Positive Impacts of Implementing the Project with the Relevant Institutions (Avoidance of Instability Factors and Promotion of Stability Factors), Appropriate Reflection of JICA and Implementing Institutions' Risk and Crisis Management, Safety Management, etc., in a Plan that Minimizes the Impact of Conflict on the Entire Project***

  Addressed. Particularly appropriate were the following points:

  i) By establishing separate implementation structures with the MILF side (the BTC) and the ARMM government as respective counterparts, the project successfully avoided instability factors stemming from their relationship.

  ii) Since the MILF is not a government institution, designating the BTC (a committee formed by the Philippine government and the MILF) as the counterpart for the implementation of CCDP-B enhanced the legitimacy of support to the MILF, thereby avoiding factors that could lead to instability.

3.1.2 Coherence (Rating: ③)

3.1.2.1 Consistency with Japan's ODA Policy

During the ex-ante evaluation, this project was aligned with Japan's development cooperation policy. In the *Country Assistance Policy for the Republic of the Philippines* (2012), "Peace and Development in Mindanao" is identified as one of the three priority

areas. This project aligns with this priority area by providing support for governance and socio-economic development. Additionally, in the *JICA Country Analysis Paper for the Republic of the Philippines* (2012), "peacebuilding in conflict-affected areas in Mindanao" is highlighted as a key issue. Specifically, the paper positions seamless support for regional stability and development toward the establishment of a new autonomous government after the peace agreement as a medium-term goal, which is consistent with the purpose of this project.

The project also aligns with JICA's perspectives of project evaluation in conflict-affected countries and regions.

JICA's Perspectives of Project Evaluation in Conflict-Affected Countries and Regions
(4) Consistency with Japan's ODA Policy

- ***Attaching Political and Policy Significance from the Perspective of the Japanese Government and Policy Significance and Implications from the Perspective of Peacebuilding***

  Addressed (significant). Since particularly 2006, the Japanese government has been directly involved in peace negotiations and advising the parties to the peace in Mindanao, even before the CAB was reached, through participation in the International Contact Group. This project is positioned as part of such involvement and is recognized to have high political and policy significance.

3.1.2.2 Internal Coherence

During the ex-ante evaluation, collaborations and coordination were anticipated as follows and were largely realized, yielding certain concrete results. First, the outputs of the Development Study on Promotion of Local Industry in ARMM (2010–2012) and the National Industry Cluster Capacity Enhancement Project (2012–2015) laid the foundation for local industrial promotion in this project, namely output 3 of CCDP-A, contributing to the generation of this output. Additionally, although the collaboration with the Community Development in the Conflict-Affected Areas in Mindanao (CD-CAAM) (2012–2015), which aimed to strengthen the capacity of the BDA and establish mechanisms for community development, did not result in the adoption of the livelihood improvement model from that project because of differences in implementation structures, it did contribute indirectly, primarily to the outputs of CCDP-B, through the capacity enhancement of stakeholders centered around the BDA.

Collaborations and coordination not anticipated during the ex-ante evaluation can be cited as follows.

Firstly, around 2018, the JICA Philippines Office provided an updated version of the organizational structure proposal and transition roadmap for the transitional government and the new autonomous government. In CCDP-B, an organizational structure proposal and transition roadmap for the transitional government and the new autonomous government were initially created based on the first draft of the BBL1 around 2014.

However, the peace process stalled, and the draft law was abandoned, rendering the project-supported proposals ineffective. Subsequently, when the BBL2 (BOL) was enacted in 2018, the situation changed significantly. This project was, however, nearing completion, and an update of the 2014 proposal could not be made. In response to this, JICA, through its Philippines Office's initiative, collaborated with the Coordination Team for the Transition (CT4T), consisting of the Philippine government, the ARMM government, and the MILF, to create an updated proposal. This was submitted from the Implementation Panel (a forum for peace negotiations and implementation between the Philippine government and the MILF) to the BTA in May 2019. This activity was important in complementing this project and promoting the transition process, the project purpose of CCDP-B.

Secondly, JICA's Knowledge Co-Creation Program (programs to accept trainees), particularly the Project for Human Resource Development Scholarship (JDS), a grant aid scholarship project established in 1999, included specialized programs for Mindanao support, such as the Regional Development Administration in Mindanao (2011–2014) and the Regional Development Administration in Mindanao / Support for Establishment of Bangsamoro Autonomous Government (2015–2018) (a total of 34 individuals were trained). Furthermore, within the latter program, the Prioritized Slots for Bangsamoro was implemented from 2015 to 2017, targeting nine individuals for human resource development aimed at the future establishment of the Bangsamoro Government. These programs were utilized in this project's activities. During the project implementation, contributions were made to the promotion of the industrial cluster approach (output 3 of CCDP-A). At the time of the ex-post evaluation, contributions were observed in road administration (continuation of the output 2 of CCDP-A) and agricultural administration (continuation of output 2 of both CCDP-B and CCDP-A) (See Box 1). Additionally, projects under the JICA Partnership Program such as the Hiroshima Peacebuilding Human Resource Development Project for the Bangsamoro Government in Mindanao (2014–2016) and the Hiroshima Peacebuilding Human Resource Enhancement Project for the Bangsamoro Government in Mindanao (2015–2018), implemented by Hiroshima University and Hiroshima Prefecture, are considered complementary to this project. Staff from the ARMM government, the BDA, and other young talents were dispatched to Japan. While the specific contributions of these trainees to the project's outcomes could not be investigated, they are expected to shoulder the future Bangsamoro Government. Therefore, if follow-up surveys of the graduates, including those from the JDS and short-term trainee programs, could be conducted, further synergistic effects may be confirmed.

Thirdly, some of the infrastructure projects proposed within the Bangsamoro

Development Plan (BDP)[16] (output 3 of CCDP-B) were implemented as other JICA projects. For example, the Project for Improvement of Equipment for Power Distribution in Bangsamoro Area (grant agreement in 2017) was one of the bases for achieving the project purpose indicators of CCDP-B.

Additionally, although not the subject of this section, the seamless series of Mindanao peace and development support by JICA in the past also contributed to the achievement of this project's outputs and purposes through the utilization of nurtured human resources and collected data.

The project also aligns with JICA's perspectives of project evaluation in conflict-affected countries and regions.

JICA's Perspectives of Project Evaluation in Conflict-Affected Countries and Regions
(5) Internal Coherence

- ***Attaching Policy Significance and Implications from the Perspective of Peacebuilding through Collaboration***

  Addressed (Significant). The series of support activities discussed in the main text include peacebuilding as an objective.

Box 1 Example of Synergistic Effects between This Project and JDS
(Rural and Fishing Village Inventory Using GIS)

Mr. Ismail, who was a civil engineering staff member at the BDA, studied at Hiroshima University's Graduate School from 2017 to 2019 through the JDS, specializing in Geographic Information Systems (GIS) and earning a master's degree. After returning to his home country, he joined the MAFAR-BARMM and utilized the GIS technology he learned in Japan to create an inventory and georeferencing system for agricultural and fishing workers in the BARMM area. He also had this system integrated with the national Registry System for Basic Sectors in Agriculture (RSBSA). Field registration is now conducted by farmers themselves, who walk through the fields with smartphones. The MAFAR-BARMM plans to utilize this system for providing and monitoring support programs and services, including the maintenance and expansion of the agricultural extension component outcomes of this project (Image 2 Mr. Ismail explaining the system. source: Photographed by the ex-post evaluator).

3.1.2.3 External Coherence

Collaboration with the technical assistance program, the Facility for Advisory Support for Transition Capacity (FASTRAC) (2013–2016), led by the World Bank and UNDP, was anticipated during the ex-ante evaluation, and was realized. By sharing responsibilities for awareness-raising activities related to the draft BBL1 (output 1 of CCDP-B) and support for the formulation of the Bangsamoro Development Plan (output

[16] To distinguish between the BDP supported by this project and the BDP formulated by the BTA, the former will be referred to as "the BDP supported by this project," and the latter as "the BDP formulated by the BTA."

3 of CCDP-B), the collaboration contributed to the achievement of the respective outputs.

Coordination between this project and other projects was carried out within the following collaborative frameworks. First, coordination of Japan's support for Mindanao was conducted through the Mindanao Task Force, consisting of the Japanese Embassy, JICA, and the Japan Bank for International Cooperation (JBIC).[17] Next, Mindanao support by other donors was coordinated through the Mindanao Working Group, a sub-organization under the Philippine Development Forum, which is a framework for donor support to the Philippines.

The perspectives from the *Guidelines for Project Evaluation in Conflict-Affected Countries and Regions* are also largely addressed. According to those involved at the time, the collaboration with FASTRAC was carried out under the initiative/coordination of the Philippine side (the BTC), and it is believed that this project/JICA did not take the initiative to realize donor coordination.

JICA's Perspectives of Project Evaluation in Conflict-Affected Countries and Regions
(6) External Coherence

- ***Execution of JICA's Role within the Framework of Donor Coordination***
  Largely addressed (role was present). As mentioned in the main text, although it was led by the Philippine side rather than donor-driven, the role was clearly defined.
- ***Demonstration of JICA's Areas of Expertise and Strengths***
  Partially addressed. In terms of project content (long-standing trust with the Philippine government and the MILF, support for human resource development), it is a 'Yes,' but nothing specific can be noted in the context of donor coordination.
- ***Demonstration of JICA's "Inclusivity" from the Perspective of "Supporting Fragile Governments through Donor Coordination"***
  Not particularly present. As mentioned in the main text, the initiative was strongly led by the Philippine side, and it does not appear that JICA necessarily involved other donors.

In light of the above, this project is consistent with the development policies and development needs of the Philippines and Japan's aid policies. Synergistic effects and mutual coordination with other projects both within and outside JICA were considered, and concrete results have been confirmed. The perspectives outlined in the *Guidelines for Project Evaluation in Conflict-Affected Countries and Regions* were also addressed. Therefore, its relevance and coherence are high.

[17] In addition to JICA's support, other assistance included the dispatch of Japanese experts to the International Monitoring Team and Grant Assistance for Grassroots Human Security Projects.

3.2 Effectiveness and Impacts[18] (Rating: ③)

3.2.1 Effectiveness

3.2.1.1 Achievement of Project Purpose

In both CCDP-A and CCDP-B, the outputs were mostly achieved, contributing to the general achievement of the respective project purposes. It should be noted that the assessment of the project purpose achievement in this evaluation is based on the performance up to February 2019, when the BTA was inaugurated, and the previous implementing agencies, the BTC and the ARMM government, were dissolved, rather than as of the project's completion in July 2019. While the project purpose and indicators of CCDP-B were not affected by the dissolution of the BTC, those of CCDP-A were predicated on achievements within the ARMM government.[19]

CCDP-B It was confirmed that all three indicators were achieved. The BBL, which outlines the transition process to the new autonomous government, was drafted (Indicator 1). The agency responsible for the transition, the BTC, formulated a development plan and strengthened its capabilities for the same (Indicator 3). The communities directly supported by this project recognized the contribution of this project to building peaceful and productive communities (Indicator 2). All of these can be positioned as part of the preparations for establishing the Bangsamoro Government, indicating that the transition process to the Bangsamoro Government was accelerated. However, there are issues of ambiguity in the evaluation, as mentioned in "2.3 Constraints During the Evaluation Study."

Considerations for each indicator are as follows. For Indicator 1, it is important to note that this project's contribution was indirect and limited.

Regarding Indicator 1, although the BBL was drafted, the drafting and review of the bill were not conducted by this project, and its achievement was largely due to factors outside of this project. The project's contribution was originally indirect, such as providing training/seminars to those involved in drafting the BBL1 and supporting the organization of public hearings in communities. However, this became even more indirect when the original bill was abandoned and the revised BBL2 was enacted as the BOL. According to ex-post evaluation interviews with stakeholders at the time and documents provided by JICA, the BBL2 is based on the BBL1, and some of the drafting members are the same. Therefore, it can be said that the experience and intellectual input from the BBL1 were to some extent utilized in the drafting of the BBL2.

Regarding Indicator 2, in a survey conducted by this project among the beneficiaries of

[18] When providing the sub-rating, Effectiveness and Impacts are to be considered together.
[19] In Tables 3 (CCDP-B) and 4 (CCDP-A), the status of each indicator at the time of project completion (after the establishment of the BTA) is also noted.

the community development components (QIP and the Upland Rice-based Farming Technology Transfer Program for the Bangsamoro (URTP-B (subproject)), responses indicated that these subprojects contributed to the establishment of peaceful and productive communities. In the same survey, factors that facilitated this included capacity development of community organizations before actual construction in QIP and taking ample time to explain the purpose and progress of the construction to the residents. In the URTP-B subproject, the target site being in MILF-controlled areas (MILF camps) necessitated pre-activity social preparation activities, such as explanations from field coordinators affiliated with the Bangsamoro Islamic Armed Forces (BIAF), whom the residents of MILF camps trust, and thorough needs assessments to gain the understanding and hear the needs of the residents. During the ex-post evaluation, former counterparts repeatedly emphasized the importance of these social preparation activities.

As for Indicator 3, although the formulation and promotion of the BDP is not directly related to the preparation for the establishment of the new autonomous government, the purpose of the BDP is to prepare “useful technical materials for the development planning of the new autonomous government” and “capacity enhancement through the planning process” (according to JICA-provided documents). Therefore, it is considered to be connected to the project purpose.

Table 3 Achievement of Project Purpose (CCDP-B)

Project Purpose	Indicator	Actual
Transition process to the Bangsamoro Government is accelerated. * Note to the PDM: The word "accelerated" means that this project contributes to the preparation of establishment of the Bangsamoro Government. The process of preparation is not defined and the project is required to contribute to flexible responses toward the preparation efforts.	1. BBL is drafted.	Achieved (indirect contribution by this project) • The BBL1 (the initial draft of the BBL) was submitted to the Congress in 2014 but was not adopted and became obsolete. The BBL2 (the revised draft of the BBL) was submitted to the President in July 2017, passed through congressional deliberations, was renamed to BOL, and was signed by the President in July 2018. • No change in performance of this indicator due to the establishment of the BTA.
	2. Majority of beneficiaries* of the project evaluate that the project contributes to building peaceful and productive community in selected communities. * Note from the ex-post evaluator: The evaluation follows the definition of "(project) beneficiaries" used during the project implementation and makes judgments based on the evaluations of the beneficiaries of QIP and URTP-B.	Achieved • The results of the assessment conducted in June 2016, after the construction of QIP facilities, for the members of the beneficiary communities are as follows: (i) Out of 223 respondents, 221 (99%) answered that "QIP met their needs." (ii) Responses included observations that "the community has become more active," "cohesion has increased," and "ownership by community organizations has strengthened." • According to a social survey conducted in October 2018, changes were observed in the living conditions and income, as well as in the relationship between the beneficiary farmers of URTP-B (members and supporters of the MILF) and government-related agencies. Excerpts from the responses (collected from 310 out of 480 beneficiaries): (i) 96.2% responded that their living conditions changed due to the knowledge and skills gained from URTP-B; (ii) 97.4% responded that their current income as farmers is better than before the peace agreement (with 82.7% attributing this to a peaceful community and 67.5% to no longer feeling fear); (iii) 74.8% responded that they have built relationships with agricultural extension officers and technicians, as well as with PhilRICE; (iv) 76.8% responded that they get along well with other farmers. • No change in performance of this indicator due to the establishment of the BTA.
	3. A part of the BDP is drafted and promoted.	Achieved • The BDP1 (2015–2016) and the BDP2 (2016–2022) were formulated. As of June 2019, the projects listed in the BDP2 that had been operationalized include the following: (i) the Project for Improvement of Equipment for Power Distribution in Bangsamoro Area (preparatory survey completed, grant aid in progress), (ii) the Road Network Development Project in Conflict-affected Areas in Mindanao (preparatory survey completed, approved by the Philippine government as a Japanese ODA loan project), (iii) Ambal-Simuay River and Rio Grande de Mindanao River Flood Control Projects (approved by the Philippine government as a China loan project). • The establishment of the BTA made it necessary to develop a new development plan.

Source: Materials provided by JICA

CCDP-A All six indicators were achieved. It was confirmed that the systems and services introduced into various ministries/departments of the ARMM government were utilized until the dissolution of the government in February 2019, suggesting that the institutional reform process (including improvement in administrative services) was promoted. Although the achievement levels for the indicators were not clearly defined, the achievements can be considered sufficient when viewed qualitatively. Factors promoting these achievements are thought to be activities aligned with the needs of the ARMM government and LGUs, as well as being based on JICA's past cooperation with the ARMM government.

CCDP-A had the nature of general technical cooperation aimed at supporting institutional reform in the existing regional government (autonomous government). Therefore, it did not face issues like CCDP-B, where the project purpose could not be clearly defined, leading to ambiguous evaluations of the achievement of objectives.

Although not set as a project purpose, the significance of CCDP-A in supporting the transition process was also observed. In the ARMM organizations that were counterparts for this project, staff had to be dismissed and then reapply for positions in the newly established BTA. Experts for this project turned over the project's achievements to the new ministers of the BTA (BARMM government). Due to this, and the fact that some of the counterparts from CCDP-A joined the BTA, the improved administrative systems/services were transferred to the BTA. This contributed to the continuity of administrative services and became part of the BTA's organizational setup, including the utilization of personnel information when hiring former ARMM government staff (and as will be discussed later, many of these are still being utilized by the BTA during the ex-post evaluation).

Table 4 Achievement of Project Purpose (CCDP-A)

Project Purpose	Indicator	Actual
ARMM institutional reform process is promoted.	1. HRIS is installed and utilized.	Achieved • The Human Resources Information System (HRIS), which was developed in JICA's ARMM Human Capacity Development Project (2008–2013) and improved in this project, was in use as of November 2018. It had enhanced functionalities, such as the ability to instantly access information. It was also utilized for the transition of personnel information to the BTA, making it easier to grasp important HR data like the number of retirees. This facilitated quick reporting to the Civil Service Commission and was highly praised by the ARMM government for smoothing the transition to the new government. • After December 2018, when the likelihood of the ARMM government being abolished increased and personnel movements ceased, updates to the HR information were suspended. If it was decided to continue using the system in the BTA, modifications to organization names and positions would be made once the BTA finalized its organizational structure. • After the establishment of the BTA, efforts were made within the OCM-BARMM to utilize HRIS in the BTA. The new Information Technology Officer of the Administrative Management Service (AMS) began an effectiveness assessment of the software.
	2. 5S activities[20] are implemented and part of Good Governance Conditions (transparency shield, compliance of Administrative Order 25) is recognized among ARMM staff in target institutions.	Achieved • In this project, the DAP conducted various training sessions. Following the training, the ORG-ARMM took the lead in promoting 5S activities, achieving the implementation of 5S across all ARMM organizations. In addition to 5S, as a result of the training, the Citizen's Charter was revised in all ARMM institutions, and improvements were made in the electronic procurement system, performance-based HR system, and asset-liability management system, thereby strengthening the foundation of the ARMM institution. Furthermore, as a result of such efforts, the ORG-ARMM obtained ISO 9001 (an international standard related to quality management systems) for three consecutive years since 2016. • Activities were halted after the establishment of the BTA.
	3. Program of ARMM government on LGU revenue generation capacity development is prepared.	Achieved • In this project, revenue enhancement activities were carried out in five pilot LGUs under the Revenue Enhancement Assistance for ARMM LGUs (REAL). Achievements included the establishment of new tax and fee collection items, preparation and enactment of revised revenue codes, increased revenue, and securing interest from other LGUs for the expansion of REAL. • After the inauguration of the BTA, the REAL Guidebook for program expansion was completed in May 2019 and turned over to the MILG-BARMM.

[20] A workplace improvement slogan derived from the initial letters of five Japanese words: Seiri (Sort), Seiton (Set in order), Seiso (Shine), Seiketsu (Standardize), and Shitsuke (Systematize).

Project Purpose	Indicator	Actual
	4. Road maintenance activities are planned utilizing the Road Database System.	Achieved • The DPWH-ARMM utilized the Expanded ARMM Roads Mapping and Management system (E-ARMM) developed in this project to formulate road construction and maintenance plans. According to officials from the department, almost all roads in the ARMM region had been surveyed for roughness using the Dynamic Response Intelligent Monitoring System (DRIMS) developed in this project. Additionally, after the Marawi crisis in May 2017,[21] the condition of the roads was surveyed using DRIMS. • In May 2019, following the inauguration of the BTA, the Expanded Bangsamoro Roads Mapping and Management system (E-BARMM) was established as an advancement of the E-ARMM.
	5. LLS in target municipalities is conducted with support of MAO/AT. * The term "conducted" was used in line with the original text and its Japanese translation provided by JICA, although "operated" might be a more appropriate expression than "conducted" for describing the use of LLS.	Achieved • In this project, under the Livelihood Improvement Project for Stability in Conflict-Affected Areas of Mindanao (LIFT-UP), training for agricultural extension officers (Municipal Agricultural Officers: MAOs and Agricultural Technicians: ATs) and farmer leaders was conducted. This was followed by the implementation of Farmer's Field Schools (FFS) at 16 sites by these trained officers, and the transformation of these sites into Livelihood Learning Sites (LLS). To sustain these efforts and continue agricultural technical guidance in the target areas, all 16 farmer leaders who owned LLS created an LLS Sustainability Plan under the guidance of the MAFAR-BARMM before the conclusion of LIFT-UP. The plan included a regular visitation schedule and guidance points by MAOs and ATs, integrating not just the self-help efforts of the farmer leaders but also the active support of MAOs and ATs. • After the inauguration of the BTA, activities by agricultural extension officers were halted.
	6. Cluster approach is understood and recognized as a tool of industry promotion.	Achieved • In this project, under the ARMM Industry Cluster Capacity Enhancement Project (AICCEP) / Market Driven Local Industry Promotion (MDLIP), one cluster approach target industry was selected in each of the six provinces. Industrial promotion activities were carried out by producers, intermediaries, and support organizations (government, universities, etc.). Given that various stakeholders were investing resources in cluster activities, it was considered that the cluster approach was recognized as a tool for industrial promotion. This was also explicitly stated in the *ARMM Regional Development Plan* (2017–2022). • After the inauguration of the BTA, support from the MTIT-BARMM was halted.

