

Republic of the Philippines

FY2021 Ex-Post Evaluation Report of  
Japanese Grant Aid Project

“The Programme for Rehabilitation and Recovery from Typhoon Yolanda” and  
“The Project for Reconstruction of Municipal Halls in Lawaan and Marabut Municipalities”

External Evaluator: Keiko Asato, Value Frontier Co., Ltd

## 0. Summary

This is an integrated evaluation study of “The Programme for Rehabilitation and Recovery from Typhoon Yolanda” (hereinafter referred to as “Programme for Rehabilitation and Recovery from Yolanda”) and “The Project for Reconstruction of Municipal Halls in Lawaan and Marabut Municipalities” (hereinafter referred to as “Project for Reconstruction of Municipal Halls”).

The objective of the Programme for Rehabilitation and Recovery from Yolanda was to restore the public services and economic activities, strengthen public facilities, restore the weather forecasting and warning system by constructing various facilities, and procure equipment for social, economic, and disaster prevention infrastructure in the areas Typhoon Yolanda affected, thereby contributing to the early recovery and reconstruction of the damaged areas. The objective of the Project for Reconstruction of Municipal Halls was to strengthen the municipal halls’ shelter function and improve administrative services by rebuilding the municipal halls in Lawaan municipality, Eastern Samar, and Marabut municipality, Samar, which Typhoon Yolanda destroyed, helping those communities overcome vulnerabilities and stabilize people’s livelihood and production infrastructure.

Regarding relevance, this Project was consistent with the development policy and development needs of the Philippines at the time of planning and post-evaluation. At the time of planning, the appropriate programme and project were formulated in light of the specific situation in the Philippines at that time. The combination of sub-projects in various sectors, such as education, fisheries, health, and electricity, in the Sector Grants<sup>1</sup> was also useful. Regarding coherence, the Project aligned with Japan’s ODA Policy and international frameworks. Regarding internal coherence, a certain degree of coordination and outputs with other JICA projects was observed, and regarding external coherence, some adjustments were made to avoid duplication of cooperation with other donors, and a certain extent of outputs was confirmed. Therefore, the relevance and coherence are high. Although the entire project period exceeded the plan, the project cost was within the plan, so the efficiency is high. Regarding effectiveness, the indicators set for each sub-project at the time of planning were not appropriate to judge effectiveness, so the

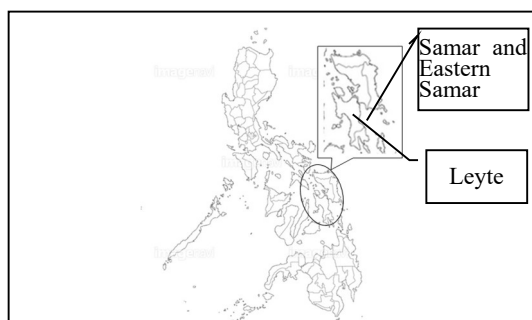
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<sup>1</sup> Sector Grants is a grant aid scheme, under which multiple grant aid projects are composed and implemented. [https://www.jica.go.jp/activities/schemes/grant\\_aid/type.html](https://www.jica.go.jp/activities/schemes/grant_aid/type.html) (accessed July 22, 2022). In this report, the entire grant project consisted of “Programme for Rehabilitation and Recovery from Yolanda” and “Project for Reconstruction of Municipal halls,” referred to as the “Project”. The multiple grant aid projects that compose it are referred to as “sub-project(s).”

evaluators set alternative indicators at the time of the ex-post evaluation and assessed the effectiveness based on the degree of its achievement. The utilization of facilities and equipment is appropriate, and it can be considered that the project objective has been achieved. Although some of the sub-projects showed limited qualitative effects, the outcomes were confirmed in each of them. In terms of impacts, quantitative and qualitative effects related to “Building safer cities,” “Recovery of People’s Daily Life,” and “Recovery of Regional Economy and Promotion of Industries,” which were this Project’s main framework of the basic policy of the rehabilitation and reconstruction, were observed as well as synergistic effects with other projects. The effects to be assessed positively were observed; therefore, effectiveness and impacts are high. In the programme and project, there are no problems in terms of policy and systems, institutional/organizational, technical, environmental, or social aspects or operation and maintenance. In terms of financial aspects, although there were some sub-projects without specific budget information, no sub-projects are likely to face difficulties in continuing their operations due to budget shortfalls. Therefore, the sustainability is high.