Source: Materials provided by JICA

In the light of above, the project mostly achieved its purposes. It also aligns with JICA's perspectives of project evaluation in conflict-affected countries and regions.

[21] Military operations and armed conflicts by the national army against Islamic extremist groups. The city of Marawi, the provincial capital of Lanao del Sur, and its surrounding infrastructure suffered significant damage.

JICA's Perspectives of Project Evaluation in Conflict-Affected Countries and Regions
(7) Achievement of Project Purpose

- ***Response to Risks in the Implementation Process***

  Addressed. Measures such as project period extension and additional activities were taken to respond to the possibility of external conditions and assumptions being disrupted due to deteriorating security and changing circumstances (as described in "3.1.1.2 Consistency with the Development Needs of the Philippines").

- ***Consideration for Differences in Results and Project Effects Among Beneficiaries***

  Addressed. By providing support tailored to the needs of both the ARMM side and the MILF side (the BTC), instability factors were avoided and stability factors were promoted.

- ***Re-examination of the Appropriateness of Indicator and Objective Setting, and Response in Case of Changes in Outcomes Due to Major Changes During Implementation***

  All were addressed within the revisions to the PDMs. Although the setting of objectives and indicators could not entirely eliminate ambiguity, particularly for CCDP-B (as described in "2.3 Constraints During the Evaluation Study"), it was judged to be an unavoidable response given the fluid situation.

3.2.2 Impacts

3.2.2.1 Achievement of Overall Goal

The overall goal of CCDP-B, which is the foundation building of the Bangsamoro Government, was mostly achieved at the time of the ex-post evaluation. Although the three indicators are not clearly defined in terms of their achievement levels, they were mostly achieved (Indicators 1 and 2) or partially achieved (Indicator 3), when viewed qualitatively, in the sense that the conditions expressed in the indicator statements have been realized. According to the definition of the "foundation of the Bangsamoro Government" as mentioned in these three indicators (as part of the preparations for the establishment of the government), the overall goal can be considered largely achieved.

Considerations for each indicator are as follows. It is particularly important to note that the contribution of this project is indirect and limited for Indicator 1, and that the significance of Indicators 2 and 3 has diminished at the time of the ex-post evaluation.

Regarding Indicator 1, the legislation of related codes to the BOL has progressed, and it was confirmed that former counterparts of this project were involved in drafting some of the enacted bills (the *Bangsamoro Administrative Code* and the *Parliamentary Rules, Procedures, and Practices*). However, the contribution of this project is limited to intellectual input to these counterparts, and other factors have played a significant role in achieving this.

Regarding Indicator 2, it can be said that the building and enhancement of cooperative relationships among stakeholders have been realized at the time of the ex-post evaluation. However, this indicator was more meaningful as a preparatory step for the transition during the project implementation. Specifically, cooperative relationships were built between the MILF and ARMM sides, which had been in a confrontational relationship at the time, and between the MILF side and institutions under the jurisdiction of the

Philippine government (national research institutes and LGUs), which had been a thin relationship, through participation in this project. However, at the time of the ex-post evaluation, the situation is such that the BTA has been established mainly by individuals affiliated with the MILF, former ARMM employees have also been employed to carry out their duties, and as a regional government, they have relations with the Philippine government agencies. In this context, it can be said that they are simply working within the same or affiliated organizations. Nonetheless, it is worth noting that particularly for CCDP-A, stakeholders from that time still maintain the cooperative relationships for the continuation of components initiated by this project (for example, between the Administrative Management Services under the OCM-BARMM (AMS/OCM-BARMM) and the DAP and between the MTIT-BARMM and local industry cluster stakeholders). While this ongoing cooperation may be considered natural given the respective authorities of these institutions, it can also be said that the establishment of appropriate relationships by this project has served as a facilitating factor.

Indicator 3, which is about the implementation of projects included in the BDP (the BDP supported by this project), was also more meaningful during the time of project implementation (before the establishment of the BTA) than at the time of the ex-post evaluation. At the time of project implementation, the fact that the BTC and the BDA were able to prepare and implement regional development plans through the BDP1 (short-term plan) and the BDP2 (medium-term plan) supported by this project was significant in terms of promoting socio-economic development by MILF members. However, these BDPs have completed their roles since the establishment of the BTA and the formulation of the new BDP1 (2020-2022). Although it was confirmed that some of the projects within the BDP2 supported by this project are also included in the BDP1 formulated by the BTA, the fact that they have become part of a different plan makes it difficult to determine whether the implementation status is sufficient. Therefore, this indicator was considered partially achieved.

Table 5 Achievement of Overall Goal (CCDP-B)

Overall Goal	Indicator	Actual
Foundation for the Bangsamoro Government is built.	1. Draft related codes are formulated.	Mostly achieved (indirect contribution by this project) • Among the codes related to the BOL, particularly the six priority codes and the indigenous people's rights act, the *Bangsamoro Administrative Code*, the *Bangsamoro Civil Service Code*, and the *Bangsamoro Education Code* have been enacted as of the time of the ex-post evaluation. The *Electoral Code*, the *Bangsamoro Local Governance Code*, and the *Indigenous People's Rights Act* are expected to pass through the parliament in 2023, while the *Revenue Code* is currently being drafted. Additionally, the *Parliamentary Rules, Procedures, and Practices* (Resolution No. 6) was adopted and promulgated in May 2019. Intellectual input from this project has contributed to some of the drafting members, at least in the case of the administrative code and the parliamentary rules.
	2. Cooperation among different stakeholders is built and enhanced.	Mostly achieved • During the project implementation, the relationship between MILF stakeholders and ARMM organizations included: a) cooperation between the BDA and the DAF-ARMM in the URTP-B subproject, and b) collaboration between the BTC, the BDA, and the DPWH-ARMM in the formulation of the BDP. At the time of the ex-post evaluation, both a) and b) continue to maintain their relationships, as they are now part of or related to BTA-affiliated organizations.
	3. Development projects from the BDP2 are implemented.	Partially achieved • There are at least four development plans referred to as the BDP: the BDP1 (2015–2016) supported by this project, the BDP2 (2016–2022) supported by this project, the BDP1 (2020–2022) formulated by the BTA, and the BDP2 (2023–2028) formulated by the BTA and supported through the BTA advisor on budget and development planning. Among these, the one referred to in this indicator is the BDP2 supported by this project, while the valid development plan at the time of the ex-post evaluation is the BDP2 formulated by the BTA. • The BDP1 formulated by the BTA, which precedes the current BDP2, was developed by the Bangsamoro Planning and Development Authority (BPDA) under the OCM-BARMM in 2019 after consultations with states, the private sector, and academia. It has no direct relationship with the BDP1 and the BDP2 supported by this project. According to the BPDA, the BDPs supported by this project, particularly the BDP2, were referenced along with other existing development plans when preparing the BDP1 formulated by the BTA. It is explicitly stated in the BDP1 formulated by the BTA that efforts were made to align it with the BDPs supported by this project. • The project list for the BDP1 formulated by the BTA is an extensive paper list, and it was not possible to confirm the overall picture of how many projects proposed in the BDP supported by this project are included. However, several projects that were also listed in the BDP2 supported by this project were found to be included. Among them are projects supported by Japan, such as the Project for Improvement of Equipment for Power Distribution in Bangsamoro Area (grant aid) and the Road Network Development Project in Conflict-affected Areas in Mindanao (ODA loan). (The BDP2 formulated by the BTA was implemented after the field survey for this ex-post evaluation, so it was not included in this analysis.)

Source: Materials provided by JICA, materials provided by the BTA, interviews with former counterparts and experts

At the time of the ex-post evaluation, most of the outputs/components of this project are being continued or utilized in some form. While none of the components directly contribute to the indicators of the overall goal, they are contributing to the preparation for the establishment of the Bangsamoro Government in the sense that they form part of the measures to strengthen BTA's governance, public services delivery, community development, and economic promotion.

The table below summarizes the status of each component, and all components except for Human Resource Mapping (HRM) have been continued or utilized. In particular, agricultural extension, LGU revenue enhancement, road planning and maintenance using DRIMS/E-ARMM, known as E-BARMM at the time of the ex-post evaluation, and local industry promotion have become established as programs within the respective BTA ministries. ARMM staff training (such as 5S and other quality management) was not carried over to the BTA, but in 2022, phased implementation was initiated by the OCM-BARMM as part of their own independent initiative for constructing a BTA Quality Management System.

As factors promoting the continuation or utilization of the project's components, stakeholders appreciated the activities initiated by this project, indicating that these components aligned with their needs. Efforts were also made by those involved to ensure the continuity of administrative services. Additionally, comments from former counterparts in both the BTA and the BDA emphasized the importance of the government's (BTA's) role in taking over and sustaining (i.e., mainstreaming) the outcomes of one-off projects by donors and the BDA.

As for the challenges related to the continuation of the components, two points are raised. First, concerning the agricultural extension components, within the scope confirmed by this ex-post evaluation, the continuation of introduced technologies is largely attributed to the self-help efforts of the farmers. At the sites targeted by the URTP-B subproject, which focused on upland rice cultivation, and the Livelihood Improvement for the Transformation of Underserved Population (LIFT-UP subproject), which supported agricultural production suitable for each site, transferred technologies are being practiced. Monitoring is also being conducted by the MAFAR-BARMM. However, it was confirmed that only a limited number of the sites have received technical and agricultural input support from the ministry.[22] The ministry has agricultural support programs that target the entire BARMM area, including upland rice cultivation. However, to receive the provision of facilities and materials, certain conditions must be met, such

[22] In fact, there are interview results from the BDA indicating that in Barangay Pabrika, Marogong Municipality, Lanao del Sur Province, measures against damage from rats were carried out with the assistance of agricultural technology officers.

as the existence of a functioning agricultural organization. Comments were made suggesting that the sites targeted by this project—particularly those in the URTP-B areas under MILF control—may not yet meet these criteria. According to the ministry, there are also communities in former MILF-controlled areas that have formed cooperatives and are receiving support from the ministry.[23] This project was the first external support immediately following the CAB. At a time when public trust in the governance by the MILF was not yet fully formed, it is considered appropriate that the project focused on the dissemination of production technologies based on the results of needs assessments. However, at the time of the ex-post evaluation, it appears that the next step should be to strengthen the organizational capabilities of the farmers. The MAFAR-BARMM has established an agricultural association task force and has begun considering support for improving organizational capabilities. Meanwhile, the follow-up technical cooperation project, "Capacity Development Project for the Bangsamoro Autonomous Government" (CDPB), continues to provide support for agricultural extension in other villages in the LGUs targeted for extension activities under this project. While the focus of this project was on production technologies, CDPB has incorporated the Smallholder Horticulture Empowerment & Promotion (SHEP) approach and has begun to develop a model that also improves sales. Regarding upland rice, there were also farmers in places like Barira Municipality, one of the URTP-B sites, who reported switching to banana cultivation because the upland rice was not selling well (according to a 2022 survey by the BDA), highlighting the importance of marketability.[24]

Second, the HRM aimed to create a database of over 5,000 local professionals who could potentially become talent for the new autonomous government, including those from the private sector. The database was intended to be used for encouraging applications to the new government. The direct reason it was not utilized was that it had become outdated by the time the BTA was established just before the project's completion, as it had not been updated since its creation in the first half of the project. Additionally, interviews with multiple stakeholders revealed that some people hesitated to register in the database due to the potential perception that doing so would be a declaration of support for the MILF. There were also observations about the database's structure, which made it difficult to extract data for mass emailing. While the concept was deemed effective, there were challenges in both the political and operational aspects.

[23] In fact, a former member of the BIAF who served as a field coordinator in URTP-B was organizing an agricultural cooperative association in his hometown at the time of the ex-post evaluation.

[24] Stakeholder interviews indicated that upland rice supported by this project has lower productivity and higher transportation costs compared to paddy rice or lowland upland rice, making it less competitive in terms of price. However, some mentioned its potential for sales targeting affluent urban consumers due to its unique aroma, provided that post-harvest and distribution processes are improved.

Table 6 List of Project Components

Output	Component	Handover recipient	Continuation/utilization of the outcome/output at the time of ex-post evaluation
CCDP-B Output 1 (Governance)	a) Support for drafting the Bangsamoro Basic Law (BBL)	BAGO[25]	Continued • Currently effective as the BOL. This project has contributed indirectly in some respects.
	b) Human Resources Mapping (HRM)	BPDA	Not utilized • Created around 2015 and not updated since. It was expected to be used for encouraging applications to the new autonomous government, but by the time the BTA was established in 2019, the information had become outdated.
CCDP-B Output 2 (Strengthening Public Service Delivery and Community Development)	c) Quick Impact Project (QIP)	Target communities	Utilized • Due to the dispersed locations of the sites, it was not possible to grasp the situation at all sites. However, the BDA believes that most of the QIP facilities are being utilized (see also Box 2).
	d) Upland Rice-based Farming Technology Transfer Program for the Bangsamoro (URTP-B)	MAFAR-BARMM	Continued • According to a survey by BDA and interviews with the MAFAR-BARMM and some LGUs, many farmers continue to engage in upland rice cultivation. There are also reports of farmers switching to cash crops due to issues such as rat damage and low marketability. At the Barangay Togaig, Municipality Barira, site there were reports that the soil was not suitable for upland rice cultivation (which should have been investigated beforehand), but on the other hand, interviews in the same municipality indicated that upland rice is still being cultivated at that site. From other sites, there were mixed reports: Some said that cultivation was hindered during restrictions on movement due to COVID-19, while others mentioned that being able to cultivate upland rice during that period was helpful for food security. • According to a survey for the ex-post evaluation among farmers at some sites (see Box 3), they are using the cultivation techniques transferred through this project. While cultivating upland rice, farmers are also practicing intercropping or double cropping with corn, bananas, vegetables, etc. Upland rice is mainly for self-consumption due to its low price competitiveness, but it is considered important for family livelihoods. Challenges include poor seed germination, weather conditions, pests and diseases, and high input costs. • At another site within the same LGUs, CDPB is currently implementing subsequent initiatives.
CCDP-B Output 3 (Economic Enhancement)	e) Formulation of the Bangsamoro Development Plan (BDP)	BPDA	Partially continued • See Indicator 3 for the overall goal in Table 5.

[25] The official name is the Bangsamoro Attorney General's Office (BAGO), under the OCM-BARMM.

Output	Component	Handover recipient	Continuation/utilization of the outcome/output at the time of ex-post evaluation
CCDP-A Output 1 (Governance)	f) ARMM Government Staff Training	AMS/OCM-BARMM	Not continued but reintroduced • 5S was discontinued due to the dissolution of the ARMM government, but BTA staff who were former ARMM employees recognized its effectiveness. In 2022, as the transition of administrative services to the BTA reached a certain stage and focus could be placed on quality management, it was resumed as part of the AMS's efforts to build a quality management system. As of June 2023, with the cooperation of the DAP, its implementation is progressing in some departments of the OCM-BARMM. According to the AMS, they are considering its future implementation across all BTA agencies.
	g) Human Resources Information System (HRIS)	AMS/OCM-BARMM	Utilized as a past information source • The HRIS was taken over by the BTA and was initially used as a provisional system right after the BTA was established. • As of the time of the ex-post evaluation, a new system is being developed through the Support to Bangsamoro Transition (SUBATRA) (2020–2024) funded by the European Union (EU) and others. Until its completion, temporary personnel information management is being done using spreadsheets and other tools. The HRIS from this project is available for reference as a source of information from the time of the ARMM government for staff who have been rehired.
	h) Revenue Enhancement Assistance for ARMM LGUs (REAL)	MILG-BARMM	Continued • The MILG-BARMM is expanding the model built during this project (Information, Education, Communication (IEC), tax maps, revenue code amendments, etc.) to other LGUs under the same program name "REAL," which runs until 2028. The REAL Guidebook created by this project is also being used as a basic material after updates. Implementation has started initially in 25 municipalities where only training was conducted during this project. • The five pilot LGUs from this project are also continuing with IEC and efforts to promote tax and fee collection, resulting in increased revenue (see Box 4).

Output	Component	Handover recipient	Continuation/utilization of the outcome/output at the time of ex-post evaluation
CCDP-A Output 2 (Strengthening Public Service Delivery and Community Development)	i) Road maintenance management through the Dynamic Response Intelligent Monitoring System (DRIMS) / Expanded ARMM Roads Mapping and Management (E-ARMM)	MPW-BARMM	Continued • According to the MPW-BARMM, the construction and maintenance of national roads are to be carried out by the Philippine government (Department of Public Works and Highways) as stipulated by the BOL. Therefore, the BTA is responsible for the construction and maintenance of local roads. DRIMS is being utilized for measurements for this purpose. • E-BARMM is operated as a web-based database system and is constantly updated. The MPW-BARMM monitors the status of all projects and takes action where there is no movement. To avoid duplication with projects being implemented by other ministries (e.g., farm road construction by the MAFAR-BARMM), it requests other ministries to input their projects in the system and has established an inter-agency committee for coordination.
	j) Livelihood Improvement for the Transformation of Underserved Population (LIFT-UP)	MAFAR-BARMM	Continued • According to the MAFAR-BARMM, Livelihood Learning Sites (LLS) led by farmer leaders continue to operate at the sites targeted by this project, and 70% of the beneficiary farmers are still using the techniques they learned. However, further details are not available. In the successor project, CDPB, activities are ongoing at different sites within the same target LGUs as this project.
CCDP-A Output 3 (Economic Enhancement)	k) ARMM Regional Industry Cluster Capacity Enhancement Project / Market Driven Local Industry Promotion (AICCEP/MDLIP)	MTIT-BARMM	Continued • While the activities were not taken over by the BTA, a former counterpart from the DTI-ARMM later joined the MTIT-BARMM, reviving the program as a regular initiative called the Growth Enhancement Approach toward Regional Economic Development (GEARED). • Although there was a hiatus in activities under the BTA, industrial promotion continued at the local level in areas other than Lanao del Sur Province (see Box 5). While the successor project, CDPB, is providing some support, the former counterpart is continuing orientations and training by securing other sponsors. There was one cluster per province during the time of this project (two clusters in Maguindanao only) and the program has expanded it to two clusters per province (adding coffee in three provinces and coconut in two provinces). Mindanao State University Maguindanao Campus is also involved, providing students with practical learning opportunities.

Source: Materials provided by JICA, materials provided by the BTA, materials provided by the BDA, interviews with former counterparts and experts

Box 2 Utilization Status of Quick Impact Project (QIP) Facilities

According to surveys conducted by the BDA and others, the utilization status of some QIP facilities is as follows (as of February 2023).

- School in Barangay Kibleg Barangay, North Upi Municipality, Maguindanao Province: In good condition and has been utilized since its opening in 2015. The school administrator collaborates with LGU staff and teachers for maintenance.
- Multipurpose hall in Barangay Kabengi, Datu Saudi Ampatuan Municipality, Maguindanao Province: Used for indigenous people activities/rituals, accommodating visitors related to indigenous people activities (such as from the BARMM Ministry of Indigenous Peoples), and for barangay and sitio (community units within a barangay) meetings.
- Multipurpose hall in Barangay Sinsimen, Pigkawayan Municipality, North Cotabato Province: Used for tribal, MILF, and NGO meetings, weddings, and COVID-19 vaccinations. Used by the barangay LGU until a new office facility was established by the BTA. Some repainting and repairs are needed (the ceiling fan is broken).
- Multipurpose hall in Barangay Makadaag Talagian, Masiu Municipality, Lanao del Sur Province: Used for MILF, United Bangsamoro Justice Party (UBJP, a political party established by the MILF) activities, barangay activities, graduations, weddings, and other celebratory events. Ceiling needs repainting. There is soot on the walls and ceiling due to cooking local dishes with an oven. Also, there is low voltage (a problem throughout the province). Water facilities are broken, so water is sourced from nearby houses.
- Multipurpose hall in Barangay Kala-Kala, Buadiposo-Buntong Municipality, Lanao del Sur Province: Managed by the barangay captain and used for barangay activities, Arabic school for grades 1–3 (twice a week), community meetings, and weddings among other events.
- Multipurpose hall in Barangay Mungit-Mungit, Talipao Municipality, Sulu Province: Being utilized.

Box 3 Results of Interviews with Beneficiaries of the Upland Rice-based Farming Technology Transfer Program for the Bangsamoro (URTP-B)

In February 2023, semi-structured interviews were conducted with residents of two target communities by a team of local research assistants. The interviewees included farmers who had received training under this subproject (referred to as "participant farmers") and those who had not (referred to as "non-participant farmers"). The main results are summarized below. Buldon Municipality was the site where the project had the most widespread adoption of techniques taught during its implementation. It was heard in Buldon that the community has the capacity to produce more upland rice, and that they are only cultivating what is necessary for their own consumption due to weak price competitiveness, which is attributed to high transportation costs.

No one explicitly stated that this subproject had a direct impact on peace. However, multiple farmers mentioned that before the project, they had fears that outsiders coming into the area might take away their land. These fears dissipated after the project. All respondents expressed satisfaction with having learned new techniques through this project, which have contributed to their livelihoods. There were many requests for support in terms of agricultural machinery and drying facilities.

Site	Respondents	Status of upland rice cultivation as of February 2023 (Figures are average per respondent)
Barangay Bugansan Sur, Matanog Municipality	10 participant farmers	• All have been cultivating upland rice since before the project and continue to practice the techniques disseminated by this project. • All have shared the techniques with other farmers (an average of 11 people). • The cultivation area has remained at 0.6 ha from before the project to the present. • All have consistently cultivated once per planting season. • Harvest yield was 780 kg before the project and 888 kg in 2022.
Barangay Cabayuan,	8 participant farmers and 4	• All have been cultivating upland rice since before the project and continue to practice the techniques disseminated by this project.

Buldon Municipality	non-participant farmers	• All have shared the techniques with other farmers (an average of 4 people). • The cultivation area was 1 ha before the project, 1.2 ha immediately after the project, and 1.1 ha in 2022. • All cultivated once before the project, twice immediately after the project, and 1–2 times in 2022. • Harvest yield was 1,910 kg before the project, 5,955 kg immediately after the project, and 4,902 kg in 2022. They could cultivate and harvest more, but due to low market demand, they only produce what is needed. • Non-participants learned the techniques from the participants and are practicing them. Their cultivation area, planting frequency, and harvest yield are almost the same as those of the participant farmers.

Box 4 Status of Pilot LGUs of the Revenue Enhancement Assistance for ARMM LGUs (REAL)

During the ex-post evaluation, interviews were conducted with officials from Barira and Matanog Municipalities in Maguindanao Province to confirm the effects of this project. As another factor enhancing the project's effectiveness, both municipalities and the MILG-BARMM pointed out the cooperation of religious leaders. In Muslim communities, there is already a system of charitable giving known as Zakat, and some residents feel that paying taxes is like being charged twice. However, religious leaders have explained the difference between Zakat and taxes to the people. Both local governments have received the Seal of Good Local Governance (SGLG) from the Philippine Department of the Interior and Local Government, awarded based on revenue growth rate, for multiple years.

Comments from Barira Municipal Officials "Through the training provided by this project, we gained passion and dedication in increasing tax revenue. Many people do not come forward to pay taxes, so we are making visits for collection and awareness activities. Due to the intensified tax collection efforts in this project, newly introduced revenue items such as the business registration fee, the franchise fee, and the public facility fee have increased. Specifically, the business registration fee and the pre-existing property tax have seen an increase. As a result, our revenue, which was in deficit until 2017, has been increasing since 2018, even amid the COVID-19 pandemic."

Comments from Matanog Municipal Officials "Some activities like the one-stop shop were temporarily halted due to the COVID-19 pandemic, but there are plans to resume them in 2023. The revenue has increased by 1 million pesos (approximately 2.4 million yen) annually due to taxes including the business tax initiated by this project. These additional funds are being used for college scholarships, salaries for volunteer teachers, school repair costs, the establishment of 24-hour outpatient clinics, and others."

Box 5 Status of the ARMM Regional Industry Cluster Capacity Enhancement Project (AICCEP) / Market Driven Local Industry Promotion (MDLIP)

According to the officer in charge from the MTIT-BARMM, the status of the clusters initiated by this project at the time of the ex-post evaluation is as follows:

Product	Province	Status as of February 2023
Abaca	Lanao del Sur	An outbreak of Panama disease in 2019 resulted in some farmers losing interest and switching to banana cultivation. The MTIT-BARMM reestablished contact in 2021, provided some inputs, and resumed training.
Coffee	Sulu	The province independently established the Sulu Coffee Federation, with 10 cooperatives participating. Results are already evident, as they ranked 5th in the Philippine Coffee Expo held in Davao in 2022. Sulu competes on quality due to high transportation costs.
Rubber	Basilan	The Governor is proactive, and the industry was already established and growing even without support from the MTIT-BARMM.

Coconut, Palm oil	Maguindanao	Selling de-husked nuts directly, and the cooperatives have purchased 22 turner trucks. Supported by the Philippine Coconut Authority and has received a budget of 10.9 million pesos from the Philippine government's Coconut Farmers and Industry Development Plan (CFIDP). An information caravan based on the same plan was implemented in February 2023.
Seaweed	Tawi-Tawi	Received loans from partner companies, leading to increased buying and selling and price competition within the province. As a result, many homes have become concrete, and motorcycles are more commonly seen. The MTIT-BARMM also provided concrete-made drying facilities.

Image 3 Office of a pilot municipality for revenue enhancement (REAL subproject). Signboard encouraging tax payment (provided by this project) and commemorative plaques from the Philippine government (on the wall) (Matanog Municipality) (source: Photographed by the local research assistant)

Image 4 Dynamic Response Intelligent Monitoring System (DRIMS) provided under the road maintenance component. Used by the MPW-BARMM for measuring road roughness. The condition is good, and it is easy to transport. (source: Photographed by the ex-post evaluator)

As described above, the Project has mostly achieved its overall goal. It also aligns with JICA's perspectives of project evaluation in conflict-affected countries and regions.

JICA's Perspectives of Project Evaluation in Conflict-Affected Countries and Regions
(8) Achievement of Overall Goal

- ***Consideration of Changes in Overall Goal Targets and Alternative Indicators***

  No issues. There are no observed indicators for which data was either difficult to obtain or underwent changes, specifically in a conflict-affected country or region.

  After the completion of this project, the planned establishment date for the new Bangsamoro Government was postponed from 2022 to 2025. The overall goal is defined as preparing for the new autonomous government, and the establishment of it is not a necessary condition. Therefore, it can be said that the postponement has no impact on the achievement of the overall goal. Although the ambiguity in setting the overall goal could not be eliminated (as described in "2.3 Constraints During the Evaluation Study"), it was judged to be an unavoidable response given the fluid situation.

3.2.2.2 Other Positive and Negative Impacts

1) Impacts on the Environment

As the project was judged to have minimal undesirable effects on the environment, it was classified as Category C based on the *JICA Guidelines for Environmental and Social Considerations* (April 2010).

No negative impacts on the natural environment have been reported from the commencement of the project to the time of the ex-post evaluation.

2) Resettlement and Land Acquisition

In this project, small-scale land acquisition occurred for the construction of QIP facilities. Detailed information could not be obtained, but according to the records at the time and the person in charge at the JICA Philippines Office at that time, the BDA handled the matter in accordance with Philippine domestic laws, and it was generally completed without any issues. No resettlement has occurred.

3) Gender Equality, Marginalized People

As mentioned in "3.1.1 Relevance," consideration was given to fairness and inclusivity throughout the project. Activities targeting people who had not previously received services, such as in QIP and LIFT-UP subprojects, were also included. Points raised in interviews with former counterparts included the following. First, many women participated in various training of this project. At the time of the ex-post evaluation, former trainees are still engaged in related activities in departments like the MPW-BARMM, the MTIT-BARMM, the MinDA, and LGUs. Second, in the local industry promotion component, many women in the processing sector received training in both the coffee and seaweed clusters. In the coffee cluster, women play a role in quality improvement through the selection of raw beans. Additionally, the promotion of the seaweed cluster has provided more women with employment opportunities. Third, members of the Bangsamoro Islamic Women Auxiliary Brigade (BIWAB) also participated in the farmer training of the URTP-B subproject.

4) Social Systems and Norms, Human Well-being and Human Rights

The establishment of the CAB and the BOL has advanced peace and development in Mindanao, and this project has positively impacted the transition process by strengthening the capabilities of organizations and individuals involved, in terms of governance and socio-economic development. For example, the contributions of the project that were repeatedly highlighted in interviews with former counterparts include

the improvement of governance capabilities among MILF stakeholders, building trust in the MILF among the people through QIP, and contributing to the livelihoods of former combatant farmers through the URTP-B subproject. Additionally, according to the MILG-BARMM and LGUs, the creation of tax maps in the revenue enhancement (REAL) subproject has clarified land ownership and boundaries, reducing land disputes, which have been a major cause of deteriorating security in the region.

5) Unintended Positive/Negative Impacts

As a positive impact of JICA's support in Mindanao, the framework of assistance organized in this project—governance, public services delivery and community development, and economic enhancement—has been adopted as the three pillars of JICA's subsequent peacebuilding support in Mindanao. This project served as a precursor to support for the BTA, enhancing capabilities across a wide range of fields and gaining the trust of the BTA. In subsequent JICA support, particularly in the direct successor project known as CDPB, the outputs and outcomes of this project are being utilized. For other projects as well, trust and basic collaborative practices gained through this project are considered to be valuable.

Impacts on economic development and poverty reduction in the BARMM area have been confirmed in the target areas of the subprojects, including increased agricultural production, higher tax revenue for LGUs, and promotion of local industries. According to the *Philippine Development Plan* (2023–2028), the overall GDP growth rate (YoY) for the BARMM area rose from 0.3% in 2016 to the second highest in the country at 7.5% in 2021, and the poverty rate decreased from 61.8% in 2018 to 37.2% in 2021. While the impact of this project on these figures cannot be quantified due to its indirect support through subprojects or training at specific sites, it is believed that the outcomes of this project are contributing to such improvements in socio-economic conditions. At the same time, it is noted that the poverty rate in remote islands like Sulu and Tawi-Tawi has increased since 2018, and the results of the expanded support led by the BTA are awaited. According to the JICA Philippines Office, it is challenging to enhance the project's effectiveness in remote areas due to safety constraints that limit the locations where Japanese experts can directly visit.

JICA's Perspectives of Project Evaluation in Conflict-Affected Countries and Regions
(9) Other Positive and Negative Impacts

- ***Impact on Instability Factors, Consideration and Assurance of Fairness for Marginalized People***

  Addressed. Consideration for gender, marginalized people, social systems and norms, human well-being, and human rights contributes to mitigating instability factors and promoting stability factors (also mentioned under Relevance).

  An impact on reducing instability factors, not explicitly stated at the time of the ex-ante evaluation, is the reduction in land disputes, often a trigger for deteriorating security, due to the clarification of land ownership rights through the REAL subproject.

- ***Contribution to Peacebuilding***

  Contributions were made. QIP fostered people's expectations for peace and built trust toward the MILF. While no direct references to peace were obtained in other components, efforts by the BTA to gain people's trust were observed through individual administrative services, community development, and economic promotion activities.

This project has mostly achieved the project purpose of accelerating the transition process to the Bangsamoro Government under CCDP-B and of promoting the ARMM institutional reform process under CCDP-A on the whole, while some components of the project contributed in an indirect or limited manner. Then, the project has mostly achieved the CCDP-B overall goal, as the preparations for the transition to the Bangsamoro Government have been confirmed. While CCDP-A did not have a set overall goal, the continuation/utilization of the project's outputs is contributing to the transition preparations. It also aligns with JICA's perspectives of project evaluation in conflict-affected countries and regions. Therefore, the effectiveness and impacts of the project are high.

3.3 Efficiency (Rating: ③)

3.3.1 Inputs

Table 7 Inputs

Inputs	Plan	Actual
(1) Experts[(a)]	3 Long-Term (Chief Advisor, Project Coordinator) 10 Short-Term (Human Resources, Local Industry, Road, Water Supply, Development Planning, Sectoral Planning)	8 Long-Term (Chief Advisor, Project Coordinator, Human Resources Development / Project Coordinator, Governance / Project Coordinator, Public Service & Community Development, Economic Promotion & Peacebuilding) 7 Short-Term (Human Resources Mapping (HRM), Institutional and Organizational Assessment, Bangsamoro Development Plan, Facility Design (QIP), Human Resources Information System (HRIS), Road Inventory, Local Industry) Japanese consultants through Consulting Services Contracts[(b)] (Development Planning, Local Industry Promotion)
(2) Trainees received	In-Country Training (Training for Administrative Personnel, etc.) Third-Country Training (Aceh, Indonesia, etc.) Training in Japan (Training for drafting the BBL, etc.)	70 Trainees for Training in Japan 14 Trainees for Third-Country Training (Aceh, Indonesia) 15,750 Trainees in In-Country Training (Training for Administrative Personnel, etc.)

Inputs	Plan	Actual
(3) Equipment	Provision of equipment, etc., if deemed necessary for the efficient implementation of the project and technical transfer	(Computers, conference systems, cameras, software, DRIMS, IEC materials, furniture, etc., were procured using the Overseas Activity Cost.)
(4) Overseas Activity Cost	Project office operating expenses[(c)]	Local consultant fees, subproject expenses, in-country travel expenses, project management costs (including the activity expenses of the project coordinator in the BTC's Socio Economic Office, security measures, and the project office)
Japanese Side Total Project Cost	782 million yen	1,607 million yen
Philippine Side Total Project Cost	Not available	Not available

Source: Ex-ante Evaluation Report, Materials provided by JICA
Note: a) The planned number of experts is not listed in the ex-ante evaluation report, so the number and fields described in the implementation plan for the first year are described. b) Number is unknown. c) Since it is not listed in the ex-ante evaluation report, the contents of the implementation plan for the first year are described.

3.3.1.1 Elements of Inputs

The type, amount, and timing of inputs are linked to the implementation of activities and the production of outputs. Notable points are as follows.

- On the Philippine side, key personnel and high-potential young talents from both the MILF and the ARMM were assigned as counterparts, contributing to capacity-building before the launch of the BTA.
- On the Japanese side, personnel with experience in the Mindanao peace process and in supporting conflict-affected countries and regions were deployed, enabling a response tailored to the situation.
- The placement of Coordinators from the BIAF, the military arm of the MILF, for the activities at the MILF camp made it possible to safely carry out the activities.
- Filipino staff at the JICA Cotabato Project Office (employed as Field Coordinators under local consultant services) coordinated between the Japanese experts, Cotabato-based staff, and the counterparts. They also ensured the continuity of activities during the evacuation periods of Japanese experts.
- By designating the BTC as the counterpart organization for CCDP-B, it became possible to support individuals from the MILF, which is not a government agency. However, due to a shortage of personnel to carry out the project's activities, the project covered the salaries and operational expenses of four Project Coordinators from the BTC's Socio Economic Office, contributing to the outputs of CCDP-B.

3.3.1.2 Project Cost

The actual project cost was 1,607 million yen, which exceeded the planned 782 million yen due to the addition of components accompanying the extension of the project period.[26]

3.3.1.3 Project Period

The initial project period was planned for 36 months from July 2013 to June 2016. However, due to an extension, it was changed to 72 months from July 2013 to July 2019. The actual project period was the same as that of this revised plan (within the plan). The project period was extended, as it became evident that the enactment of the BBL would not be feasible under the Aquino administration, given the changes in security and political conditions since early 2015. In October 2015, it was agreed to extend the project period by three years to July 2019 after consultations with the BTC and the ARMM government. As noted in "3.1.1.3 Appropriateness of the Project Plan and Approach," the deterioration in security and political conditions can be considered an external factor, and appropriate agreement and procedures for plan changes were made. Therefore, it is appropriate to evaluate the efficiency based on a comparison of the revised plan and actual performance. Additionally, the activities initially planned were completed within the original timeframe.

Therefore, the efficiency of the project is high. The project also aligns with JICA's perspectives of project evaluation in conflict-affected countries and regions.

[26] The sub-rating for project cost (project period) is determined on a four-tier scale: "[4] Within the plan (100% or less)," "[3] Slightly exceeded the plan (over 100% but less than 125%)," "[2] Exceeded the plan (over 125% but less than 150%)," and "[1] Significantly exceeded the plan (over 150%)." When there is an increase or decrease in the output, the evaluation is adjusted by comparing the degree of increase or decrease in the output with that of the project cost (period), assuming that the change is linked to the project purpose or overall goal. For this project, as already mentioned, the content of the additional components is highly aligned with the project purpose and overall goal, so such an adjustment was attempted. Since we could not obtain the total and breakdown of the planned and actual inputs during implementation, we examined whether the increase in the total project cost was proportional to the increase in the number of components. The number of components increased from the initial 7 to 11 (see Table 2). Therefore, the average cost per component is approximately 112 million yen for the plan (782 million yen ÷ 7) and approximately 146 million yen for the actual (1,607 million yen ÷ 11), resulting in an actual/plan ratio of 130%, falling into category [2]. Even if the costs for each component were not uniform, it is reasonable to judge it as category [2] for the following reasons. First, if we assume that the increase in project cost was almost entirely used for the initial seven components, a simple comparison between the planned 782 million yen and the actual 1,607 million yen would result in an actual/plan ratio of 205%, and the judgment should remain at category [1]. However, such an assumption is considered to be an underestimate since, at the point when the project cost was increased, the initial components had made significant progress, and five of them were almost complete. On the other hand, if we assume that the increased project cost was almost entirely used for the additional components, there is a possibility that it could be evaluated as category [3] or [4]; however, making such an assumption without data is considered to be an overestimate.

JICA's Perspectives of Project Evaluation in Conflict-Affected Countries and Regions
(10) Efficiency

- ***Output and Input***

  It is appropriate to conduct performance verification considering the characteristics of conflict-affected areas. Although there were delays and extensions, as well as an increase in scope (components), due to changes in the situation and deteriorating security, appropriate plan modifications were made. The additional scope (components) was to contribute to peacebuilding.

- ***Comparison of Cost and Period Before and After the Project***

  It is appropriate to make comparisons considering the characteristics of conflict-affected areas. Since the validity of the plan changes is acknowledged, the comparison of planned and actual project period was made using the revised plan. Specifically, the Mamasapano incident, which was the direct cause of the major plan changes, appears to correspond to "major external factors such as large-scale civil wars or disturbances that occurred during the implementation of the project," and "cases where events anticipated in the PNA had an impact so significant that it was unforeseeable," as specified in this *Guidelines*. Therefore, the extended period of three years was subtracted from the project duration for comparison with the actual performance.

3.4 Sustainability (Rating: ③)

This section defines the effect of this project that should be sustained as "the outputs in governance, public services delivery and community development, and economic enhancement by the transitional autonomous government (the BTA), which should continue at least until the planned establishment of the new autonomous government in 2025, thereby contributing to a smooth transition to the new government," and examines whether the various conditions for sustaining this effect have been established.

3.4.1 Policy and System

In the *Philippine Development Plan* (2023–2028), the national development plan at the time of the ex-post evaluation, one of the strategic objectives in the field of peace and security is to ensure the full transition to the Bangsamoro Government (the new autonomous government). The plan outlines support for institution building, personnel development, and economic management. The transition process is proceeding based on the BOL, which is listed as an indicator of the overall goal of this project, and BOL-related codes are also being enacted in sequence.

The *Bangsamoro Development Plan 1* (2020–2022) (the BDP1 formulated by the BTA), the development plan for the BARMM area, aims to uplift the lives of the Bangsamoro and establish the foundation of self-governance through moral governance. It outlines measures for governance, peace, security, public order, human rights, and economic development. The subsequent BDP2 (2023–2028) has also been initiated. These plans were formulated in coherence with the BDP that this project supported before the establishment of the BTA, and they align with the project's outcomes related to governance and socio-economic development. They are also consistent with the development plan for Mindanao. The MinDA of the Philippine government is coordinating between the regional

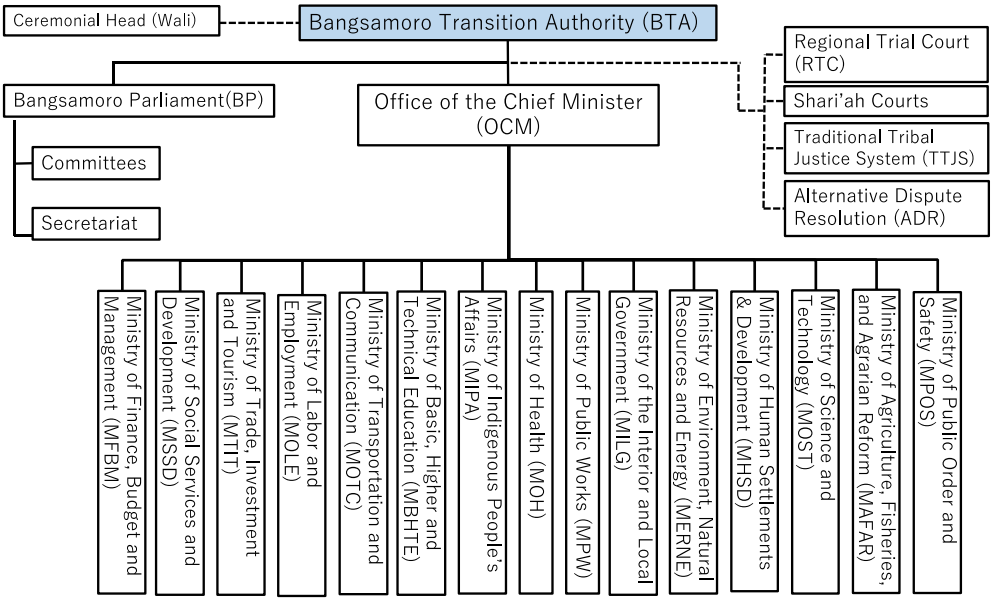
development plans of Mindanao's six regions, including the BDP formulated by the BTA. Additionally, it is in the process of formulating the *Mindanao Peace and Development Agenda* (2023–2028). This agenda is designed to harmonize with the *Philippine Development Plan* and contribute to national development goals.

At the time of the ex-post evaluation, the Philippine government pointed out that JICA's support, including the successor project of this project, is not positioned within the framework of the Philippine government's Mindanao peace process. While the direction of the support aligns with the aforementioned development plans, it appears that JICA's engagement with the Philippine government (through the Office of the Presidential Adviser on Peace, Reconciliation, and Unity, or OPAPRU) has not been sufficient, and this has not been fully recognized by the Philippine government. Since the outputs of this project have already been handed over to the Philippine side, this does not affect the sustainability of this project; it is, however, noted as a point for consideration.

In this way, the policies and systems necessary to sustain the project effects is secured.

3.4.2 Institutional/Organizational Aspect

Many of the outputs of this project were transferred to the BTA following its establishment. The organizational structure of the BTA has been established as shown in the diagram below. As of September 2020, the total number of staff, including both permanent and temporary employees, was 35,555. Of these, the number of rehired former ARMM employees (excluding approximately 23,000 in the education, health, and social welfare sectors who were not subject to separation) was 2,237, achieving about 58% of the target of 3,998 (data provided by the BTA; data for 2021 and beyond is still being compiled). The hiring of former ARMM employees who have left their positions has been delayed due to travel restrictions associated with the spread of COVID-19, as explained. The BTA continues to rehire according to its *Human Resource Development Plan*, and the fulfillment rate at the time of the ex-post evaluation was around 70% in the OCM-BARMM, for which data was available.