In light of the above, this Project is evaluated as highly satisfactory.

## 1. Project Description



Project Location(s)  
(Source: External evaluator)



Santo Niño Elementary School (Tanauan)  
(Source: External evaluator)

### 1.1 Background

On November 8, 2013, Typhoon Yolanda, described as “unprecedented in its scale,” mainly crossed the Visayas region of the Philippines.

The typhoon caused extensive damage to houses; public facilities, such as municipal halls, schools, and medical facilities; economic infrastructure, such as roads including bridges, airports, and ports; and public services, such as water supply and electricity in Region Eight, which includes the eastern coast of northern Leyte and the southern coast of Samar Island, requiring prompt restoration and reconstruction assistance.

In response to this situation, the Technical Cooperation for Development Planning “Urgent development study on the project on Rehabilitation and Recovery from Typhoon Yolanda in the Philippines” (2014-2017) was implemented. This Project consisted of “Recovery and Reconstruction Planning,” “Quick Impact Projects” (hereinafter referred to as “QIPs”), and

“Preparatory Survey for this Project” and was implemented, setting (1) Building safer cities, (2) Recovery of People’s Daily Life, and (3) Recovery of Regional Economy and Promotion of Industries” as basic rehabilitation and reconstruction policies.<sup>2</sup>

In line with this policy, this Project was also implemented with the aim of supporting highly prioritized sub-projects for early recovery and reconstruction, such as social, economic, and disaster prevention infrastructures, thereby contributing to the formation of a disaster-resilient society.

## 1.2 Project Outline

Programme for Rehabilitation and Recovery from Yolanda: The objective of this programme is to restore public services and economic activities,<sup>3</sup> strengthen public facilities, and restore the weather forecasting and warning system by constructing various facilities and procuring equipment for the social, economic, and disaster prevention infrastructures in the areas Typhoon Yolanda affected, thereby contributing to the early recovery and reconstruction of the damaged areas.

Project for Reconstruction of Municipal halls: The objective of this project is to strengthen the municipal halls’ shelter function and improve administrative services by rebuilding the municipal halls in Lawaan municipality, Eastern Samar, and Marabut municipality, Samar, which Typhoon Yolanda destroyed, thereby helping the communities overcome vulnerabilities and stabilizing their livelihoods and the production infrastructure.

### <Grant Aid Project>

Grant Limit / Actual Grant Amount	Programme for Rehabilitation and Recovery from Yolanda 4,600 million yen / 4,214 million yen Project for Reconstruction of Municipal Halls 507 million yen / 502 million yen
Exchange of Notes Date <sup>4</sup> / Grant Agreement Date <sup>5</sup>	Programme for Rehabilitation and Recovery from Yolanda Exchange of EN: March 2014 / Exchange of GA: May 2014 Amendment of EN: December 2017 / Amendment of GA: June 2016 (first), December 2017 (second) <sup>6</sup> Project for Reconstruction of Municipal Halls

<sup>2</sup> *The urgent development study on the project on Rehabilitation and Recovery from Typhoon Yolanda in the Philippines, Final Report (I), Main Report, June 2015, (pp.46)*

<sup>3</sup> Although “economic activity” was not included in the outcomes in the ex-ante evaluation, considering the contents of the outputs, economic activity will be added to the outcomes in this evaluation.

<sup>4</sup> Exchange of Note, hereinafter referred to as “EN”

<sup>5</sup> Grant Agreement, hereinafter referred to as “GA”

<sup>6</sup> Initially, the "Yolanda Rehabilitation and Reconstruction Plan" was initiated as a single program (Sector Grants), but as described in 3.2.2.1, due to the administrative costs for the wide coverage of the target sites and the rising cost of materials and labor due to high reconstruction demand, the bidding process was unsuccessful. Consequently, the sub-project of municipal halls, which comprised the Sector Grants, was cut out and reformulated as the "Project for Reconstruction of Municipal Halls", and for which, a separate EN and GA were signed and implemented in December 2015. The GA for the "Project for Reconstruction of Municipal Halls" covered only the project cost, while the consultancy services were covered by the GA for the "Programme for Rehabilitation and Recovery from Yolanda". The GA for the "Programme for Rehabilitation and Recovery from Yolanda Yolanda" was amended in December 2017, in order to manage the “Project for Reconstruction of Municipal Halls” which was completed in May 2018.

	Exchange of EN: October 2015 / Exchange of GA: December 2015 Amendment of EN: December 2017 / Amendment of GA: December 2017
Executing Agency(ies)	For consultant service: Department of Finance (DOF) For construction and procurement: Department of Public Works and Highways(DPWH), Department of Transportation and Communication / Civil Aviation Authority of the Philippines(DOTC/CAAP), Department of Energy/National Electrification Administration(DOE/NEA), Department of Labor and Employment/National Maritime Polytechnic(DOLE/NMP), Department of Health(DOH), Department of Agriculture/Bureau of Fisheries and Aquatic Resources(DA/BFAR), Department of Science and Technology/ Philippine Atmospheric, Geophysical and Astronomical Services Administration(DOST/PAGASA)
Project Completion	Programme for Rehabilitation and Recovery from Yolanda: September 2017 Project for Reconstruction of Municipal Halls: May 2018
Target Area	Eastern Visayas region: (Tacloban is city, others are all municipality) Leyte province: Tacloban, Palo, Tanauan, Tolosa, Dulag, MacArthur, Samar province: Marabut, Paranas Eastern Samar province: Lawaan, Giporlos, Borongan, Guiuan
Main Contractor(s)	Oriental Consultants Global Co., Ltd., CTI Engineering International Co., Ltd., MOHRI ARCHITECT & ASSOCIATES, INC., Joint Venture of Japan Weather Association., International Meteorological Consultant Inc., PACET corp., K.I.TO Architects & Engineers Inc.
Main Consultant(s)	TSUCHIYA CORPORATION., SHIMIZU CORPORATION, SUMITOMO MITSUI CONSTRUCTION CO., LTD., NISHIZAWA LIMITED, inc.
Procurement Agency	Ogawa Seiki Co., Ltd., ITOCHU Corporation., Sumitomo Corporation Power & Mobility Co., Ltd., SIRIUS Co., Ltd., Mitsui E&S Holdings Co., Ltd., TEC International Co., Ltd.
Basic Design/ Preparatory Survey	In programme and project : January–April 2014(Among the “Programme for Rehabilitation and Recovery from Yolanda,” study for the “Project for rehabilitation of meteorological Radar System in Guiuan” was done from January to May 2014)
Related Projects	Technical Cooperation : <ul style="list-style-type: none"> <li>• The Grass-root Technical Cooperation Project “Development of mariculture and processed products using Oku-Matsushima technique in typhoon Yolanda affected areas”(2016-2019)</li> <li>• Public-Private Partnership “Verification Survey with the Private Sector for Disseminating Japanese Technologies for Typhoon-Resistant Fish Farming Cage with the Submersible Function in the Typhoon Stricken Areas” (2015-2019)</li> <li>• Technical Cooperation for Development Planning " The urgent development study on the project on Rehabilitation and Recovery from Typhoon Yolanda in the Philippines” (2014-2017)</li> <li>• Technical Cooperation Project “Philippines National Maritime Polytechnic Training Centre Project” (1985-1991)</li> </ul> Grant aid project : <ul style="list-style-type: none"> <li>• The Project for Improvement of the Meteorological Radar System (2009)</li> </ul> Other donor’s projects : <ul style="list-style-type: none"> <li>• UNDP “Recovery and resilience in Selected Typhoon Yolanda Affected Communities in the Visayas”(2014-2017)</li> <li>• ADB “Support for Post Typhoon Yolanda: Disaster Needs Assessment and Response”(2013-2017)</li> </ul>

## 2. Outline of the Evaluation Study

### 2.1 External Evaluator

Keiko Asato, Value Frontier Co., Ltd.<sup>7</sup>

### 2.2 Duration of Evaluation Study

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

Duration of the Study: August 2021 – January 2023

Duration of the Field Study: None<sup>8</sup>

### 2.3 Constraints during the Evaluation Study

Due to travel restrictions imposed by the novel coronavirus infection (hereinafter referred to as “Covid-19”) and in consideration of the security condition in rural areas after the presidential election, Japanese consultants did not conduct field surveys, but they collected information through the local consultant. This limited the information collection at some sites, such as elementary schools and regional health units (hereinafter referred to as “RHUs”) because information was not provided from all sites.