Source: Material provided by JICA

Figure 2 Organization Chart of the BTA

The status of each organization related to the continuation/utilization of individual components of this project is summarized in the table below. Activities of this project that have been turned over to the BTA are institutionalized/mainstreamed in each ministry/department (budget and permanent staff are allocated as regular government tasks or programs). As of the time of the ex-post evaluation, for all these turned-over activities, the original counterparts remain in the organization and are taking the initiative. Therefore, there is no certain outlook for the continuation of activities in the case of future personnel changes. However, new permanent staff who had no prior connection to this project have also been placed, and the original counterparts are in managerial positions and are guiding and nurturing the staff.[27] Although there are remaining challenges, such as a shortage of staff for the follow-up and expansion of the agricultural extension components and the local industry promotion component, improvements are being made, such as the completion of the appointment of agricultural extension officers to LGUs in May 2023.

For the pilot LGUs involved in the revenue enhancement (REAL) subproject, at least in the two municipalities where interviews were conducted, the same structure as during the

[27] Several counterparts from the MILF side, including former members of the BTC and the BDA, have been appointed to cabinet-level and parliamentary positions in the BTA (BARMM government). These include the Interim Chief Minister, Deputy Speaker of the Bangsamoro Parliament, Attorney General, Minister of Agriculture, Fisheries, and Agrarian Reforms, Minister of Basic, Higher and Technical Education, Minister of the Interior and Local Government, Minister of Trade, Investment, and Tourism, and the Director General of the Bangsamoro Planning and Development Authority. In addition, key counterparts from the ARMM government continue to serve in roles such as directors and division chiefs. Furthermore, many of their key staff members are former counterparts or training participants. These personnel are carrying forward the knowledge and experience gained from this project.

implementation of this project is in place, and Information, Education, and Communication (IEC) activities introduced by this project are being carried out. The overall picture of the operation and maintenance system for QIP handed over to residents' committees (organized through this project) in the respective communities is unclear. However, individual cases have been reported where these committees (with designated managers), an LGU head (who also serves as the commander of the BIAF), and village chiefs (barangay captains) are taking on management responsibilities.

In this way, while there are some concerns, the organizational structures and systems necessary for sustaining the project effects are largely in place.

Table 8 List of Project Components

Organization	Component	Organizational, Technical, and Financial Aspects for the Continuation/Utilization
BPDA	b) Human Resources Mapping (HRM) e) Formulation of the Bangsamoro Development Plan (BDP)	Overall: No particular issues.
AMS/OCM-BARMM	f) ARMM Government Staff Training g) Human Resources Information System (HRIS)	Organizational Aspect: No particular issues. Technical Aspect: No particular issues. Training new staff remains a challenge, but donor support is being received (from JICA's CDPB, SUBATRA by the EU and others, among others). For the re-introduction of the quality management system, including 5S, cooperation from the DAP is being obtained. Financial Aspect: Donor support is available. Budgetary measures from the government are in place for the quality management system, but they are insufficient to cover all BTA organizations.
MAFAR-BARMM	d) Upland Rice-based Farming Technology Transfer Program for the Bangsamoro (URTP-B) j) Livelihood Improvement for the Transformation of Underserved Population (LIFT-UP)	Organizational Aspect: As of May 31, 2023, the appointment of agriculture and fisheries extension officers (one MAFAR Agriculture Officer, two Agriculturalists (technicians), two Fisheries Technicians, and one Land Reform Officer, totaling six officers to each municipality) to all LGUs has been completed, which could potentially invigorate future activities. There is a MAFAR rice cultivation support program that has taken over the support from this project and CDPB (providing seeds, agricultural tools, and facilities). However, to receive this support, certain conditions such as the existence of a properly managed cooperative must be met. If there is a cooperative in the village, there are options to support its operation. Technical Aspect: No particular issues. Financial Aspect: Support from CDPB was received until 2023. The budget for the MAFAR rice cultivation support program from 2024 onwards has already been secured in the *Bangsamoro Investment Development Plan*.
MILG-BARMM	h) Revenue Enhancement Assistance for ARMM LGUs (REAL)	Overall: No particular issues. Permanent staff and budget have been allocated under REAL, the MILG's program.

Organization	Component	Organizational, Technical, and Financial Aspects for the Continuation/Utilization
MPW-BARMM	i) Road maintenance management through the Dynamic Response Intelligent Monitoring System (DRIMS) / Expanded ARMM Roads Mapping and Management (E-ARMM)	Organizational Aspect and Budget: No particular issues. The operation of DRIMS and E-BARMM has become a regular activity of the province, with permanent staff and a budget allocated to each team. Technical Aspect: No particular issues. The engineers responsible for the operation and maintenance of DRIMS/E-BARMM possess the necessary skills and have also received training through this project.
MTIT-BARMM	k) ARMM Regional Industry Cluster Capacity Enhancement Project / Market Driven Local Industry Promotion (AICCEP/MDLIP)	Organizational Aspect: The MTIT's program known as GEARED, which took over from AICCEP/MDLIP, has allocated a dedicated team of permanent staff and a budget, led by the former counterpart team leader. The team leader is extremely busy, as there are few staff members with experience. Technical Aspect: Many members of the GEARED team are young staff newly hired by the BTA and do not yet have enough experience to act as local industry promoters on the ground. The team leader (former counterpart) is providing guidance. Financial Aspect: In addition to the MTIT budget, external funding has also been secured through networking with other partners, both domestic and international.
BDA	–	Overall: Although not incorporated into the BTA and remaining as an NGO, the BDA is led by the former counterpart. Leveraging the NGO's characteristic of higher agility compared to the government, it is executing development projects in close collaboration with the BTA.
LGUs	h) Revenue Enhancement Assistance for ARMM LGUs (REAL)	Organizational Aspect: No particular issues. Although all the mayors of LGUs that received training under the REAL subproject have been replaced, the current mayors are all either the spouses or children of the former mayors, ensuring political continuity. At the operational level, staff who participated in this project continue to be assigned. Technical and Financial Aspects: No particular issues.
Target communities	c) Quick Impact Project (QIP)	Overall: The full picture is unclear. Cases have been reported where community resident committees, an LGU head (who also serves as commanders of the BIAF), and village chiefs (barangay captains) are taking on management responsibilities.

Source: Materials provided by JICA, materials provided by the BTA, interviews with former counterparts and experts

3.4.3 Technical Aspect

While numerous donor-supported initiatives, including the successor project, CDPB, are being implemented to enhance the capabilities of BTA staff, it is difficult to determine whether sufficient technical support is being provided to ensure the continuation of this project's activities. This is due to the high number of young staff and the likelihood of staff turnover due to political factors. However, some former counterparts are utilizing the skills and knowledge acquired through this project in various organizations within the BARMM area. They are also imparting these skills and knowledge to their subordinates (see also Table 8). Therefore, it is unlikely that the continuation or utilization of this project's components will be immediately compromised due to a lack of technical expertise.

In this way, while there are some concerns, the technical expertise necessary for the sustainability of the project effects is generally secured.

3.4.4 Financial Aspect

The majority of the BTA's budget comes from the Philippine government budget and is allocated annually as the Block Grant, based on the provisions of the BOL. In addition to this, the central government also allocates the Special Development Fund (SDF), which is allocated for 10 years from the approval of the BOL for the reconstruction, rehabilitation, and development of communities affected by conflict. As for local revenue sources within the BARMM area, there are shares from national taxes/fees/charges collected within the BARMM area and local tax revenues. The recent budget is as shown in the table below; although there are variations in the annual amounts and breakdowns, the total amount is on an increasing trend.

Table 9 BTA Budget

Unit: Million pesos

	FY2021	FY2022	FY2023
Revenue	75,629	79,862	85,359
of which: Block Grant	71,670	66,964	64,756
BTA share from national taxes/fees/charges	3,614	2,788	4,595
Local tax revenues	345	377	567
Special Development Fund (SDF)	0	500	500
Carry-over, etc.	0	9,233	14,941
Expenditure	NA	67,020	68,082
of which: OCM-BARMM	NA	8,082	5,984
MTIT-BARMM	NA	364	470
MPW-BARMM	NA	16,379	16,480
MILG-BARMM	NA	1,274	1,269
MAFAR-BARMM	NA	1,505	1,495

Source: Materials provided by the BTA

The sustainability of the effect of this project requires budget allocation from the BTA in several areas: the MTIT-BARMM's GEARED program to promote local industry; the operation and maintenance of the MPW-BARMM's Road Surface Monitoring / Road Management System (DRIMS/E-BARMM); the MILG-BARMM's REAL program to enhance revenues; the MAFAR-BARMM's agricultural extension services; and the AMS/OCM-BARMM's quality management system training. It was reported that all these areas are managing within the scope of the budget they receive. Donor support is also available. However, concerning agricultural extension, although the budget for providing seeds and agricultural machinery to farmers has been allocated, the project sites, as far as information could be gathered, do not meet the criteria for receiving such support (such as the existence of a cooperative). Therefore, the farmers have been sustaining the transferred technologies through their own efforts. It is unclear whether the funds needed for the repair costs of the QIP facilities can be raised at the community level (see also Table 8).

In this way, while there are some concerns, the financial resources needed for the sustainability of the project effects is generally secured.

3.4.5 Environmental and Social Aspect

While no sustainability risks from environmental or social aspects are recognized in the continuation of the activities introduced by this project, it is believed that among the infrastructure projects transferred from the BDP supported by this project to the BDP formulated by the BTA, there are those that have environmental impacts or involve land acquisition. In both the BDP supported by this project and the BDP formulated by the BTA, environmental and social considerations were among the basic strategies for Bangsamoro development. Therefore, appropriate considerations are expected to be included, although the actual performance is unknown.

3.4.6 Preventative Measures to Risks

After the completion of this project, events such as the postponement of the establishment of the new autonomous government and the emergence of the Marcos administration have occurred, causing the transition process to lag behind the expectations at the time of project completion. While risks of deteriorating security and setbacks in the peace/transition process continue to exist, responses are being carried out in accordance with the framework of the BOL by both the MILF and the Philippine government. Based on interviews with multiple stakeholders, news articles, and information from the Ministry of Foreign Affairs of Japan, the situation at the time of the ex-post evaluation is as follows.

- While the frequency of terrorist acts by Islamic extremist groups has been decreasing due to the Philippine government's counter-insurgency operations and the weakening of the Islamic State (IS), sporadic small-scale guerrilla activities and kidnappings continue to occur. Multiple assassinations and bombings took place around the time of the general elections in May 2022.
- Overall, the peace process between the Philippine government and the MILF is progressing, and disarmament efforts within the MILF are underway. However, the situation remains volatile, with a high likelihood that political and clan-based conflicts could escalate into armed confrontations.
- In November 2022, a clash occurred between the MILF and the national army in Basilan Province. According to reports, the conflict was triggered when MILF members harbored a group engaged in illegal activities such as the manufacturing of improvised explosive devices (IEDs) in a village where the national army was conducting counter-insurgency operations. To prevent a setback in the peace process, both the MILF and the OPAPRU took corrective measures such as by immediately

dispatching the Coordinating Committee on the Cessation of Hostilities (CCCH) and the Ad Hoc Joint Action Group (AHJAG), their peace negotiation mechanisms, to the area.

- It is analyzed that small-scale Islamic extremist groups are engaging in activities like extortion, kidnapping, and robbery, or being hired for clan conflicts, not necessarily due to ideological reasons but often due to poverty.

In this way, while there are risks to the sustainability of this project, ongoing measures are being taken, and it is believed that these risks will not immediately impact the sustainability.

3.4.7 Status of Operation and Maintenance

Regarding the operation and maintenance status of the QIP facilities, during the monitoring survey conducted from March to May 2019, it was found that the 20 facilities constructed are generally in good condition and are being utilized effectively. As of the time of the ex-post evaluation, the condition of the facilities is generally good based on the available information, although there have been reports indicating the need for repairs at some facilities (see Box 2). While the issues do not seem to render the facilities unusable, the status and outlook for repairs are unclear.

The major equipment provided through this project and subsequently handed over to the BTA is being utilized effectively and is in good condition. To cite an example from the MPW-BARMM, the E-BARMM system provided to the ministry is being updated and utilized. Besides, during the surveys conducted as of the time of the ex-post evaluation, the GPS receivers are mainly being used for demonstration purposes because the consultants hired for the surveys bring and use more up-to-date equipment.

Thus, the status of operation and maintenance is generally good, although there are some challenges.

JICA's Perspectives of Project Evaluation in Conflict-Affected Countries and Regions
(11) Sustainability

- ***Sustainability of the Project Effects (Policy/System, Institutional/Organizational, Technical, and Financial Aspects)***

  No special notes in the context of conflict-affected areas.

- ***Response to Risks and Handling of External Factors***

  Addressed. The transition process is experiencing ongoing delays compared to what was initially expected at the completion of this project. However, there has been no significant setback, and progress is being made within the framework of the BOL.

  Small-scale bombings, threats, and kidnappings, as well as armed conflicts between the national military and MILF, are occurring intermittently. These pose risks to the regression of the peace process, but efforts by both the Philippine government and the MILF are ongoing.

Slight issues have been observed in the institutional/organizational, technical, financial, environmental, and social aspects including preventative measures to risks; 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

In this project, known as CCDP, two plans were implemented with the aim of transitioning to the Bangsamoro Government set to be established in Mindanao. The first is CCDP-B, implemented by the BTC, and the second is CCDP-A, implemented by the then-existing ARMM government. Each plan aimed at foundational construction of governance, enhancement of administrative service provision and community development, and promotion of economic growth. Specifically, CCDP-B aimed to accelerate the transition process to the Bangsamoro Government, and CCDP-A aimed to promote the institutional reform process of the ARMM.

The project plan is relevant and coherent, aligning well with the development policies and needs of the Philippines and the target regions, as well as with Japan's aid policy. It also has synergy and mutual linkage with other projects. As a result of the project implementation, the objectives of both CCDP-B and CCDP-A were mostly achieved. Many of the various activities introduced in the project continue even at the time of the ex-post evaluation, contributing to the preparations for the transition to the Bangsamoro Government, indicating high effectiveness and impacts. Regarding efficiency, although the project cost exceeded the plan due to additional components, the project period remained within the plan revised after extension due to stagnation in the peace process and delays in the transition process. Thus, it is rated as high. Sustainability is high, although there are minor issues in personnel placement and technical acquisition by staff other than the counterpart personnel of this project. The establishment of the Bangsamoro Government has been postponed from what was assumed during the project implementation. There are risks in the peace and transition processes, but as of the time of the ex-post evaluation, both the transitional autonomous government and the Philippine government continue to address these issues.

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

4.2 Recommendations

4.2.1 Recommendations to the Implementing Agency

1) It is recommended that the BTA continue to strive for political and socio-economic stability within the region, while also focusing on the placement and skill enhancement of its staff.

2) It is recommended that the MILG-BARMM execute its revenue enhancement (REAL) program, the MTIT-BARMM carry out its local industry promotion (GEARED) program, the MPW-BARMM proceed with road planning and maintenance management using the Road Surface Monitoring / Road Management System (DRIMS/E-BARMM), and the MAFAR-BARMM continue to support agricultural extension, including at URTP-B and LIFT-UP subproject sites, according to their respective plans (these are the activities initiated by this project and continued and developed by each agency). During this, it is recommended to share knowledge and skills within the organization so that not only the original counterparts from this project but also newly added staff can acquire knowledge and experience. This will ensure that activities continue as organizational practices even when there are future staff changes.

3) It is recommended that the MAFAR-BARMM ensure that outreach to the URTP-B and LIFT-UP sites is included in the activities of the agricultural extension officers who have been placed in the LGUs. Given that many of these sites have not yet initiated cooperative activities and do not meet the conditions for receiving support such as seeds, agricultural machinery, and post-harvest facilities from the ministry, it is also recommended to consider capacity building, including organizational support. Moreover, given the current practice at URTP-B sites of intercropping upland rice (mainly for self-consumption due to its low price competitiveness) with corn, coconuts, and fruit trees (for cash crops), more comprehensive livelihood support for mountainous areas would be appropriate. As the introduction of market-oriented agricultural promotion (SHEP) is planned in the successor project, CDPB, it is recommended that its outcomes also be utilized for follow-up support at the sites of this project.

4.2.2 Recommendations to JICA

1) The 5S training was disseminated to all ARMM organizations through this project's CCDP-A. Although it was not continued due to the abolition of the same autonomous government, it has recently been resumed in some offices by the AMS/OCM-BARMM as part of BTA's independent initiatives. During the ex-post evaluation, many voices in other BTA ministries also highly valued the 5S training. However, according to the AMS, it would be difficult to roll it out to all government agencies on their own. It is recommended that JICA's sectoral department, the Philippines Office, and CDPB consider the possibility of supporting this within the current framework of CDPB.

2) It is recommended that the JICA Philippines Office intensify information sharing and consultations with the OPAPRU. This will help ensure that JICA's support is appropriately positioned within the framework of the Philippine government's peace process and peacebuilding efforts. It will also help make the impact of this project visible within the current framework from the perspective of the Philippine government.

3) It is recommended that the JICA Philippines Office actively promote networking among JDS alumni and other former training participants who are actively involved in the BTA and related agencies. This is in line with the office's current considerations for networking. The aim is to effectively utilize the developed human resources and thereby amplify the synergistic effects with JICA projects. Additionally, while the office individually tracks the performance of former training participants, there is no systematic database. Conducting follow-up surveys on these individuals could potentially confirm further synergistic effects.

4) As of the time of the ex-post evaluation, many infrastructure projects are being implemented or planned in the BARMM area in accordance with the BDP formulated by the BTA. Some of these projects were proposed in the BDP supported by this project. JICA is already supporting some of these projects, and support for new projects is anticipated to continue. In this context, it is recommended that special attention be paid to the selection of project sites and land acquisition issues to ensure that JICA's involvement does not create new instability factors such as divisions among diverse groups and land disputes. Additionally, to ensure the effective realization of support, it is recommended to expand, as much as possible while ensuring safety, the areas that Japanese experts can visit.

4.3 Lessons Learned

(1) Social preparation for building trust in conflict-affected areas

A recurring point emphasized by stakeholders as a factor that facilitated the achievement of community-focused components was the meticulous social preparation carried out by this project. This included needs assessments, awareness-raising, and community organization. By thoroughly conducting social preparation for building trust in conflict-affected areas—such as detailed needs assessments accompanied by trusted local figures and JICA personnel—the project was able to implement activities in a manner suited to the needs and circumstances of the residents. This not only enhanced the trust of the community but also mitigated potential instability factors. Furthermore, it ensured the relevance of subsequent local institutional follow-up, contributing to the sustainability of the project's effects.

(2) Utilizing local resources for uninterrupted support

In this project, there were many sites where JICA staff and Japanese experts could not visit due to safety management reasons. However, the project continued its activities by utilizing service providers and local consultants in the Philippines. Even in areas where Japanese personnel could visit, they were forced to evacuate due to the martial law imposed across the island following the Marawi occupation crisis in 2017. During the evacuation period, the field coordinator of the JICA Cotabato Project Office continued the activities while frequently communicating with Japanese experts remotely. In this way, by utilizing local resources, activities could be carried out without interruption in areas where Japanese personnel could not enter or during periods when they had to evacuate. (However, as noted in "4.2.2 Recommendations to JICA," it is believed that the effectiveness of the support would be higher if Japanese personnel could visit the local areas.)

(3) Comprehensive analysis of external factors in project evaluation in conflict-affected countries and regions

In this project, the assumption "the peace process does not stagnate" was set during project planning as an external condition for the output to lead to the project purpose. This assumption was not met in the early phase of the project (initial project period) due to the occurrence of the Mamasapano incident. As a result, achieving the project purpose became difficult, leading to revisions in objectives and indicators, an extension of the project period, and consequently, a revision in the project scope. In this context, the deterioration of the situation and security at the time could be considered as an external factor beyond what was anticipated as risks during planning. Therefore, despite the project cost and period significantly exceeding the initial plan due to the extension, the project was still evaluated as efficient. On the other hand, between the latter half of the project (after the extension of the project period) and the time of the ex-post evaluation, the said assumption was largely met. This, in combination with internal factors such as the high relevance of the project and the efforts of the stakeholders, led to high effectiveness and impacts.

This evaluation is appropriate when considered within JICA's general project evaluation framework and the framework for projects in conflict-affected countries and regions. However, when looking solely at the conclusions, it may seem that factors outside of this project, such as the peace process, consistently contribute to a high evaluation regardless of whether they are favorable or unfavorable. That is, if the peace process is going smoothly, it would contribute to a high evaluation, and if it is stagnating, it would be considered as an external factor, avoiding a low evaluation. Especially in projects implemented in conflict-affected countries and regions, the influence on the project from conflict and political instability may not be fully recorded or shared. However, if one simply attributes this to

external factors, even when evidence is lacking, due to the nature of operating in a conflict-affected area it could potentially lead to an inflated evaluation.

Therefore, when conducting in-project reviews or ex-post evaluations for projects where the progress of peace or political processes significantly influences the project's progress and achievements, it is essential to fully understand how such processes were initially assumed as assumptions in the project plan. One must carefully assess whether the actual trends in these processes are beyond the project's control and exceed the assumptions made during planning, qualifying them as significant external factors. Moreover, it is crucial to fully recognize the relationship between external factors and evaluation results. Even if the project receives a high rating, it is important, in light of the evaluation's goals of accountability and project improvement, to explicitly state any points of caution or challenges related to the project, regardless of the rating.