## 3. Results of the Evaluation (Overall Rating: A<sup>9</sup>)

### 3.1 Relevance/Coherence (Rating: ③<sup>10</sup>)

#### 3.1.1. Relevance (Rating: ③)

##### 3.1.1.1 Consistency with the Development Plan of the Republic of the Philippines

At the time of planning, the Philippine Development Plan (hereinafter referred to as “PDP”) (2011-2016) identified the investment in adequate infrastructure for flood risk reduction as one of its major policies, and it raised the necessity to alleviate and manage the disaster risk by not only structural investment but also non-structural efforts (such as ensuring the resilience against natural disasters by strengthening people’s adaptive capacity). In addition, the National Disaster Risk Reduction Management Plan (hereinafter referred to as “NDRRMP”) (2011-2028) set the goal of a “safe, adaptive and disaster resilient Philippine society” and set “recovery and reconstruction from disaster” as a high priority initiative, based on the principle of “better restoration” (Build Back Better<sup>11</sup> (hereinafter referred to as “BBB”)).

<sup>7</sup> The Foundation for Advanced Studies on International Development participated in this ex-post evaluation as reinforcement.

<sup>8</sup> The local consultant conducted a field survey (from April 17 to May 1, 2022).

<sup>9</sup> A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

<sup>10</sup> ④: Very High, ③: High, ②: Moderately Low, ①: Low

<sup>11</sup> An attempt to view disasters from a global perspective, consider the environment, and encourage social resilience includes measures to mitigate disasters and revitalize sustainable communities (Sendai Framework for Disaster Risk Reduction, p.23)

In the “Updated PDP” (2017-2022)<sup>12</sup> at the time of the ex-post evaluation, the importance of strategies related to disaster risk reduction continues to be emphasized and the NDRRMP (2011-2028) remains valid, with the aim of creating a “safe, adaptive and disaster resilient Philippine society.” As key initiatives to achieve this goal, (1) disaster prevention and mitigation, (2) preparedness for disaster, (3) disaster response, and (4) recovery and rehabilitation from disasters are mentioned.<sup>13</sup>

### 3.1.1.2 Consistency with the Development Needs of the Republic of the Philippines

At the time of planning, Typhoon Yolanda, which hit the Philippines, caused unprecedented damage throughout the country, leaving 6,000 people dead, more than 1 million houses destroyed, and more than 4 million evacuees. Particularly on the eastern coast of northern Leyte island and the southern coast of Samar island, social infrastructure, such as municipal halls, elementary schools, RHUs, and the Eastern Visayas Medical Centre (hereinafter referred to as “EVMC”<sup>14</sup>), and economic infrastructure, such as roads, airports, and electricity, was severely damaged. The government of the Philippines estimated the total damage as US\$12.9 billion overall and the reconstruction cost as US\$8.2 billion. However, the Philippines’ revenue in FY2013 was US\$4.61 billion. The burden of the reconstruction cost was extremely high, and it was difficult for the country to recover and restore on its own.

Even at the time of the ex-post evaluation, typhoons heading toward the Philippines are becoming more ferocious every year,<sup>15</sup> and it is still important to mitigate disaster risks by strengthening social and economic infrastructure and developing robust facilities that can withstand typhoons. The general public, including socially vulnerable people, frequently used the social infrastructure this Project rehabilitated so it was necessary to design it so that these people could also use it in a fair manner.

### 3.1.1.3 Appropriateness of the Project Plan and Approach

In late November 2013, shortly after Typhoon Yolanda hit the Philippines, JICA dispatched a survey team<sup>16</sup> consisting of experts from various fields and departments at JICA Headquarters to

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<sup>12</sup> The PDP is assessed and updated on its mid-term implementation to reflect the recent developments in the past years. Hence updated PDP (2017-2022) focused on the recovery and resilience from the COVID-19 pandemic.

<sup>13</sup> NDRRMP p.27

<sup>14</sup> At the time of the disaster, this centre was called the “Eastern Visayas Regional Medical Center,” but at the time of the post-event evaluation, the name was changed as described above. The name, at the time of ex-post evaluation, is uniformly used in this report.

<sup>15</sup> Prior to Typhoon Yolanda, tropical cyclones were classified into four warning levels: 185 km/h and above, 100-185 km/h, 60-100 km/h, and 30-60 km/h. After Typhoon Yolanda, PAGASA revised the classification system and raised the wind speed ranges to 220 km/h and above, 118-220 km/h, 89-117 km/h, 62-88 km/h, and 61 km/h and below, and warnings are now issued at five levels (World Meteorological Organization website, [https://ane4bf-datap1.s3-eu-west-1.amazonaws.com/wmocms/s3fs-public/modified\\_tcws\\_for\\_wmo.pdf?TJ91amk3aBWGjDIRIk7fmmANc3keuU1q](https://ane4bf-datap1.s3-eu-west-1.amazonaws.com/wmocms/s3fs-public/modified_tcws_for_wmo.pdf?TJ91amk3aBWGjDIRIk7fmmANc3keuU1q)) (accessed September 12, 2022). After Typhoon Yolanda, super typhoons (typhoons with speeds of 220 km/h or more) have also made landfall, including Lawin (2016), Rolly (2020), and Odette (2021).

<sup>16</sup> Experts in transportation, water, infectious diseases, etc. from outside the JICA as well as professionals in JICA, from the Social Infrastructure, Human Development, and Electricity and Energy Departments.

assess the needs of the affected situation in a wide range of areas. The JICA Philippine Office also briefed the survey team on sectoral information obtained through their previous projects and cooperated with them to facilitate the understanding of the situation and to formulate the Project. JICA also explained the land use proposal based on the no-resident zones and restricted-use zones to the president and the Secretaries involved in reconstruction and obtained their understanding.

The following month, the Philippine government announced “Recovery Assistance for Yolanda” (hereinafter referred to as “RAY”) and requested assistance from other countries. While the donors competed with each other for the quantity of assistance amount, JICA set BBB as the recovery philosophy, emphasizing the need to use the disaster as an opportunity to create a more resilient society rather than returning to pre-disaster conditions and the importance of the recovery process in itself through rehabilitation and reconstruction. The Secretaries of the major Philippine departments and agencies endorsed this philosophy, which became the basic principle of cooperation between JICA and the Philippine government. Based on this background, after discussions among the Philippine government, experts, JICA headquarters, and the JICA Philippine office, in this Project, early

rehabilitation and reconstruction (facility construction and equipment procurement) in highly prioritized projects for social and economic infrastructure, such as medical facilities, schools, and municipal halls, and disaster prevention infrastructures will be conducted, applying the Sector Grants scheme so this Project would help realize BBB<sup>17</sup>. JICA had been aware of the need for rapid reconstruction assistance since after the Sumatra Earthquake in 2004,<sup>18</sup> and

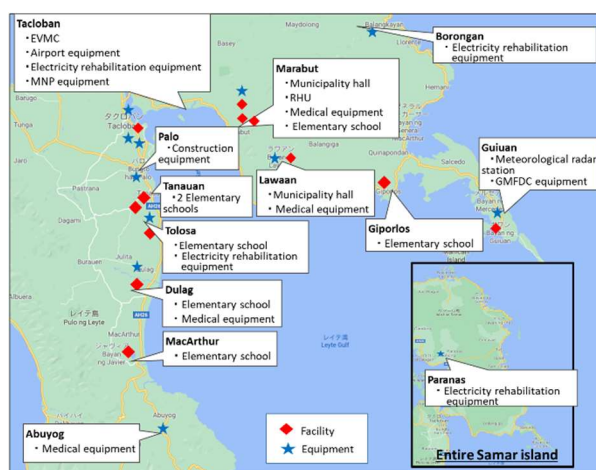


Figure 1 Sub-projects and their sites

through the discussions with the Ministry of Foreign Affairs, the outline of the Sector Grants was almost finalized. This Project was the first to which this scheme was applied. This made it possible to formulate and implement multiple sub-projects simultaneously under the overall picture and allowed for prompt action to shorten the time required to select consultants. With this new scheme, the Project included five facility sub-projects (elementary schools (8 sites), RHUs (4 sites),