(4) Setting direct indicators

The indicators for the governance-related project purpose and overall goal of this project (CCDP-B) were "BBL is drafted" and "Draft related codes are formulated," respectively. Both were indeed drafted/formulated. However, the project's intervention mainly consisted of intellectual inputs like training and seminars (e.g., introducing Japanese cases) for some of the drafting members. Therefore, the project's contribution to achieving these indicators was both indirect and limited. As noted in "2.3 Constraints During the Evaluation Study," especially in projects in conflict-affected countries and regions, objectives and indicators tend to be ambiguous, leaving much room for interpretation, due to the fluid and politically influenced environment. In such a context, setting clear indicators like drafting legislation could arguably be considered important. However, this project did not draft or comment on any bills, and other factors could have influenced the drafting/formulation. Therefore, it is difficult to confirm the project's direct contribution to the achievement of objectives based on these indicators alone. For example, the indicator "BBL is drafted" could have been specified as "Drafting members reflect the knowledge and experience gained in this project in the draft BBL," which would have made the project's contribution and influence more explicit.

(5) Consideration and documentation of the implementation structure from a peacebuilding perspective

The latest PNA available at the time of the project's ex-ante evaluation in 2012 was from 2007, which naturally did not include analyses on the change of government, progress in the peace process, or the signing of the FAB. The situation was fluid before the implementation of this project, so even without a formal PNA, regular reports from JICA staff assigned to

the International Monitoring Team and visits from headquarters were used for information gathering, analysis, and sharing, based on which the project plan was formulated. However, the consideration of the implementation structure, which is one aspect of the PNA's perspective (e.g., ensuring that the selection of counterparts and cooperating agencies does not have a negative social or political impact or exacerbate instability factors), was neither sufficiently carried out nor documented and shared in a manner that could be utilized in planning. This may have contributed to a situation where the initial project plan (PDM) proposed by JICA headquarters suggested that the BTC, which was on the MILF side, would take the lead in jointly conducting activities with the ARMM government. This proposal met strong opposition from both the MILF and ARMM sides, potentially delaying the planning process and risking the introduction of instability factors (in reality, the instability factors were avoided by changing the plan). In Mindanao, it seems that regional PNAs are conducted approximately every 10 years. However, to ensure that implementation structures are proposed based on a thorough understanding of the current political and organizational context and outlook, it may be important to either conduct these PNAs more frequently or to document and share the results of project-level PNAs or equivalent monitoring and situational analyses in a manner easily accessible by the headquarters.

Additionally, the Comprehensive Review of JICA's Assistance in Mindanao, which includes a review of this project, has drawn out the following lessons learned: "It is crucial to understand the trends in the peace process from the planning stage, conduct political and stakeholder analyses, and utilize these analytical results for revising the support plan. In the case of assistance in Mindanao, understanding the political capital of a president with significant authority, and the relationships between the president and high-ranking officials in the legislative, executive, and judicial branches, as well as changes in peace policies due to regime changes, is useful for predicting the future course of the peace process, assessing the feasibility and timing of the project, and considering its effectiveness. Especially during the transitional period, the political and security situation becomes fluid, influenced by the functional status of the interim autonomous government (the BTA) and the progress of normalization, including disarmament. Therefore, it is crucial to anticipate multiple scenarios, discuss assistance policies and content based on those scenarios among stakeholders, formulate contingency plans including for the worst-case scenario, monitor them regularly, and enhance responsiveness."[28] From interviews with stakeholders, it appears that the project was generally implemented with a flexible approach to the situation at the time. However, by conducting a new PNA during both the planning and

[28] "Contributions to Peace and Development in Mindanao by JICA: Findings from the Comprehensive Review of JICA's Assistance in Mindanao" (in Japanese), JICA, 2021. Accessed on July 9, 2023. URL: https://openjicareport.jica.go.jp/pdf/1000044368.pdf, p. 15.

implementation stages, carrying out the aforementioned political and stakeholder analyses, and proactively anticipating systematic scenarios, there is a possibility that support resources could have been used even more effectively.

5. Non-Score Criteria

5.1. Performance

5.1.1 Objective Perspective

JICA has fulfilled its role as an implementing partner institution and can be said to have contributed to the results. As a donor that had provided long-term support to Mindanao and as a donor to offer direct support to the MILF side, JICA initiated balanced support for both the MILF and the ARMM sides even before the peace agreement, contributing to a smooth transition.

The supervisory system, which also took into account the changing project environment, is considered to have been appropriate. The headquarters, the Philippines Office, and the Cotabato Project Office coordinated in implementation and supervision. The local field coordinators also played a crucial role in continuing activities during times of deteriorating security.

Communication with the implementing agencies and the building of cooperative relationships are also considered to have been well-managed. This point was noted by all former counterparts interviewed. The project was implemented based on JICA's long-term support in Mindanao, and furthermore, continuous JICA support is being provided under close coordination with the BTA and Philippine government implementing agencies, indicating that mutual trust has been established. (However, as noted in the second paragraph of "4.2.2 Recommendations to JICA," it is necessary for the impact of such relationships to be fully recognized by the Philippine government's Mindanao peace-handling agencies.)

5.1.2 Subjective Perspective (retrospective)

We conducted interviews with former experts and multiple former JICA officials involved in this project to reflect on the situation at the time. The interviews revealed that the project commenced in an uncertain environment where the political and security situations were fluid, and the future roles of BTC stakeholders and ARMM government officials were unclear. Despite these challenges and unforeseen changes in circumstances, the project was successfully completed (see Box 6)."

Box 6 Reflections from JICA Stakeholders

The main challenges and responses during the planning and implementation of the project were compiled from the perspectives of multiple stakeholders, based on interviews. (Factual information is supplemented with materials provided by JICA.)

1) Two PDMs (Project Planning Stage)

Accounts from JICA Headquarters Personnel

In November 2012, a detailed planning survey team was dispatched. A proposal for the implementation structure was presented, suggesting that the MILF and the ARMM government jointly carry out a single project, and the Joint Coordinating Committee (JCC), the decision-making body for the project, would have its chairperson come from the BTC (effectively the MILF side). However, this was not accepted. Both the MILF and the ARMM acknowledged the importance of cooperation and coordination toward the new autonomous government and the significance of capacity-building for ARMM staff who would become administrative officials in the future new autonomous government. However, they expressed opinions such as: "There is no need to strengthen the organizational capacity of the ARMM, which is set to be abolished" (MILF), "It is difficult to mention the ARMM in documents due to MILF policy" (MILF), and "The ARMM is an independent autonomous government where the governor is elected by vote; it is legally difficult to be positioned under the BTC, which is established by presidential decree" (ARMM).

At the time, although the FAB had been concluded, the CAB had not yet been signed. We believed that it was not possible to exclude the ARMM under such circumstances and that since they would eventually be together, both parties could collaborate moving forward. In other words, we weighed the objective of accumulating a track record of joint activities between the BTC and the ARMM government against the risks that could arise from it. We judged that the potential risks were within acceptable limits. Given that there was already a good relationship of mutual trust with the then-chairman of the BTC and the governor of the ARMM, we were confident that even if our proposal angered them, a careful explanation of JICA's intentions would eventually bring the reality closer to the ideal over time. In that sense, their reaction was within the expected range, although it was not immediately understood. We thus renegotiated the implementation structure. Ultimately, we divided the project plan into two PDMs: CCDP-B, to be implemented by the BTC—an MILF-affiliated organization—and CCDP-A, to be implemented by the ARMM government. Agreements were reached with each agency, allowing the project to commence.

Accounts from JICA Philippines Office Personnel

Given our history of engagement with both the MILF and the ARMM, we had believed that implementing a project with both of them together was unthinkable. There was a gap in understanding as the headquarters initially told us to "do it as one." We were concerned that if the headquarters insisted on unification, it would damage JICA's reputation and exacerbate tensions with the stakeholders. Therefore, we explained the situation on the ground to the headquarters and advocated for proceeding with two separate tracks.

2) Extension of Project Period and Plan Modification (Project Implementation Stage)

Accounts from Former Experts

When the project started in 2012, there was a sense that if things went smoothly, a peace agreement would be reached in the early stages, and an autonomous government would be established during the project's implementation. Therefore, we set establishing the foundation of the autonomous government—including its governance structure, organization, and human resources—as the objective. However, the reality turned out to be more challenging than expected, as the enactment of the BBL was delayed. As a result, for a while, we shifted the focus toward strengthening the core under the assumption that the BBL and the new autonomous government would not be established for some time. In other words, preparations for the establishment of the new autonomous government, including gaining the trust of the residents and realizing the dividends of peace, were considered as the foundation for the autonomous government, along with creating an organization and society capable of supporting it once established.

The occurrence of the Mamasapano incident in January 2015 definitively necessitated this shift in focus. Even before the incident, the deliberation of the BBL was already lagging, as discrepancies between the draft and the constitution were pointed out and needed to be resolved. People were highly upset about what happened in Mamasapano, making it clear that approval of the bill was unfeasible. The likelihood of establishing an interim autonomous government by the end of President Aquino's term in June 2016 also

diminished. After discussions with the Philippine side, it was decided to extend the project for another three years, and an agreement was signed with each of the BTC and the ARMM government in October 2015. For the extension period, subprojects with communities and LGUs were added, which were not dependent on the progress of establishing the autonomous government.

Those who are familiar with the latter half of the project often say that the "first and second halves are two different projects." However, from the perspective of someone involved in the first half, it feels like several pillars created in the first half are still relevant in the second half. The focus of the activities in the first half was on supporting the drafting of the BBL and formulating development plans. These were activities conducted by a limited number of people and did not directly involve the residents. Therefore, we implemented QIPs, surveys in MILF camps, and initiatives to promote industrial clusters (local industry promotion) to cultivate a sense among the residents that "something promising will happen when the new administration is established." In the second half, it seems like these activities have evolved and expanded. As for activities with the ARMM government, we engaged in various activities with young talents who were likely to become future leaders, believing that leveling up the ARMM would also benefit the next government. While not everything went smoothly, we operated with the belief that it was certain that talents from both the MILF and the ARMM sides would work together in a single organization. I am very interested to see what the situation is like at the time of the ex-post evaluation and whether the activities were ultimately futile or meaningful.

The basic stance throughout the project implementation period was to respond to the current situation. It is easy to say in hindsight that "you should have done it this way," but things do not always go as planned. On the counterpart side, only a few capable individuals were busy, so flexibility in scheduling and role allocation was also important.

Accounts from JICA Philippines Office Personnel

We handled the procurement of service providers and the supervision of QIPs. The most challenging aspect was having to concurrently manage the procurement and construction for QIPs at 20 different locations. Speed was of the essence for QIP, so it was necessary to carry them out simultaneously. By outsourcing procurement support and construction supervision to local consultants, we managed to complete the projects despite some delays (even so, looking back, the financial settlement tasks handled by the Philippines Office were truly challenging).

3) Integration of Implementing Agencies into the BTA and Handover of Project Outcomes (Project Implementation Stage)

Accounts from Former Experts

In the first half of 2018, it was still uncertain whether the BBL would be enacted. Within the project team, the atmosphere was leaning toward it not being enacted, and the focus of activities leading up to the project's completion in July 2019 was on wrapping up the project and compiling outputs that could be externally explained. However, the situation changed when it was learned in June 2018 that the President would sign the bill into law. As a result, the direction of activities shifted toward initiatives aimed at post-enactment developments and preparations for a successor project.

In July 2018, the BOL (BBL) was enacted, and following the plebiscites, the BTA was established in February 2019. Just before the project's completion, the implementing agencies for this project were shifted from the BTC and the ARMM government to the single entity BTA. While there was not strong resistance from the counterpart side to this consolidation, as there had been during the project planning phase, care was taken on the Japanese side to emphasize that the efforts were "for the sake of Bangsamoro." A key activity after the establishment of the BTA was the handover of the project's outputs. Once it was known who would assume key positions such as ministers, we initiated the transition of project outputs to them. As for the outputs of CCDP-A, in which former counterparts from CCDP-B were not involved, it was up to the BTA to decide whether to adopt them, as they were achievements made by the ARMM side. However, the desire for their continuation was communicated.

5.2 Additionality

As for forward-thinking and unique elements and initiatives that can be cited, the project continuously provided adaptive support in response to the situation, a hallmark of JICA's long-standing peacebuilding efforts in Mindanao. The project also addressed diverse needs through multi-sectoral support and was the first to undertake community development projects within a MILF camp (URTP-B subproject). Additionally, the insights gained from these initiatives were widely disseminated not only by the project team but also through JICA's *Comprehensive Review of JICA's Assistance in Mindanao* and various seminars. The project has also been extensively covered in media, books, and magazines related to peacebuilding in Mindanao.

(End)

Appendix: Timeline

	Philippines	Project (CCDP-B and CCDP-A)
2010	**July**: Aquino administration inaugurated	
2011	**August**: Meeting between President Aquino and MILF Chairman Murad in Narita	
2012	**October**: Aquino administration and MILF concluded the *Framework Agreement on Bangsamoro* (FAB) Bangsamoro Transition Commission (TC, later BTC) established	**November**: Detailed planning survey
2013		**July**: Record of Discussion (R/D) concluded with BTC Project commenced Cotabato Project Office (CPO) established **September**: Memorandum of Understanding (MOU) concluded with ARMM government (17th)
2014	**March**: Aquino administration and MILF concluded the *Comprehensive Agreement on Bangsamoro* (CAB) **September**: *Bangsamoro Basic Law* (BBL) submitted to both houses of Congress (later abandoned)	
2015	**January**: Mamasapano incident	**February**: First mid-term review Project plans (PDMs) revised (first time) **October**: Extension of cooperation period until July 2019 agreed upon with BTC and ARMM government, respectively
2016	**June**: Duterte administration inaugurated **August**: New administration announced *Roadmap for Peace and Development* (peace policy)	
2017	**May**: Marawi siege, martial law declared across the island (resolved in October) **July**: Revised BBL (BBL2) submitted to President, deliberated and approved in Congress	**June**: Second interim review **July**: PDMs revised (second time)
2018	**July**: BBL2 (now *Bangsamoro Organic Law* (BOL)) signed by President	**March**: PDMs revised (third time) (final) **November**: Terminal evaluation
2019	**January**: First plebiscite (21st) **February**: Second plebiscite (6th), BOL ratified, Bangsamoro Autonomous Region in Muslim Mindanao (BARMM) confirmed, Bangsamoro Transition Authority (BTA) established	**February**: Implementing agencies for CCDP-B, CCDP-A shifted to BTA **July**: Project completed Successor project, Capacity Development Project for Bangsamoro (CDPB) commenced
2021	**October**: BOL revised, decision made to hold Bangsamoro parliamentary elections in 2025	
2022	**May**: Marcos administration inaugurated	CDPB extended until 2025
2025	Bangsamoro parliamentary elections scheduled Bangsamoro Government expected to be established	CDPB expected to be completed

The Democratic Republic of Timor-Leste

FY2022 Ex-Post Evaluation Report of Japanese Grant Aid Project

"The Project for Urgent Relocation of Ferry Terminal in Dili Port"

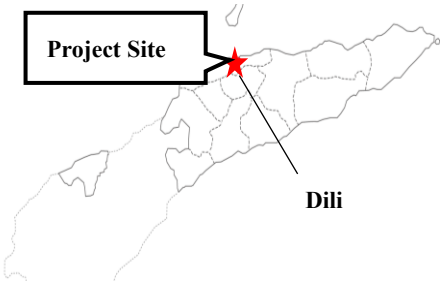
External Evaluator: Toshihisa Iida, OPMAC Corporation

0. Summary

This project was conducted to meet the increasing demand for passenger and cargo transportation and ensure their safe and efficient operation by promoting the separation of cargo and passengers at the international port in the capital city of Dili through the relocation and expansion of the existing ferry terminal, thereby contributing to the improvement of access to the enclave and remote islands, and the promotion of economic activities through the expansion of maritime transport. The project was fully in line with the country's development policy and development needs. The project was fully consistent with Japan's aid policy. While the project was linked to other JICA projects and technical assistances from other donors, the results of these links were not fully confirmed. Thus, the relevance and consistency of the project was high. While the project period exceeded the plan due to design changes during project implementation, the project cost was kept within the plan. Thus, the efficiency of the project is high. The targets for ferry berthing time and the annual number of ferry passengers, which were the operation and effect indicators, were both achieved, and a certain contribution to an increase in the number of ferry operations and efficient operation in handling containerized cargo and so on was confirmed. Through on-site interviews, qualitative effects were recognized such as ensuring the safety of passengers including children, the elderly, and physically challenged people when boarding and disembarking from ferries, efficient ferry boarding, and improved access to remote islands and enclave. In addition, project impacts such as improved quality of life and revitalization of the economic activities of residents of the enclave and remote islands were confirmed. No negative impacts on the natural and social environment due to the project were observed. Therefore, the effectiveness and impact of the project are high. Some minor issues have been observed in technical, financial and environment and social aspects of operation and maintenance including the current status of the facilities. Therefore, the sustainability of the project effect is moderately low.

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

1. Project Description



Project Location (source: evaluator)

New Ferry Terminal (source: Administração dos Portos de Timor- Leste (APORTIL))

1.1 Background

Dili Port is the only international seaport in Timor-Leste[1], and in addition to its role as a port for international cargo ships, it is one of the most important parts of the transportation infrastructure as a port for the residents of enclave (Oecusse) and remote islands (Atauro Island), transporting their daily necessities. The passenger ferry terminal in Dili Port was located in close proximity to the container yard, and for the safety of passengers, the loading and unloading of cargo and carrying operations were stopped when passengers were boarding and disembarking. In addition, ferries were operated with severely restricted berthing during cargo vessel berthing and loading/unloading operations, and during low tides, due to insufficient berthing distance, which resulted in ferry berthing availability of three hours per day in the 2014 actual data. Thus, the efficiency of passenger and cargo transportation was hampered, and the separation of the passenger ferry terminal from the cargo container yard was an urgent issue for the safe and efficient operation of passenger and cargo transportation. In addition, the ferry terminal was designed to accommodate one ferry in operation at a time and had reached the limit of its capacity to transport residents and daily commodities. In response, the government planned to introduce a further ferry each in 2016 and 2017, and it was therefore essential to develop a passenger terminal that could accommodate multiple ferry arrivals.

1.2 Project Outline

The objective of this project is to respond to increased demand for passenger and cargo transportation and ensure safe and efficient operation by promoting the separation of cargo and passengers at the international port in the capital city of Dili through the relocation and expansion of the existing ferry terminal, thereby contributing to the improvement of access to the enclave and remote islands, and the promotion of economic activities through the expansion of maritime transport.

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[1] Until September 2022, when the Tibar port was opened.

<Grant Aid Project>

Grant Limit / Actual Grant Amount	2,197 million yen / 2,122 million yen
Exchange of Notes Date / Grant Agreement Date	September 2016 / September 2016
Executing Agency	Administração dos Portos de Timor Leste (APORTIL)
Project Completion	October 2019
Target Area	The city of Dili, Dili District
Main Contractor(s)	Tobishima Corporation
Main Consultant(s)	Ides Inc., Japan Port Consultants, Ltd..
Procurement Agency	N/A
Preparatory Survey	June 2015 - April 2016
Related Projects	・ Technical Assistance “Advisor for port facilities & security” (2012-2016), “Advisor for port planning and facility” (2017-2020), and “Port Facility Maintenance (Short-Term JICA Expert)” (2015), “The Project on Strategic Port Development Master Plan in Timor-Leste” (2022-2024) ・ Grant Aid “Dili Port Rehabilitation Project” (2006), “The Oecusse Port Urgent Rehabilitation Plan” (2010) ・ Deutsche Gesellschaft fur Internationale Zusammenarbei (GIZ) “Technical Cooperation in the Maritime Transport Sector” (2006-2016), “Technical Cooperation in Advice and Training to the Maritime Related Industries of Timor-Leste” (2017-2021) ・ Kreditanstalt fur Wiederaufbau (KfW) “The construction and commissioning of a second ferry for north coast traffic in Timor-Leste”

2. Outline of the Evaluation Study

2.1 External Evaluator

Toshihisa Iida, OPMAC Corporation

2.2 Duration of Evaluation Study

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

Duration of the Study: October 2022 – December 2023

Duration of the Field Study: January 15 – 27, 2023 and May 30 – June 3, 2023

2.3 Constraints During the Evaluation Study

In this ex-post evaluation, an interview survey was conducted to determine whether there was heterogeneity in the project effects among children, elderly, and physically challenged ferry users as well as other ferry users in terms of ensuring safety when boarding and disembarking from ferries which was assumed as a qualitative effect of the project. It should be noted that in the interview survey, (i) there are large individual differences in the judgment of the sense of safety, (ii) the information obtained may not necessarily be representative of ferry users due to the small sample size (11 persons in total, including children, the elderly, and the physically challenged), and (iii) since the old ferry terminal had major problems in the safety when boarding and disembarking from ferries, such as the need to pass nearby container cargo handling operations, it is possible that the relocation of the new ferry terminal is the only reason for the passengers' decision that the safety has been improved at the time of ex-post evaluation.

3. Results of the Evaluation (Overall Rating: B[2])

3.1 Relevance/Coherence (Rating: ③[3])

3.1.1. Relevance (Rating: ③)

3.1.1.1 Consistency with the Development Plan of Timor-Leste

At the time of planning, the *Strategic Development Plan (2011-2030)* had the target of the country becoming an upper middle-income country by 2030 and infrastructure development in the port sector was identified as one of the priority areas to achieve this goal. In addition, the *Program of the Seventh Constitutional Government (2012-2017)*, a government strategic program that embodied the aforementioned *Strategic Development Plan,* stated that the expansion of seaport capacity was necessary for Timor-Leste's economic growth and identified seaport infrastructure development as essential for importing essential goods, building major infrastructure, and supporting export industries for petroleum products, coffee, fish and meat,

[2] A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

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

fruits, and grains, in order to revitalize the economy.