<sup>17</sup> BBB was identified as Priority 4 in the 2015 Sendai Framework for Disaster Risk Reduction, with the specific goals of reducing the number of deaths, victims, and economic losses due to disasters as well as reducing damage to critical infrastructure and disruption of basic services. In 2014, when this Project was planned, these goals had not been set. Therefore, this Project aimed to achieve BBB by (1) Building Safer Cities, (2) Recovery of People’s Daily Life and (3) Recovery of Regional Economy and Promotion of Industries (see 1.1 Project Background, p.2).

<sup>18</sup> One of the challenges in reconstruction assistance was that it took time to begin providing emergency assistance. This scheme was introduced to speed up the process and make it possible to implement project as seamlessly as possible after the emergency assistance.

municipal halls (2 sites), EVMC (1 site), weather radar stations (2 sites),<sup>19</sup> six equipment sub-projects (equipment for RHU (4 sites)), construction equipment (1 site), electricity rehabilitation equipment (4 sites), airport equipment (1 site), NMP equipment (1 site), and Fisheries Centre laboratory equipment (1 site) were selected<sup>20</sup>.

Moreover, although not recognized at the time of Project formation, the combination of these sub-projects was aligned with the NDRRMP's key initiatives of (1) disaster prevention and mitigation, (2) disaster preparedness, (3) disaster response, and (4) disaster recovery and reconstruction, and it can be said that this was an appropriate approach in light of the Philippines' sector policies (see Figure 2).

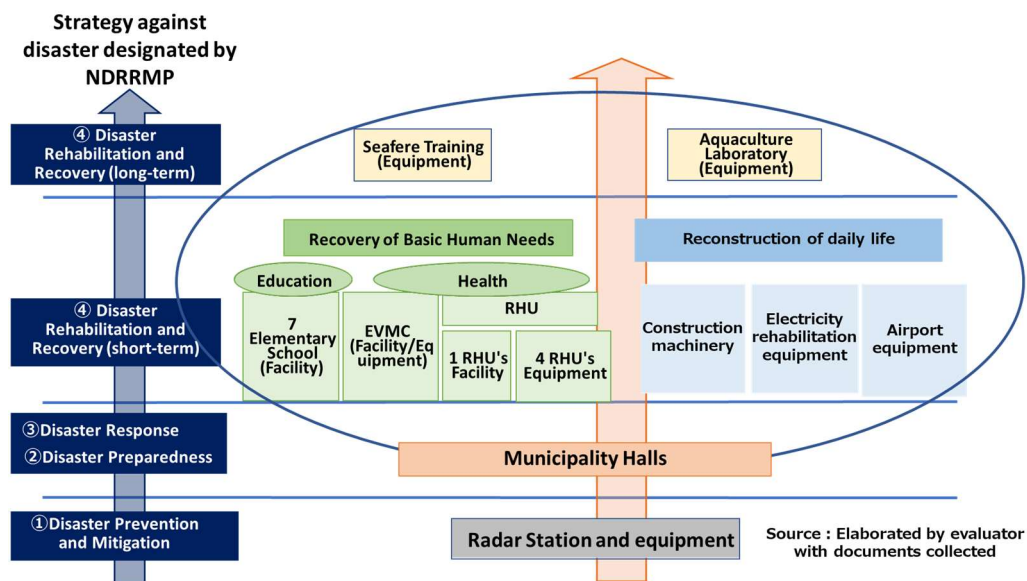


Figure 2: Relationship between the NDRRMP and sub-projects in Sector Grants

In formulating the Sector Grants, it is important to balance structural and non-structural elements to prevent the reoccurrence of disasters. In this concept, JICA proposed a reconstruction project composed by construction of tidal embarkment, establishment of a non-residential zone, and relocation of important public facilities from the corresponding zones. The president and heads of disaster-prevention-related departments expressed their understanding of this proposal. The term “BBB” was also printed on the cover of the RAY material distributed at the donor meeting.

<sup>19</sup> The meteorological observatory project was included because it was damaged immediately after its completion in 2013 under the “Project for Improvement of the meteorological Radar System” (2009).

<sup>20</sup> The selection criteria for these sub-projects were (1) implementation of the BBB policy, (2) realization of Japan's experience in rehabilitation and reconstruction, (3) large impact, (4) no overlap with other rehabilitation and reconstruction projects, (5) possible examination of the projects within a limited time frame, (6) timeliness of input, (7) reconstruction of severely damaged public facilities (restoration of functions of educational, medical, and municipal hall) and (8) securing Japan's presence (from documents provided by JICA).



On the other hand, the opinion of the Philippine government, as an administrative structure, was not monolithic. Advocating BBB as a reconstruction policy, the dominant opinion in the Philippine government was unassuming to large-scale public investment. In addition, a strong request for livelihood improvement projects which could be implemented quickly was expressed.<sup>21</sup> Whereas the cover page of the RAY included “BBB,” the main text included “fast and efficient project implementation” as part of the project policy.<sup>22</sup>



Material distributed in the donor meeting

Similarly, in JICA, there was another opinion that even though the proposed project mentioned above was ideal from the perspective of BBB, the core government of the Philippines (such as DOF and NEDA) and the Department of the Interior Local Government (hereinafter referred to as “DILG”) did not welcome that proposal. Because the construction of tidal embankment required significant expenses and relocation from non-residential zones took time, they wanted to prioritize the livelihood improvement projects. JICA took the stance that the bilateral cooperation should be the one with the same viewpoint of the partner country’s government. Even though the effectiveness in mitigating damage might decrease, the facilities should be reconstructed in the same location, with consideration of building structure, standards, and materials as well as setting the conditionality to select the target facility with the location criteria,<sup>23</sup> JICA decided to reconstruct the facilities in the same location and cooperate so the project could be implemented quickly and contribute to industry promotion from the mid-long-term perspective. The construction of a tidal embankment was proposed and given technical assistance under the “Recovery and reconstruction planning” as a project the Philippine government would undertake in the future.<sup>24</sup>

In addition, this Project, originally planned as one project, was to be divided into two projects (see footnote 6). That change was made with a sound agreement with the counterpart country, sending a person in charge of the Project of JICA headquarters to the project site and explaining the reasons to the implementing agency, relevant organizations, and local government. The reason for splitting the project and its process and procedures for the change were considered appropriate in light of the Project objectives.

Based on the above process, the Project plan and its approach are assessed as generally appropriate.

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<sup>21</sup> From JICA internal documents

<sup>22</sup> “RAY”, p.18

<sup>23</sup> Target facilities were selected on the condition that they be located more than 40 m inland from the coastline.

<sup>24</sup> In fact, DPWH constructed a tidal embankment and elevated roads from Tacloban to Palo and Tanauan with its own budget (from documents provided by JICA)

### 3.1.2 Coherence (Rating: ②)

#### 3.1.2.1 Consistency with Japan's ODA Policy

The Country Assistance Policy of the Republic of the Philippines (April 2012) stipulates “To overcome the vulnerabilities and stabilize the livelihoods and production infrastructure” as priorities and emphasizes the importance of appropriate risk reduction and disaster minimization under the “Disaster and Risk Reduction Management Program.” This Project contributes to the response to natural disasters, such as typhoons, and risk reduction. This Project is consistent with Japan's ODA Policy at the time of planning.

#### 3.1.2.2 Internal Coherence

The collaboration between this and other JICA projects was confirmed as follows.