At the time of the ex-post evaluation, in addition to the aforementioned *Strategic Development Plan*, in the *Program of the Eighth Constitutional Government (2018-2022),* seaport infrastructure development continued to be included as one of the key policy measures due to the importance of enabling the import of critical goods to strengthen and diversify the national economy. For Dili Port, the redevelopment plan of Dili Port, being prepared by the United States Agency for International Development (USAID)[4], calls for the development of hotels, apartments, commercial facilities, cruise terminals, marinas, parks, and other facilities as a Public-Private Partnership (PPP). Under this plan, the new ferry terminal at Dili Port will continue to be operated and maintained by the Administração dos Portos de Timor Leste (hereinafter referred to as "APORTIL"), while also serving as a ferry terminal for domestic passengers between Dili Port and regional seaports, which are under consideration for future development.

As shown above, from the time of planning to the ex-post evaluation, seaport infrastructure development has been one of the priority issues for economic revitalization, and in the redevelopment plan for Dili Port currently under consideration, the new ferry terminal will function as a ferry terminal for domestic passengers connecting not only the existing ferry route but also regional seaports. This is consistent with the development policy of the Timor-Leste government.

3.1.1.2 Consistency with the Development Needs of Timor-Leste

At the time of planning, the old ferry terminal at Dili Port was in close proximity to the container cargo yard, and the flow lines of ferry passengers and container cargo handlers were intermingled, making it very dangerous for ferry passengers as container cargo-related vehicles passed by passengers as they were getting on and off the ferries. For the safety of ferry passengers, the loading and unloading of containerized cargo and other transportation works had to be stopped when passengers were boarding and disembarking. Ferry berthing was also severely restricted during containerized cargo ship berthing, cargo handling operations, and low tide, which hindered the efficient cargo handling and ferry operations[5]. Furthermore, the ferry terminal was designed to accommodate only one ferry vessel, which was forced to operate over capacity, limiting its ability to transport residents and daily commodities[6]. Thus, in addition to these safety issues, the efficient operation of ferries and cargo transportation was

[4] Initially, USAID prepared the plan, but at the time of the ex-post evaluation, the work had been transferred to the International Finance Corporation (IFC).

[5] Ferry berthing availability was 3 hours per day based on 2014 actuals.

[6] According to documents provided by JICA, the average overcapacity rates for the Atauro and Oecusse routes during the five-year period from 2010 to 2014 were 1.5 times and 1.28 times, respectively.

hampered. For the safe and efficient operation of passenger and cargo transportation, it was essential to separate the passenger ferry terminal from the cargo container yard and to develop a ferry terminal that would allow multiple ferries to arrive at the terminal at the same time.

At the time of ex-post evaluation, as shown in Table 1 below, the volume of containerized cargo handled at Dili Port had increased from 50,994 TEU in 2018 to 60,419 TEU in 2021, indicating that the need for efficient containerized cargo handling remained high[7].

Table 1 Containerized Cargo Volume Handled at Dili Port

(Unit: TEU[8])

	Import	Export	Total
2018	25,649	25,245	50,894
2019	27,663	27,073	54,736
2020	29,863	27,994	57,857
2021	29,562	30,857	60,419
2022(note)	27,082	22,869	49,951

Source: APORTIL

note: Data for 2022 is for the nine months ending September 2022

The number of ferries using the ferry terminal at Dili Port has increased to four (two privately operated and two operated by APORTIL), and the number of services has also increased significantly, from two services weekly on the Oecusse route and one service weekly on the Atauro route at the time of planning to five services weekly on the Oecusse route and six services weekly on the Atauro route (Tables 2 and 3). The new ferry terminal, which allows multiple ferry arrivals and departures at the same time, facilitates the smooth operation of the increased number of ferries. The number of passengers on the Oecusse and Atauro routes were 79,059 and 28,708, respectively, at the time of the ex-post-evaluation in 2022, a significant increase from 44,036 and 21,634 in 2014. This was due to the increased number of ferries and services (Table 7 & Table 8). In 2022, the total cargo transported by ferry on the Oecusse and Atauro routes was 3,030 tons, up from 2,585 tons in 2014 (Table 9). Thus, there has clearly been a high need for the use of ferries to transport residents and daily necessities, and the new ferry terminal has been indispensable in making this possible.

[7] Container cargo handling at Dili Port was transferred to the newly opened Tibar Port in October 2022.

[8] TEU is a unit of measurement for the number of containers converted to 20 feet.

Table 2 Ferry Services[9]

Name of vessel	Operators	Commission	Route
The Berlin Nakroma	APORTIL	2007	Dili-Atauro-Dili/Dili-Oecusse-Dili
The Laju Laju/The Success（note 1）	Private	2016	Dili-Atauro-Dili/Dili-Oecusse-Dili
The Dragon Star Craft（note 2）	Private	2016	Dili-Atauro-Dili
The Berlin Ramelau	APORTIL	2022	Dili-Oecusse-Dili

Source: documents provided by JICA and APORTIL
note 1: The Success took over the Laju Laju and entered service in 2019. The ownership changed in 2022.
note 2: The Dragon Star Craft normally operates between Dilli and Atauro, but it also operates between Dilli and Oecusse when the Berlin Nakroma is out of service for maintenance.

Table 3 Number of Ferry Services

(Unit: services/week)

	Dili – Oecusse	Dili – Atauro
Until 2015	2	1
2019	4	2
At the time of the ex-post evaluation	5	6

Source: documents provided by JICA and APORTIL

As mentioned above, demand for containerized cargo handling operations at Dili Port was high (until October 2022, before transfer to the Port of Tibar[10]) and the separation of the passenger ferry terminal from the containerized cargo yard was necessary for efficient containerized cargo handling and to ensure the safety of ferry passengers. Ferry transportation is essential for the movement of residents and daily necessities, and the demand for ferry use remains high, making a new ferry terminal highly necessary to accommodate the correspondingly increasing number of ferries. Furthermore, in the redevelopment plan of Dili Port, which is currently under consideration, the ferry terminal at Dili Port is scheduled to become a hub for domestic transportation, and the need for such a terminal is recognized as high.

3.1.1.3 Appropriateness of the Project Plan and Approach

The following was pointed out as a lesson learned from past similar projects: “the importance of training to improve the technical capacity of staff in order to systematically and effectively perform administrative tasks related to port entry and exit, cargo, passenger, quarantine, and air safety and security for the entire port.” As described in “3.1.2 Coherence” below, GIZ provided technical assistance to APORTL for human resource development in the maritime transport sector and JICA provided technical assistance for port operations and management,

[9] At the time of planning, one new ferry was to be procured in 2016 and another one in 2017, but due to delays in shipbuilding, one vessel (the Berlin Ramelau) entered service in 2022 and the other (the Haksolok) would be completed in 2023, according to an interview with staff of the Special Zone of Social Market Economy (ZEESM)

[10] See note.5

and for improving the operation and maintenance capacity of facilities and equipment. These assistance activities were coordinated by the two organizations to ensure that the areas of assistance did not overlap and that they were complementary. In addition, a "Port Facility and Safety Advisor (2012-2016)" and a "Port Planning and Facility Maintenance Advisor (2017-2020)" as long-term experts and a "Port Facility Management Advisor (2015)" as a short-term expert were dispatched as part of JICA's technical assistance to provide support in developing a port facility maintenance management plan and manual, in database development, and advice on operation and maintenance. This assistance supported the improvement of the operation and maintenance capacity of the facilities developed by the Project. Therefore, it is considered that the project plan and approach were appropriate.

3.1.2 Coherence (Rating: ②)

3.1.2.1 Consistency with Japan's ODA Policy

At the time of planning, *the Ministry of Foreign Affairs of Japan's Country Assistance Policy for Timor-Leste (2012)* identified the development of infrastructure to revitalize economic activities as one of the priority areas for assistance, and stated that support for infrastructure development, including software, and industrial human resource development, would be emphasized. In addition, *the JICA Country Paper for the Democratic Republic of Timor-Leste* stated that "infrastructure development for revitalization of economic activities" was a priority issue and that infrastructure development related to transportation (roads, bridges, and seaports) would be promoted. This project was therefore consistent with Japan's aid policy at the time of planning.

3.1.2.2 Internal Coherence

For the purpose of improving APORTIL's capacity to maintain and manage facilities and equipment, JICA dispatched long-term experts, an "Advisor for Port Facilities and Security" (2012-2016) and an "Advisor for Port Planning and Facility" (2017-2020) as well as a short-term expert on "Port Facility Maintenance" (2015), who were expected to contribute to the improvement of the capacity for the operation and maintenance of the new ferry terminal developed under the project by conducting tasks closely related to the project. These included formulating maintenance and management plans and maintenance manuals, developing a database of information related to port facilities and equipment, and providing advice on port facility maintenance and management. However, as described in "3.4 Sustainability" below, at the time of the ex-post evaluation, there was no manual or maintenance plan for the maintenance and management of the new ferry terminal, little daily maintenance and work had been conducted, and no training was provided in the department. Thus, it can be said that at the time of the ex-post evaluation it was almost impossible to confirm the specific results of the

cooperation conducted in the past.

3.1.2.3 External Coherence

At the time of planning, it was envisioned that JICA would work with GIZ, which provided technical assistance to APORTIL, to improve the technical skills of APORTIL staff. According to APORTIL and former consultants for GIZ, GIZ's support was mainly for human resource development in the maritime transportation sector, such as strengthening the ferry operation capacity of APORTIL and the maritime administration capacity of the National Direction of Maritime Transportation (DNTM). The JICA support was for port operation and management, and for capacity building for the operation and maintenance of facilities and equipment. The content of the JICA and GIZ support was complementary and did not overlap, and the two parties were well coordinated. A former JICA expert also mentioned that, during the implementation of the project, the GIZ consultants participated in JICA-sponsored workshops, shared knowledge in areas where JICA experts did not have sufficient knowledge and provided technical assistance in collaboration with JICA long-term experts and GIZ. Thus, the collaboration with GIZ functioned to some extent, as the areas of support were determined so that there would be no duplication of efforts and the support would be effective as a whole, with knowledge being shared as necessary. However, as described in "3.4 Sustainability" below, there were some issues with APORTIL's operation and maintenance capacity, and although the collaboration alone would not necessarily improve the operation and maintenance capacity of APORTIL, in light of its current status, it can be said that specific results of the collaboration cannot be confirmed.

From the above, in terms of relevance, the project was consistent with the development policy and development needs of Timor-Leste. Regarding consistency, the project was consistent with Japan's aid policy. In terms of internal consistency and external consistency, although the project was being coordinated with JICA's technical cooperation projects and GIZ support for improving APORTIL's operation and maintenance capacity, as mentioned above, considering that maintenance activities are not currently being implemented, the effectiveness of those efforts cannot be confirmed. Therefore, its relevance and consistency are high.

3.2 Efficiency (Rating: ③)

3.2.1 Project Outputs

The plan and actual of this project outputs are shown as Table 4.

Table 4 Planned and Actual Outputs of the Japanese Side

Items	Plan	Actual	Remarks
Ferry Jetty	100 m length ×2 berth Design water depth: 11.5 m	100 m length ×2berth Design water depth: 11.5 m	Top elevation of superstructure was increased by 0.4 m due to design changes caused by the adjustment of Chart Datum Level (CDL)[11], and design changes caused by changes in specification of ferries to be procured
Platform	55 m×52 m + Deformed Area	52 m×51 m + Deformed Area	Top elevation of superstructure was increased by 0.4 m due to design changes caused by the adjustment of Chart Datum Level
Access Way	Hard core + Pavement concrete (400 m^2)	Hard core + Pavement concrete (460 m^2)	Increases due to detailed design changes and the adjustment of Chart Datum Level
Illumination, Water Supply, Fire Hydrants, Power Supply	1 set of each	Same as on the left	As planned
Beacon Light	1 set	2 sets	Design changes associated with countermeasures for sunk vessel
Security Equipment	Surveillance and security TV systems and others	Same as on the left	As Planned
Consulting Services	Detailed design and construction supervision	Same as on the left	As Planned

Source: documents provided by JICA and APORTIL

According to the documents provided by JICA, the changes from the plan and the reasons for the changes were as follows:

- Extension of movable ramp (from 11 m to 16.4 m) and lowering of deck elevation of the jetty (from +4.0 m CDL to +3.2 m CDL) due to specification changes of vessels to be procured from Germany (the Berlin Ramelau) and Portugal (the Haksolok).
- Implementation of countermeasures for a sunk vessel that had not been assumed during the detailed design (partial removal of the sunk vessel, addition of an anticorrosion anode[12], enclosure by steel sheet piles, and installation of light beacons).
- Raising the jetty and platform deck elevation by 173 mm (due to a surveying error by the contractor and implemented at the contractor's expense).
- Raising the height of jetty and platform superstructure, etc., by 400 mm and extending access slope to platform due to the fact that Datum Level (DL)[13] was found to be approximately 400 mm lower than CDL during project implementation (Without the change, there would have been approximately 4 hours in which the vessels planned to be procured from Portugal would not have been able to berth).

11 Chart Datum Level (CDL): Water depth standard, minimum water level

12 One of the methods to stop corrosion by cutting off the corrosion current generated when steel corrodes by supplying electricity; a sacrificial anode is attached to the corrosion prevention target.

13 Datum Level (DL): Reference plane for observing the height to sea level (construction reference plane)

As mentioned above, the main reasons for the design changes were changes in accordance with modification of the specifications of the ferries to be procured, the discovery of a sunk vessel that was not anticipated at the time of planning, and differences in the CDL identified during project implementation, etc. These design changes were considered unavoidable in order to realize the project effects.

Jetty (source: evaluator)

Platform (source: evaluator)

Movable ramp (source: evaluator)

It was agreed that Timor-Leste would bear the costs for land acquisition, the removal of unnecessary obstacles, the construction of a passenger terminal building, import duties on permanent materials for construction, and banking procedures. Of these, all except for the construction of the passenger terminal building were implemented as planned. The construction of this building had not yet started at the time of the ex-post evaluation[14]. According to APORTIL, the construction was scheduled to proceed with budgetary measures in 2023, however, the construction was suspended with the inauguration of the new administration in July 2023 and a resumption date has not yet been determined. Currently, a temporary covered waiting area, ticket

[14] Although budgetary measures were taken and a construction contractor was even selected in 2021 after the project was completed, construction was canceled by the funding agency, the Administrative Council of the Infrastructure Fund (CAFI), for the following reasons: (i) it was assumed that the passenger terminal building in question would be constructed within the Dili Port Redevelopment Area, and (ii) the winning bid price was about half the budget, which raised questions about the quality of construction.

booth, and restrooms have been installed, so it is unlikely that the non-construction of the building has had a significant impact on the project's effects. However, from the perspective of improving convenience for ferry passengers and making effective use of the ferry terminal, it is desirable that the building be constructed as soon as possible.

3.2.2 Project Inputs

3.2.2.1 Project Cost

The project cost was planned to be 2,335 million yen, consisting of 2,197 million yen for the Japanese side and 138 million yen for the Timor-Leste side. The actual project cost on the Timor-Leste side is yet to be determined because the construction of the passenger terminal building has not yet started as mentioned above, but the Japanese side project cost was 2,122 million yen, as shown in Table 5. This was 96.6 % of the planned project cost of 2,136 million yen. While the construction cost of the jetty increased because of changes in the specification of the jetty during project implementation and the increased cost for the detailed design and construction supervision by the consultant due to the extension of the construction period, the total project cost was lower than planned due to a decrease in the yen value of imported materials caused by the exchange rate fluctuations[15].

Table 5 Actual Project Costs for the Japanese Side

(Unit: million yen)

Breakdown	Actual Cost
Demolition	11
Jetty	1,130
Platform	698
Jetty Pavement	37
Revetment	14
Marine Accessories	43
Ancillary Facilities	11
Detailed Design/Construction Supervision	178
Total	2,122

Source: documents provided by JICA and APORTIL

If the amount to be borne by the Timor-Leste side is calculated based on the budgeted amount for the construction of the passenger ferry terminal by APORTIL at the time of ex-post evaluation (US$ 549,000), the actual project cost was US$ 647,000 compared to the planned project cost of US$ 1,146 million, which was within the planned (56.4% of the planned cost) (Table 6). The total project cost, taking into account the Timor-Leste side, was 2,193 million yen, including 2,122 million yen for the Japanese side and 71 million yen[16] for the Timor-Leste

[15] The average exchange rate during the project period was 110.28 yen/US$ compared to the exchange rate of 120.10 yen/US$ at the time that the grant agreement was signed.

[16] US$647,000 × average exchange rate during the project period (110.28 yen/US$)

side, which was 93.9% of the total planned cost of 2,335 million yen. As such, the total actual cost was within the plan.

Table 6 Actual Project Costs for the Timor-Leste side

（Unit: US$）

Breakdown	Actual Cost
Land Purchased Fee	State Land
Demolition of Blockage in the Construction Yard	19,500
Construction of Passenger Terminal Building	TBD（Budget amount: 549,000
Import Tax for Everlasting Construction Materials	59,265
Necessary Cost of Banking Arrangements	20,000
Total	TBD（647,000）

Source: documents provided by JICA and APORTIL

3.2.2.2 Project Period

The planned project period[17] was 30 months (May 2016 to October 2018), including the detailed design and bidding period. The actual project period was 38 months (September 2016 to October 2019), which exceeded the plan by 126.7%. The main reasons for the excess in the planned period were, as stated in "3.2.1 Project Outputs" above, changes in the jetty structure due to changes in the specifications of the ferries to be procured during the project implementation period, measures necessary due to the unexpected discovery of a sunk vessel, and changes in the design of the jetty and other facilities resulting from the discovery of discrepancies in the CDL that had been used[18].

The project output was generally in line with the plan, and the project cost was within the plan, but the project period exceeded the plan. Therefore, efficiency of the project is high.

3.3 Effectiveness and Impacts[19] (Rating: ③)

3.3.1 Effectiveness

3.3.1.1 Quantitative Effects (Operation and Effect Indicators)

(Operation and Effect Indicators)

At the time of planning, ferry berthing time and annual number of ferry passenger were listed

[17] Since the definitions of the project start date and project completion date were unknown at the time of the ex-ante evaluation report, the project period was calculated based on the process chart shown in the preparatory survey report. In the report, project completion was defined as the completion of the construction work. However, the date of exchange of note and the date of grant agreement were not included as the project start. Therefore, the project starts in both the plan and actual was defined as the date of exchange of note and the date of grant agreement at this ex-post evaluation.

[18] In Dili Port, it was recognized and utilized for the repair works of the port that DL was equal to CDL until the implementation of this project. However, as described in 3.2.1 above, the DL was found to be approximately 400mm lower than the CDL during the implementation of this project.

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

as operation and effect indicators. In the ex-post evaluation, the actual values of these indicators were confirmed as shown in Table 7 below.

Table 7 Operation and Effect Indicators

		Baseline Value	Target Value	Actual Value		
		2014	2021	2020	2021	2022
			3 Years After Completion	1 Year After Completion	2 Years After Completion	3 Years After Completion
Berthing hours of Ferry (hours per day)		3	24	24	24	24
Annual number of Passengers (person/year) (note)	Atauro route	21,634	28,392	31,503	5,112	29,706
	Oecusse route	44,036	70,985	39,309	8,588	79,059

Source: documents provided by JICA, APORTIL, and DNTM
note: since APORTIL does not have data related to the number of passengers for ferries operated by private operators, data from DNTM, which is the harbor master and receives passenger count reports from vessels when they enter or leave Dili Port, is used in this ex-post evaluation.

Ferry berthing can be available 24 hours a day because the relocation and construction of the new ferry terminal eliminated the waiting time that had been necessary during container loading/unloading operations occurring at the old ferry terminal. In addition, the introduction of movable ramps at the jetty has made stable berthing possible even during high tides and high waves.

The annual ferry passenger volume target was achieved for all routes. For the Atauro route, the target of 28,392 annual passengers per year was achieved in 2020, one year after the completion of the new ferry terminal. In 2021, the number of ferry passengers decreased due to the impact of COVID-19 and the suspension of the Berlin Nakroma's service for maintenance[20], but the target was achieved again in 2022, three years after the completion of the ferry terminal. The Oecusse route achieved its target of 70,985 annual passengers in 2022, three years after completion, largely due to the Berlin Ramelau entering service in 2022[21](Table 8).

[20] The Berlin Nakroma did not operate from January 2021 to October 2022 due to maintenances.

[21] The Berlin Ramelau does not serve Atauro because it cannot berth at Atauro port due to its vessel size。

Table 8 Number of Passengers per Year by Ferry in Operation

(Unit: number of people)

		2014 (at the time of planning)	2019	2020	2021	2022
Atauro Route	The Berlin Nakroma	21,634	25,410	31,503	0	2,919
	The Dragon Star Craft (note 1)	-	0	0	0	16,816
	The Success (note 2)	-	18,204	0	2,644	8,973
	Others (note 3)	-	-	-	2,458	-
	Total	21,634	43,614	31,503	5,112	28,708
Oecusse Route	The Berlin Nakroma	44,036	36,552	39,309	0	2,060
	The Berlin Ramelau	-	-	-	-	51,413
	The Dragon Star Craft (note 1)	-	0	0	0	12,162
	The Success (note 2)	-	37,980	0	7,089	13,424
	Others (note 3)	-	-	-	1,499	-
	Total	44,036	74,532	39,309	8,588	79,059

Source: documents provided by DNTM and JICA
note 1: The Dragon Star Craft did not operate from 2019 to 2021 due to vessel license renewal and maintenance. Operation resumed from January 2022.
note 2: The Success did not operate in 2020 for maintenance. It resumed operation from August 2022 after a change of ownership.
note 3: When the Berlin Nakroma was out of service, alternative vessels operated for a period of time.

The following are identified as other quantitative effects.

(Increase in the Number of Ferry Operations)

At the time of planning, the number of ferry services was two per week for the Oecusse route and one per week for the Atauro route, as stated in "3.1.1 Relevance" above. At the time of the ex-post evaluation, the number of ferry service had increased significantly to five per week for the Oecusse route and six per week for the Atauro route, which has improved transportation convenience and access from these areas to Dili. This is due to the fact that, in addition to the start of private ferry operations, the completion of the new ferry terminal under the project at the end of 2019 has allowed multiple vessels to arrive and depart simultaneously, while the relocation of container cargo handling to Tibar Port has allowed the old ferry terminal to be used when tidal and wave conditions allow for safe boarding and disembarking. With the increase in the number of ferry services, an increase in the number of passengers as well as in the volume of logistics such as ferry cargo was expected. However, as shown in

Table 9 below, the actual cargo volume and the number of vehicles and motorcycles carried by ferries in 2022 were lower than the actual volume and number in 2019 when the project was completed, This could be attributed to the fact that the Berlin Nakroma rarely operated in 2021-2022.

Table 9 Ferry Cargo Volume, Vehicles, and Motorcycles (Atauro and Oecusse routes combined)

	Cargo (tons)	Vehicles (number)	Motorbikes (number)
2014 (at the time of planning)	2,585	991	1,379
2019 (Completion)	4,763	2,597	3,109
2020 (1 Year after Completion)	1,157	1,834	2,168
2021 (2 Years after Completion)	1,252	799	443
2022 (3 Years after Completion)	3,030	2,444	2,797

Source: documents provided by JICA and DNTM

(Effects on Containerized Cargo Operations Efficiency)

As shown in

Table 10 below, a comparison of the number of containerized cargos handled per hour before and after the relocation of the ferry terminal in Dili Port shows that the number of containerized cargos handled increased after the relocation. It can be considered that the relocation of the old ferry terminal, which was adjacent to the containerized cargo loading and unloading area, had some effect on improving the efficiency of containerized cargo operations.

Table 10 The Number of Containerized Cargos and Others Handled per Hour

	2019 (Completion)	2020 (1 year after completion)
The number of containerized cargos and others handled per hour (note)	14.43	15.39

Source: documents provided by APORTIL

note: Total number of containerized cargos and others handled (including imports and exports) /container vessel berthing time.

3.3.1.2 Qualitative Effects (Other Effects)

In order to confirm the qualitative effects and impacts of the project, interviews with implementing agencies, relevant ministries and agencies, and ferry users (including children, elderly, and physically challenged persons) were conducted during the field survey[22]. As a result, the following qualitative effects were confirmed.

[22] In addition to the implementing agencies, key informant interviews were conducted around the ports of Dili, Oecusse and Atauro with the following to ascertain the qualitative effects and impacts of the project. (Dili: Ministry of Transport and Communication, DNTM, private ferry operators (2), container cargo handlers (2), transporter (1), taxi driver (1), Timor-Leste Chamber of Commerce and Industry, ferry passengers (24), Oecusse: Special Social Market Economic Zone, ferry passengers (10), retailers (4), building materials distributor (1), tuk-tuk driver (1), Atauro: Atauro District Office, retailers (2), guesthouse and catering (1), fishermen (1)).

(Ensuring Passenger Safety When Boarding and Disembarking from Ferries)

According to interviews with ferry users and others, the majority of the respondents were of the opinion that passenger safety when boarding and disembarking from ferries at the new ferry terminal has been greatly improved compared to the situation at the old ferry terminal. The following is a summary of specific comments.

- At the old ferry terminal, boarding and disembarking from ferries was significantly dangerous due to the following conditions:(i) the ferry terminal was located in the middle of the containerized cargo handling yard, creating the dangerous situation where ferry passengers and container cargo handling traffic lines were intermingled, container cargo handling vehicles passed close by ferry passengers, and containers were stacked high in the vicinity of passenger paths, (ii) because ramps from ferries were hung over the fixed ramp for boarding and disembarking, there was insufficient distance during low tide when the ramp could not maintain the proper angle, and during high waves and rain, the ramp was very slippery for passengers boarding and disembarking, (iii) frequently, ferry passengers rushed onto the ramp when boarding and disembarking, pushing each other off the ramp to the seaward side, (iv) when there were many ferry passengers, the line of passengers waiting for ferries overflowed from the port and lines were formed even on the sidewalks of public roads,
- Many commented that the new ferry terminal has greatly improved the safety of boarding and disembarking from ferries and that there is now no danger at boarding and disembarking because (i) the flows of lines for ferry passengers and containerized cargo handling are clearly different, and (ii) the adoption of movable ramps at the jetty has made it possible to get on and off the ferries on an almost flat ramp.
- The majority of respondents also agreed that the new ferry terminal does not pose any danger to children, the elderly, and physically challenged people when boarding and disembarking from ferries (In this ex-post evaluation, a qualitative study from the perspective of Leave No One Behind (LNOB) was conducted on safety when boarding and disembarking from ferries, the results of which are shown in the box below).

As described above, it can be considered that the relocation of the ferry terminal by this project has contributed to the improvement of the safety of ferry passengers when boarding and disembarking from ferries by the separation of the lines of flow between containerized cargo handling operation and ferry passengers, and the adoption of movable ramps which enables safe berthing at all times even during high tides.

At the old ferry terminal (waiting at the public roadside) (source: JICA)

At the old ferry terminal (passengers walking toward a ferry) (source: JICA)

At the old ferry terminal（boarding a ferry）(source: JICA)

At the new ferry terminal (waiting area) (source: evaluator)

At the new ferry terminal (corridor to ferries) (source: evaluator)

At the new ferry terminal (boarding a ferry) (Source: evaluator)

On the other hand, there are issues related to safety inside ferries, such as the fact that when

disembarking from the ferries, passengers rush to disembark quickly using only one narrow passageway inside the ferries. The elderly, children, etc., are pushed by other passengers. Also, there were comments that passengers and vehicles disembarking from ferries and vehicles entering the platform to load disembarking passengers' luggage and cargo are mixed together at the platform, which may be dangerous if a child suddenly jumps out of the platform or looks away. While this is not the issue of facilities constructed by this project, it is believed that safer boarding and disembarking from ferries would be possible by implementing ferry operation measures such as thorough announcements on the ferries, staggered disembarkation, and traffic guidance to clearly separate the lines of flow between vehicles and passengers.

Slope for wheelchair users from waiting area to platform (source: evaluator)

Disembarking from a ferry at the new ferry terminal (source: evaluator)

Results of beneficiary interviews regarding safety when boarding and disembarking ferries from the perspective of Leaving No One Behind.

In this ex-post evaluation, an interview survey was conducted using the triangulation method[23] to see if there were any differences in the intended qualitative effect of the project, "ensuring the safety of ferry passengers when boarding and disembarking from ferries," between ferry users such as children, the elderly, and the physically challenged people and other ferry users from the perspective of "Leave No One Behind (LNOB)". The survey and a summary of the results are as follows.

1. Survey Contents

(1) Interviewees

(a) Ferry passengers: children, the elderly, and the physically challenged: total 11 people (note 1), (b) Other ferry passengers: total 8 people (note 2), (c) Passenger guidance staff of ferry operators: total 4 people (note 3)

(2) Questionnaire by Interviewee

- Interviewees (a) above: Existence/non-existence of hazards when boarding and disembarking from ferries at the new and old ferry terminal and the nature of such hazards,
- Interviewees (b) above: Whether or not you feel that children, the elderly, and physically challenged people are unsafe when boarding and disembarking from ferries at the new and old ferry terminal, and the nature of such unsafe conditions,
- Interviewees (c) above: Whether or not you feel that children, the elderly, physically challenged people and other ferry passengers at the new and old ferry terminal feel unsafe when boarding and disembarking from ferries, and the nature of such unsafe conditions.

(3) Survey Location: Dili Port Ferry Terminal and Oecusse Port Ferry Terminal

2. Summary of Survey Result

[23] Triangulation is a method that combines several different perspectives, methods, or views, and in this case, is a combination of opinions from several different groups.

(1) The safety of ferry passengers when boarding and disembarking from ferries at the new ferry terminal has greatly improved for all types of passengers, and there are few areas where ferry passengers feel unsafe, confirming that there is no difference in the project effect in terms of safety when boarding and disembarking among ferry passengers.
  - At the old ferry terminal, the situation was dangerous for ferry passengers, in particular for the elderly, children, and the physically challenged as follows:
    - passengers passed by containerized cargo loading and unloading vehicles,
    - the ferry ramp moved up and down intensely during high tide and high waves, making the ramp slippery when soaked in water, and
    - passengers were pushed by the crowd and fell off the ramp.
  - At the new ferry terminal, the ferry passenger flow line is separated from the container cargo flow line, the ramp is always flat and easy to get on and off, even during high tide and high waves through the introduction of movable ramps. There is no issue in terms of passenger safety for boarding and disembarking from ferries.

(2) On the other hand, the following comments were made by some interviewees:
  - Three out of the four elderly interviewees said that they had never felt unsafe when boarding and disembarking from ferries at either the old or the new ferry terminals, and that safety at boarding and disembarking had been ensured at both. This may be due to differences in judgment criteria regarding safety and the level of durability.
  - With regard to the safety of the elderly, physically challenged, and child passengers in particular, these and other users of the ferry confirmed that the narrow, single aisle inside ferries makes it dangerous for physically challenged and child passengers as they push each other to get off the ferry as quickly as possible when disembarking.

(3) Reasons why there is no difference in the project effect among users of the new ferry terminal in terms of ensuring safety when boarding and disembarking include the following:
  - The relocation of the ferry terminal from the middle of Dili Port to the west end has completely eliminated the traffic flow confusion between containerized cargo handling operations and ferry passengers.
  - Due to the introduction of the movable ramps at the jetty, the ramp is always flat even in high waves,
  - The slope for the physically challenged and the elderly was installed in the passageway from the passenger gate to the platform at the suggestion of APORTIL during the detailed design stage.

(note 1) Children 5 people (male: 3, female: 2), the elderly 4 people (male: 1, female: 3), the physically challenged people: 2 (male: 1, female: 1)
(note 2) Total 8 people (male: 4, female: 4)
(note 3) APORTIL (2 people), JAJ Oceans Agency (the Success operator) (1 person), Dragon Star Ship (the Dragon Star Craft operator) (1 person)

(Efficient Ferry Boarding)

Interviews with ferry users and others confirmed that the new ferry terminal has reduced the time required to board ferries by separating the flow line from those of containerized cargo loading and unloading operations. According to the interview survey, at the old ferry terminal, ferry passengers had to wait while containerized cargos were being loaded and unloaded. Ferry passengers were required to arrive at the terminal three hours before boarding time. At the new ferry terminal, there is no such waiting time, and ferry passengers can board ferries as soon as they arrive at the terminal on time for boarding, making boarding more efficient.

(Efficient Containerized Cargo Operation)

Interviews with container cargo-handling operators revealed that the relocation of the ferry terminal has improved the efficiency of container cargo handling operations. Specifically, before the relocation of ferry terminal, (i) the space was too cramped and there was not enough room for containers, and (ii) the lines of flow for container cargo handling operations and those for ferry passengers were intermingled, and in some cases container cargo handling operations had to be

stopped to accommodate ferry passengers. This resulted in inefficient container cargo loading and unloading operations. The relocation of the ferry terminal has improved the efficiency of containerized cargo handling operations, such as increasing the volume of containerized cargos handled per hour, by securing space for containers and eliminating stoppages in containerized cargo handling operations due to passengers boarding and disembarking from ferries. The results of the survey confirmed the increase in the number of container cargos handled per hour after the completion of the project, as described in the quantitative effect section above.

(Improved Access to Enclave and the Remote Islands)

Interviews with ferry users and businesses operators on the remote islands and enclave confirmed that the construction of the new ferry terminal and the increased number of ferry services have increased the availability of ferries and the ability to go to Dili when necessary, increasing the convenience of ferry transportation and access from the remote island and enclave to Dili and vice versa.

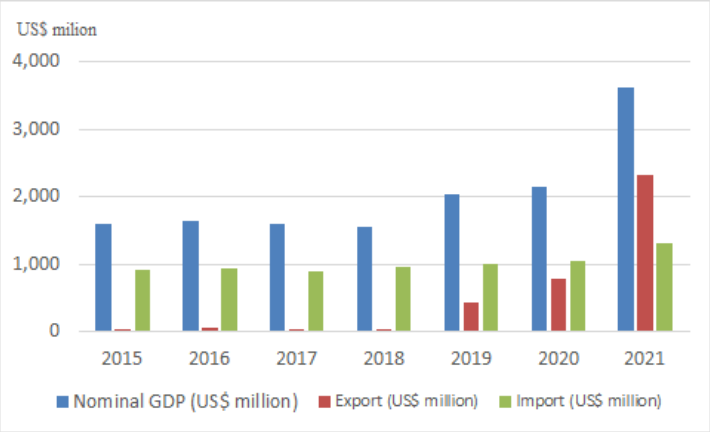
3.3.2 Impacts

3.3.2.1 Intended Impacts

The intended impact envisioned by the project was to "improve access to enclave and remote islands" and "promote economic activities through the expanded maritime transportation".

Timor-Leste's nominal GDP increased from US$ 2,029 million in 2019 to US$ 3,621 million in 2021, partly due to increased exports (see Figure 1 below). As mentioned in "3.1.1 Relevance" above, the export volume of containerized cargo handled at Dili Port increased from 27,703 TEU in 2019 to 22,869 TEU (30,492 TEU on an annual basis[24]) by September 2022, when containerized cargo operations were transferred to Tibar Port. In addition, as mentioned above, it is also confirmed that the efficiency of containerized cargo handling operation has been increased by this project. Thus, the project is considered to have supported a part of this increase in exports. However, it is difficult to quantitatively measure the contribution of the project.

[24] The export volume per month in 2022 was 2,541 TEU, and the annual export volume would be 30,492 TEU when recalculated over 12 months.



Source: The World Bank World Development Indicator

Figure 1 Nominal GDP, exports and imports of Timor-Leste

Through the interviews with ferry passengers, container cargo handlers, transporters, and retailers around Oecusse Port and Atauro Port in the ex-post evaluation, the following qualitative impacts were confirmed, although these are not impacts of this project alone.

(Improving the Quality of Life of Local Residents in Enclave and Remote Islands)

In the interviews with local residents, it was heard that the construction of the new ferry terminal, which has enabled an increase in ferry services, has improved the quality of life of local residents on remote islands and enclave. Specifically, the increase in the number of ferry services has: (i) made it easier to purchase and transport goods from Dili, making it possible to purchase daily necessities such as rice and cooking oil at local stores and to purchase new goods such as construction materials[25], (ii) created employment opportunities and increased income earning opportunities through the expansion of existing retail stores as well as the entry of new retail stores, and (iii) made it more convenient to travel to Dili when necessary for hospitals, meetings, etc. As such, certain contributions made by this project to the improvement of living standards and convenience for local residents in enclave and remote islands by increasing accessibility to Dili have been confirmed.

(Revitalization of Economic Activity on Remote Islands and Enclave)

The construction of a new ferry terminal and increased ferry services have improved transportation to enclave and remote islands, which has had a positive impact on existing businesses and the entry of new businesses, confirming the revitalization of the local economy,

[25] When the number of ferry services was limited, the transportation of goods from Dili was delayed when ferry services were cancelled due to rain or other reasons, causing local retailers to run out of food and other daily necessities.

albeit only partially. Specifically, as mentioned above, local retailers have found it easier to purchase products to sell, which has led to an increase in the volume of products purchased and sold, as well as an increase in revenues due to the expansion of the types of products sold (in addition to daily necessities, including snacks, clothing, and building materials). This has led to the expansion of existing stores and the entry of new retailers, which has had a positive impact on the retail industry. On the other hand, there were few comments regarding the impact on increases in consumers' income. Most of the comments were that, with the increase in ferry services, local retailers are now able to keep necessary quantities of daily necessities and other items in stock at all times and consumers are able to purchase necessary quantities.

This has led to increases in retailers' sales, while previously consumers could not purchase necessary amounts of these goods due to the insufficient stock in the local retail shops. In the fishing industry, one of the main industries on Atauro Island, dried fish used to be the main product sold, but with the increase in fresh fish purchases for sale from Dili due to increased ferry services and the increase in fish consumption by tourists, fishermen's income has increased. This has led some fishermen to start seaweed farming and fishnet sales as a side business, confirming the positive impact on fishermen. While the construction of the new ferry terminal and the increased number of ferry services may have had an impact on stimulating economic activities in certain segment of industries, many respondents said that it had not led to an overall increase in economic activity.

3.3.2.2 Other Positive and Negative Impacts

1) Impacts on the Environment

At the time of project planning, it was judged that the project was not regarded as a large-scale project in the port sector and that any undesirable impact on the environment through project implementation would be insignificant. The project area did not fall under the sensitive characteristics and sensitive areas based on *JICA's Guideline for Environmental and Social Considerations (April 2010)*. Thus, the project was categorized as Category B. The simplified environmental impact statement for the project was approved in June 2017. According to the implementing agency, during the construction period, the contractor monitored air, water, waste, soil pollution, vibration, noise, and odor according to the determined frequency and content, and the environmental monitoring report obtained from the implementing agency did not show any negative impact on the natural environment. In addition, no specific complaints were reported from surrounding residents or other parties.

2) Resettlement and Land Acquisition

The project site was within existing port facilities, and no relocation of residents or land acquisition occurred as a result of project implementation.

3) Gender Equality, Marginalized People, Social Systems and Norms, Human Well-being, and Human Rights

There were no issues related to gender equality, marginalized people and social systems and norms, human well-being, and human rights in this project. As for the impact on marginalized people, the introduction of a movable platform has ensured the safety of all ferry passengers, including children, the elderly, and physically challenged people, by allowing boarding and disembarking to take place on a flat ramp. In addition, although not envisioned in the preparatory study for this project, a slope to the platform has been installed beside the passenger walkway for the use of wheelchairs, etc., ensuring safe boarding and disembarkation for the elderly and physically challenged people. For the results of the qualitative study conducted at the time of this ex-post evaluation regarding ensuring safety for children, the elderly, and physically challenged people when boarding and disembarking from ferries, see the box in "3.3.1.2 Qualitative Effectiveness" above.

As mentioned above, this project has mostly achieved its objectives. Therefore, effectiveness and impacts of the project are high.

3.4 Sustainability (Rating: ②)

3.4.1 Policy and System

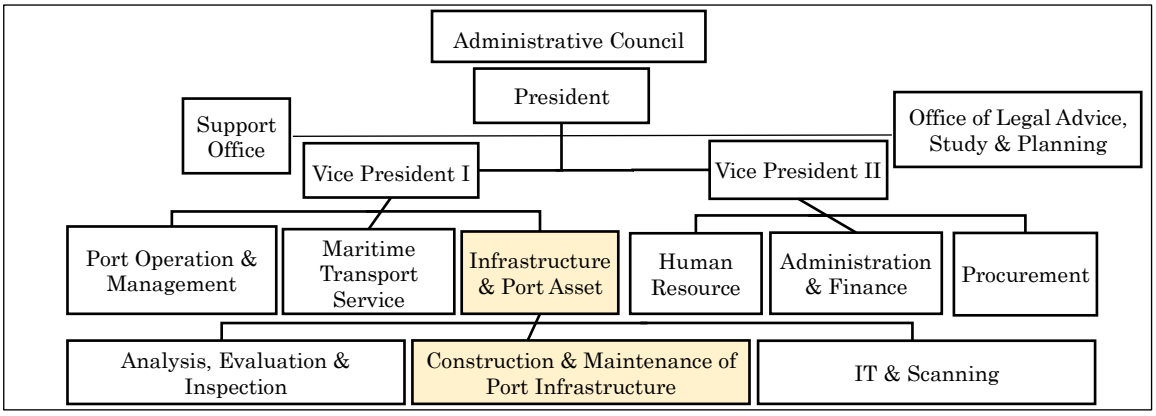
As mentioned in section “3.1.1 Relevance”, the national-level development plan focuses on infrastructure development in the port sector with no policy changes. The proposed redevelopment plan for Dili Port, which is currently under consideration, calls for Dili Port to be developed as a tourist marina, with hotels, apartments, commercial facilities, a cruise terminal, a marina, parks, and other facilities through PPP, while the new ferry terminal will continue to be operated and maintained by APORTIL and will also serve as a domestic passenger ferry terminal connecting Dili Port to the regional ports that are planned to be developed in the future.

As stated above, the current ferry terminal will continue to be operated under its current legal status and operation and maintenance regime without being affected by the redevelopment of Dili Port. Thus, no issues have been observed.

3.4.2 Institutional/Organizational Aspect

APORTIL is responsible for the operation and maintenance of the facilities developed under the project. At the time of the ex-post evaluation, APORTIL had 94 employees, and the Division of Infrastructure Ports Assets, with 11 staff members, 6 of whom are engineers, was in charge of

the maintenance of the facilities. According to APORTIL, since large-scale maintenance work[26] is outsourced to outside contractors through a bidding process, the number of staff required for the current maintenance work is generally sufficient, and there are no issues related to maintenance caused by staff shortages. At the time of the ex-post evaluation, no specific problems in terms of the number of personnel were identified in the maintenance of the facilities developed in this project. On the other hand, some problems were identified in the technical aspects, as described below.



Source: documents provided by APORTIL

Figure 2 APORTIL Organization Chart

3.4.3 Technical Aspect

Minor maintenance tasks are performed by three of the six engineers, while major maintenance tasks are outsourced to outside contractors through a bidding process. According to the implementing agency, three of the engineers in charge of maintenance have sufficient technical competence, but the technical competence of the staff, including the other three engineers, was not sufficient. Although the implementing agency has been receiving support to enhance the capacity for facility maintenance and management from JICA experts, the number of new staff members has been increasing due to personnel transfers, etc., and according to the implementing agency, ongoing support for the strengthening of technical capacity is necessary.

There are no maintenance manuals and maintenance plans for the ferry terminal, and basically no periodic preventive maintenance has been performed at the time of the ex-post-evaluation, with some exception[27], JICA long-term experts (2012-2016 and 2017-2020) prepared inspection and maintenance manuals as well as specific details for and frequency of preventive maintenance.

[26] For example, permanent repair of jetty concrete damages caused by a ship collision as pointed out in the defect inspection report described below.

[27] The only periodic maintenance performed is electrical corrosion protection of the jetty, which is performed annually.

They also provided awareness-raising and technical guidance related to maintenance activities. According to the implementing agency, the technical assistance by JICA long-term experts greatly contributed to the staff's ability to maintain and manage the facility. However, these manuals and other documents have not been updated for the new ferry terminal and were not being used by the staff at the time of the ex-post-evaluation. According to a former JICA long-term expert, the reasons for this were: (i) a lack of awareness of the need for periodic maintenance and insufficient technical knowledge, (ii) insufficient transfer of the technical knowledge provided by JICA experts due to personnel transfers and staff turnover, and (iii) inadequate maintenance budget. With regard to (i) above, although JICA experts had conducted activities to enhance the knowledge and awareness of staff regarding the need for preventive maintenance and the appropriate use of facilities during their assigned period, it is believed that the reform of such awareness within the organization has not taken root due to staff transfers and other factors.

As mentioned above, although the implementing agency has recognized the need to improve the technical capacity of their staff, there are no regular training programs on maintenance and management within the organization, and training programs supported by JICA and other donors are only occasion for the staff training. The condition and the maintenance status of the port facilities can be ascertained from the port facilities database that was developed with the assistance of JICA's short-term expert (2015). However, due to flood damage in April 2021, the PC on which the database was installed broke down and the database could not be restored. At the time of the ex-post evaluation, the database was still unusable and there were no plans for its restoration.

As described above, in terms of the technical aspects of facility maintenance, there are no manuals or plans for the maintenance of the facilities developed under this project, and while there are a few staff with sufficient technical skills, regular training programs are not conducted within the organization to improve staff skills. Despite the support and guidance of JICA experts, regular maintenance is rarely implemented except for a few exceptions. Although JICA experts promoted knowledge and awareness-raising regarding maintenance, there are many technical issues, such as the fact that such awareness-raising has not taken root in the organization due to staff transfers and other factors. Currently, the implementation of proactive efforts to improve maintenance capacity has not been recognized in APORTIL, and ongoing supports are needed to improve maintenance capacity. In view of this situation, JICA is planning to continue to support APORTIL in strengthening its maintenance capacity by inviting APORTIL staff to participate in JICA training and dialogue programs, dispatching JICA experts, and developing an action plan to improve APORTIL’s maintenance and management system as a part of the ongoing technical cooperation "The Project on Strategic Port Master Plan in Timor Leste". However, as long as there is no indication of awareness and efforts toward proactive capacity

building, the results of capacity building through continued supports are uncertain.

As it continues to be difficult to allocate sufficient budget for maintenance, in order to properly implement maintenance activities within the limited budget, it is necessary to give priority to routine preventive maintenance works and to strive for the early detection and repair of problems so that repairs that require large budgets do not occur. Thus, in order that the appropriate maintenance activities are conducted, continuous supports for non-technical aspects, such as raising the awareness of staff and increasing their knowledge will be necessary, in addition to post-project support, such as continuous monitoring by JICA experts and others, until a system is established as an organization in which their awareness of preventive maintenance among the staff in charge takes root. On top of this, regular internal training programs should be conducted to improve the knowledge and technical skills of the staff in charge and to establish a system whereby guidance can be provided through on-the-job training, in order to improve the organizational capacity.

In light of the above, in addition to the lack of manuals and plans related to maintenance and management and the lack of regular internal training, continuous supports are needed to be provided to APORTIL because there is insufficient awareness regarding the maintenance, and no awareness or commitment to proactive capacity building is recognized. However, the results of the ongoing supports are unclear. Thus, it is considered that there are some issues in the technical aspect.

3.4.4 Financial Aspect

APORTIL's income and expenditure in recent years are shown in Table 11. APORTIL's revenues include ferry fees, containerized cargo handling revenues, and warehouse revenues, which are collected by APORTIL and paid to the national treasury, not directly allocated to APORTIL's expenditure. Thus, APORTIL's current revenues are allocated from the Consolidated Fund for Timor-Leste based on an annual budget request to the government[28]. Both the amount allocated from the Consolidated Fund for Timor-Leste and the revenues collected by APORTIL are shown in Table 11. It should be noted that APORTIL is to become financially independent since 2016, but the budget and accounting methods remain the same as in the previous method.

A comparison of the amounts collected by APORTIL with its expenditure shows that in each year, the amounts exceeded expenditure, resulting in an operating surplus. On the other hand, as

[28] Other characteristics of APORTIL's financial aspects include: (i) if there is a budget shortfall during the fiscal year, a budget request is made mid-year and funds are allocated as needed; (ii) if there is a surplus of funds from the allocated budget from the Consolidated Fund for Timor-Leste at the end of the fiscal year, it is required that the surplus be returned to the Fund; and (iii) APORTIL uses the cash basis accounting method with single-entry book keeping, and while there are assets and liabilities belonging to APORTIL, a balance sheet has not been prepared. Neither has a calculation of the depreciation of assets such as buildings been performed. Therefore, the final status of income and expenditure is unknown.

shown in Table 12 below, the operating income and expenses for APORTIL-owned ferries (the Berlin Nakroma and the Berlin Ramelau) have shown a significant deficit every year. The reason for the significant decline in revenues in 2021 was due to the fact that the Berlin Nakroma did not operate until October 2021 due to maintenance. With the transfer of port cargo handling operations at Dili Port to Tibar Port in October 2022, APORTIL is no longer able to collect revenues related to such operations. It is not possible to exactly determine the revenues related to port cargo handling operations since revenues other than APORTIL's ferry operation revenues, and water charges used by other vessels, are booked in the same account item in the APORTIL. However, "The Project on Strategic Port Development Master Plan in Timor-Leste", a JICA technical cooperation project currently underway, analyses that APORTIL's revenue will decrease significantly due to the transfer of all port cargo handling at Dili Port to Tibar Port, and that it will not be financially self-sustaining based on ferry operation revenue alone. Therefore, APORTIL has been considering other sources of income besides ferry operation in the A*ction Plan for Improvement of Port Operation and Maintenance System by APORTIL* to be developed under the project. Comparing the revenues from APORTIL-owned ferry operations to the total amounts APORTIL collected, the ratio of ferry operation revenues to APORTIL's overall revenue collections between 2018 and 2022 ranged from 1.5% to 19.6% (except for 2021 when the Berlin Nakroma was not operated, the ratio then ranging between 11.2% and 19.6%) (Table 12).

Table 11 APORTIL Operating Income and Expenses (Actual)

(Unit: Thousand US$)

	2018	2019	2020	2021	2022
Fund transfer from Consolidated Fund for Timor-Leste	2,207	3,638	2,270	3,896	3,640
Government subsidies (note1)	—	—	—	—	531
Amounts APORTIL collected (A)	4,118	3,461	3,230	3,535	4,264
Vessel related revenue (note 2)	3,374	2,808	2,834	3,217	3,934
Other related revenues (note 3)	740	653	396	317	330
Others	3	1	0	1	0
Expense(B)	2,033	2,948	2,001	1,652	3,061
Personnel expenses	1,012	1,111	1,215	1,141	1,454
O&M expenses	539	1,149	110	236	827
Other expenses （note 4）	481	688	676	278	779
(A)-(B)	2,085	513	1,229	1,873	1,203

Source: documents provided by APORTIL
note 1: Government subsidies in 2022 was based on applications from APORTIL due to rising fuel costs.
note 2: Vessel related revenue includes ferry fares, vessel docking fees, and containerized cargo handling fees.
note 3: Other related revenues include warehouse rental fees and water and electricity supply.
note 4: Other expenses include foreign traveling, vehicle rental, fuel, IT related expenses, other administration expenses.

Table 12 Operating Revenues and Expenses for Ferries Owned by APORTIL (the Berlin Nakroma& the Berlin Ramelau)

(Unit: Thousand US$)

	2018	2019	2020	2021	2022
Revenue from ferry operations (A)	548	389	516	55	838
Ferry related expenses (B))	1,600	1,792	1,380	815	2,277
Ferry operating balance ((A)-(B))	▲1,052	▲1,403	▲963	▲760	▲1,439
Revenue from ferry operations/total amounts APORTIL collected (Table 11 above)	13.3%	11.2%	16.0%	1.5%	19.6%

Source: documents provided by APORTIL

The maintenance budget for Dili Port is about US$ 80,000 per year, according to the APORTIL division in charge of maintenance. This amount can cover small-scale repair work, but is not sufficient for large-scale maintenance work, making it difficult to manage maintenance within the current budget. Budget allocation at an appropriate level is desirable, and in order to control future repair costs under budget constraints, it is necessary to implement maintenance activities focusing on preventive maintenance. Based on the above, there are concerns about financial sustainability. On the other hand, the government has continued to support APORTIL financially including the provision of the funds for the restoration of the facilities that needed to be repaired which was confirmed during the ex-post evaluation through a separate application to the government, and increased APORTIL budget for 2023 to US$ 5,486 million.

From the above, it can be seen that although the government continues to support financially, some issues were confirmed in terms of the perspective of aiming for financial independence.

3.4.5 Environmental and Social Aspect

With regard to environmental monitoring of the items stipulated in the simplified environmental impact assessment report approved in June 2016 after completion of the project, APORTIL has neither established nor implemented a regular monitoring system as required by the report. When the Division of Port Operation and Management discovers a problem, the department informs the Division of Infrastructure and Ports Assets. This is an ad hoc base implementation system, and it cannot be said that sufficient environmental monitoring is being conducted as required. According to APORTIL, no environmental problems have been reported so far, but there are issues with the environmental monitoring system and implementation after the project.

3.4.6 Preventative Measures to Risks

At the time of planning, the following risk factors were identified: (i) construction of the passenger terminal building to be borne by the recipient country; (ii) ferry procurement as planned; and (iii) securing the budget for operation and maintenance. As for the construction of the passenger terminal building, as mentioned above, it is scheduled to be constructed in the

future, and temporary waiting areas and a restroom have been constructed. Although this is not an issue that affects the sustainability of the project effect, its early completion is desirable from the viewpoint of effective utilization of the new ferry terminal. As for ferry procurement, at the time of the ex-post evaluation, four vessels were in operation, including those operated by private operators, and the risk of underutilization of the ferry terminal was avoided. As for the operation and maintenance budget, while budget allocation has not been sufficient, as mentioned above, a significant decrease in APORTIL's revenue is expected with the relocation of container cargo handling operations to the Tibar Port. How the APORTIL is involved in the redevelopment plan of Dili Port will have an impact on its role, organizational structure, and financial situation. Thus, close monitoring of the situation will be needed.

3.4.7 Status of Operation and Maintenance

The maintenance status of the Dili Port Ferry Terminal facilities showed that there were no problems that would interfere with the functionality of the facilities. However, there were several areas in need of repair, including damage to the handrails of the movable ramp and tilting of the LED light pole on the jetty caused by a ship collision, rust on the rampway of the movable ramp and the ramp protection plate on the jetty, failure of the LED lighting on the jetty, damage to the fire hoses, and a depleted UPS battery in the movable ramp control room[29]. In addition, children can enter the ferry terminal from the left side of the passenger gate, and immediate action is required to prevent a serious accident from occurring[30]. Among these, replacement parts for the LED lighting on the jetty and the UPS in the movable lamp operation room are not distributed in Timor-Leste and must be imported. However, importing small lots is relatively expensive, making procurement difficult. Therefore, it is desirable that the equipment selected at the time of detailed design can be easily procured locally for repair parts.

A defect inspection conducted one year after the completion of the project recommended to APORTIL that the following five items need to be addressed, three of which have not yet been addressed. Although routine visual inspections and cleaning have been conducted, periodic maintenance and repair works have not been carried out due to the lack of a sufficient maintenance budget and the lack of sufficient technical capacity on the part of staff, other than three engineers in the department in charge. The damage to the concrete portion of the jetty is

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[29] For these, an additional budget for repairs has been approved by the government, and the repair work was scheduled to begin in September 2023.

[30] A fence was installed in 2020 to prevent encroachment, but it was damaged by wind in late 2020 and no fence has not been installed since then and according to APORTIL, there have been cases of children trespassing at night. At the time of the ex-post-evaluation, a temporary fence was installed, and budgetary measures had been taken to install a permanent fence and repair damaged areas, which were expected to be completed by the end of 2023 after a contractor bidding process.

scheduled to be repaired by the end of this year. In addition, as mentioned above, the construction of the passenger terminal building, which was cancelled after the budget was secured in 2021, was scheduled to proceed with construction in 2023 with budgetary measures again. However, the project was suspended with the inauguration of the new administration in July 2023, and a resumption date has not been determined.

Table 13 Responses to the Five Items Suggested in the Defect Inspection Report

	Suggested items	Response
1	Conduct periodic inspection of the facility and perform proper maintenance	Not yet responded
2	Permanent repair of damaged concrete area of the jetty caused by “Success” collision	Not yet responded
3	Installation of buffer material to prevent direct contact of the ferry ramps with the top of the movable ramps	Responded
4	Raise ferry ramps during bad weather conditions to prevent damage to the movable ramps caused by ferry movement	Responded
5	Construction of passenger terminal building	Not yet responded

Source: documents provided by JICA, and interviews with APORTIL

Although no factors were found to hinder the functional aspects of the facilities constructed by the project, there are some areas that need to be repaired, and there are also problems that could lead to serious accidents, such as children entering the ferry terminal, which require immediate action. Daily and periodic maintenance are also rarely implemented except for visual inspections, cleaning, and electrical corrosion protection of the jetty. Some of the items suggested in the defect inspection report have also not been implemented, suggesting that there are issues regarding the current state of maintenance and operation.

As mentioned above, some minor issues have been observed in the technical, financial, and environmental and social aspects including the current status of operation and maintenance. They are not expected to be improved. Therefore, sustainability of the project effects is moderately low.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

This project was conducted to meet the increasing demand for passenger and cargo transportation and ensure their safe and efficient operation by promoting the separation of cargo and passengers at the international port in the capital city of Dili through the relocation and expansion of the existing ferry terminal, thereby contributing to the improvement of access to the enclave and remote islands, and the promotion of economic activities through the expansion of maritime transport. The project was fully in line with the country's development policy and development needs. The project was fully consistent with Japan's aid policy. While the project was linked to other JICA projects and technical assistances from other donors, the results of the links were not fully confirmed. Thus, the relevance and consistency of the project was high. While

the project period exceeded the plan due to design changes during project implementation, the project cost was kept within the plan, and thus the efficiency of the project is high. The targets for ferry berthing times and the annual number of ferry passengers, which were the operation and effect indicators, were both achieved, and a certain contribution to an increase in the number of ferry operations and efficient operation in handling containerized cargo and so on was confirmed. Through on-site interviews, qualitative effects were recognized such as ensuring the safety of passengers including children, the elderly, and physically challenged people when boarding and disembarking from ferries, efficient ferry boarding, and improved access to remote islands and enclave. In addition, project impacts such as improved quality of life and revitalization of the economic activities of residents of the enclave and remote islands were confirmed. No negative impacts on the natural and social environment due to the project were observed. Therefore, the effectiveness and impact of the project are high. Some minor issues have been observed in technical, financial and environment and social aspects of operation and maintenance including the current status of the facilities. Therefore, the sustainability of the project effect is moderately low.

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

4.2 Recommendations

4.2.1 Recommendations to the Executing Agency

(1) Prompt responses to suggestions made in the defect inspection report and other necessary repair

Items recommended in the defects inspection that have not yet been addressed (periodic inspections and proper maintenance of the facility, permanent repairs of damages to jetty concrete caused by ship collision, construction of passenger terminal building) and the items identified during the actual field survey of this ex-post evaluation (damage to the handrails of the movable ramp and jetty due to ship collision, tilting of the LED lighting pole, rusting of the rampway of movable ramps and pier ramp protection plates, failure of LED lighting on the pier, damage to fire hoses, UPS battery depletion in the movable ramp operation room, etc.) need to be addressed as soon as possible. In particular, immediate remedial actions are required to prevent children from entering the ferry terminal, which could cause serious accidents.

(2) Completion of the Timor-Leste side output

The construction of the passenger terminal building, which was to be constructed by Timor-Leste side, had not been started at the time of the ex-post evaluation. Since this passenger terminal building is essential for the effective utilization of the new ferry terminal and the convenience of ferry passengers, the construction should be carried out as planned.

(3) Improvement of the technical capacity for facility maintenance

APORTIL needs to improve its organization-wide technical capacity for facility maintenance, periodic inspections and maintenance of the new ferry terminal. As part of the ongoing development study-type technical cooperation " The Project on Strategic Port Development Master Plan in Timor-Leste ", JICA is scheduled to support APORTIL in developing an action plan to improve the APORTIL port operation, maintenance and management system, including organizational and institutional design for operation and maintenance. JICA will also dispatch a new JICA long-term expert in "Maritime Administration Management and Port Operation", in order to improve the maintenance capacity of APORTIL. It is necessary to improve maintenance capacity as an organization, through such technical assistance, by developing maintenance and operation plans and maintenance manuals, etc., for the new ferry terminal facilities and by conducting training for staff on maintenance.

(4) Additional efforts to improve safety when disembarking from ferries

Although ferry passengers' safety when boarding and disembarking from ferries has been significantly improved by this project, there are still some cases where passengers are crowded in the aisles of ferries, which is dangerous for children and the elderly, and where disembarking passengers, disembarking vehicles, and vehicles that enter to the platform to pick up luggage as well as cargo mix together on the platform, which can also sometimes be dangerous. Therefore, it is necessary to adopt measures to improve safety during disembarkation, such as announcements and guidance inside the ferry, and traffic guidance and clear separation of vehicles and passengers at the platform.

(5) Restoration of the port asset management database that serves as a ledger of port facilities and equipment

The database that serves as a ledger of port facilities and equipment, which was established with JICA assistance, was damaged by flooding in April 2021, and is still unusable. Since this database is important for proper facility maintenance management, it needs to be restored as soon as possible.

4.2.2 Recommendations to JICA

It is desirable that JICA encourage APORTOL to implement the above recommendations, monitor their implementation status, and encourage the relevant agencies as necessary.

4.3 Lessons Learned

(1) Ongoing support to improve the maintenance capacity of the implementing agency

Despite the fact that JICA provided support to the implementing agency to improve their capacity for facility maintenance through the dispatch of long-term and short-term experts during

project implementation, there were no maintenance manuals or maintenance plans at the time of the ex-post evaluation, and no maintenance work related to periodic preventive maintenance was being conducted. This is largely due to the lack of awareness of the importance of preventive maintenance and periodic maintenance activities in the implementing agency, which is thought to reflect the lack of sufficient experience and knowledge related to maintenance activities to date.

It is often difficult for small and new countries and organizations such as Timor-Leste to secure sufficient maintenance budgets, and maintenance activities with a limited budget should be focused on preventive maintenance in a way that incurs as little repair cost as possible. To this end, it is necessary to change the mindset of staff involved in maintenance activities from thinking about repairing damage when it occurs to thinking about what should be done to prevent damage, and to share knowledge and experience about the importance of preventive maintenance, so that regular maintenance activities can take root within the organization. Therefore, for organizations that do not have sufficient awareness of such preventive maintenance, it is desirable that support of JICA experts and others be provided to encourage a change in awareness of maintenance activities during project implementation, and also to promote awareness of the importance of preventive maintenance and other periodic maintenance within organizations through continuous support and periodic monitoring of implementation for several years after project completion.

(2) Selection of equipment considering local conditions

As described in 3.4.7 “Status of Operation and Maintenance," repair parts for LED lighting on the jetty and UPS in the movable ramp operation room are not available in Timor-Leste and must be imported from overseas. However, importing parts is often difficult due to the relatively high cost of importing in small lots. Therefore, in countries where it is not easy to import repair parts, such as in the case of small island countries, it is desirable to examine whether it is possible to use local repair parts and choose easily procurable equipment at the time of the overall design of the project.

(3) Continuous collaboration with donors providing assistance in the same sector

Technical assistance related to this project was provided to the implementing agency by GIZ and JICA. At the time of planning, the areas of the assistance were determined based on discussion between GIZ and JICA so that they would be complementary and comprehensive with no overlap: GIZ support for human resource development in the maritime transport sector, and JICA support for port operations and management, and capacity building for the maintenance of facilities and equipment. In addition, during implementation of the project, continuous information sharing, participation in workshops, knowledge sharing in areas where JICA experts did not have sufficient knowledge, and other continuous collaboration were implemented. When multiple donors provide related technical assistance to the same implementing agency, it is desirable that coordination take

place not only to avoid duplication of assistance areas, but also to coordinate and collaborate with other donors to enhance the overall effectiveness of the assistance through continuous information and knowledge sharing during project implementation.

5. Non-Score Criteria

5.1 Performance

5.1.1 Objective Perspective

JICA has recognized the need for continuous support for the maintenance and operation of APORTIL, as awareness of maintenance and operation did not take root in APORTIL, and adequate maintenance activities were not implemented. Thus, JICA provided technical assistance during the implementation of the project, including the dispatch of JICA long-term experts and sending APORTIL staff in charge of facility maintenance to training programs in Japan. Even after completion of the project, JICA has continued to implement initiatives to improve the maintenance capacity of the implementing agency by formulating an action plan to improve the port operation and maintenance management system as part of the ongoing technical cooperation " The Project on Strategic Port Development Master Plan in Timor-Leste " as well as dispatching new JICA long-term experts, and other efforts.

5.2 Additionality

None

(End)