<Fishery Sector>

QIPs (implemented as part of the Technical Cooperation for Development Planning of “urgent development study on the project on Rehabilitation and Recovery from Typhoon Yolanda in the Philippines” (2014-2017))

At the time of the planning of sub-project Guiuan Marine Fishery Development Centre (hereinafter referred to as “GMFDC”), the QIPs had not yet been formulated,<sup>25</sup> so no specific outcomes of the collaboration of this Project and QIPs was envisioned, but some outcomes for the fisheries in Region VIII, through the cooperation with GMFDC, were intended. GMFDC was still not in full operation, so direct collaboration was difficult to conduct during the QIPs implementation. However, during the post-evaluation, milkfish fry was provided to LGUs and fishermen via the local satellite BFAR station, and the fishermen appreciated the GMFDC fry because they were larger than those purchased at the market. As such, the collaboration and its result were confirmed. On the other hand, because the grouper and oyster farming were not continued,<sup>26</sup> no fry were provided, the processing projects (QIPs 20 and 21) were not continued after the completion of the QIPs, and no collaboration was confirmed.

The private sector partnership project “Verification Survey with the Private Sector for Disseminating Japanese Technologies for Typhoon-Resistant Fish Farming Cage with the Submersible Function in the Typhoon Stricken Areas” (2015.5-2019.1)

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<sup>25</sup> Fishery-related QIPs included aquaculture and its processing projects in Tanauan, Basay, and Guiuan. Concrete project are as follows:

at Tanauan, QIPs 15: Integrated culture of oyster and milkfish improvement for sustainable aquaculture and livelihood, QIPs 20: Construction of processing plant for integrated aquaculture and processing development;  
at Basay, QIPs 1: Regenerating livelihood through introduction of disaster-resilient submersible fish cage (milk fish), QIPs 21: Construction of processing plant for integrated aquaculture and processing development-4 sites  
at Guiuan, QIPs8: Regenerating livelihood through introduction of disaster-resilient submersible fish cage (Lapu-Lapu culture)

<sup>26</sup> Grouper were not farmed because Typhoon Ursula rendered the sunken fish tanks introduced in the QIP unusable in 2019, and oyster farming was not continuously established because the oyster was a new variety introduced in the QIP and it was difficult for its aquaculture to take root after the QIPs were completed.

The Project was implemented in Guiuan and Basay municipalities and Tacloban City. At the time of planning, some collaboration was envisioned such that GMFDC would provide fishermen fry, and the fishermen would raise this fry to adulthood and sell them.<sup>27</sup> Some of the floating and sinking fish tanks installed in Basay are still in continuous use, and milkfish are still being cultured there. On the other hand, in Guiuan, the GMFDC provided fry and the sales amount increased during the implementation of the QIPs. However, at the time of the post-evaluation, the floating and sinking fish tanks were not being used due to the high maintenance costs, and the outcome of the collaboration was not confirmed.

Grassroots Technical Cooperation “Aquaculture and processed product development in typhoon Yolanda affected fishing village utilizing inside Matsushima’s technology” (2016-2019)

One of the participants in this training program, an extension worker in BFAR Region VIII, learned oyster farming methods from Japan and obtained fry and feed from GMFDC to guide the fishermen in Region VIII. With this, some collaboration was done, and a certain outcome was confirmed.<sup>28</sup>

<Health Sector >

QIPs (Implemented as part of the Technical Cooperation for Development Plan “The urgent development study on the project on Rehabilitation and Recovery from Typhoon Yolanda in the Philippines” (2014-2017))

At the time of planning, the collaboration of this Project with the RHUs was foreseen, and the outcome of the collaboration was confirmed during the ex-post evaluation. EVMC shares the results of the analysis of death cases with the RHUs and provincial health department and receives and treats patients referred by the RHUs, so the collaboration’s outcomes were confirmed.<sup>29</sup>

From the above, the collaboration among the projects in the region was envisioned at the time of planning. At the time of the ex-post evaluation, the concrete outcome in the health sector was confirmed, but in the fisheries sector, it was limited.

### 3.1.2.3 External Coherence

BBB was adopted as Priority 4 at the 3rd UN World Conference on Disaster Risk Reduction, “Sendai Framework for Disaster Risk Reduction (2015-2030),” which states that “disaster recovery, rehabilitation and reconstruction are critical opportunities for better recovery”.<sup>30</sup> This

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<sup>27</sup> Republic of the Philippines, completion report of “Verification Survey with the Private Sector for Disseminating Japanese Technologies for Typhoon-Resistant Fish Farming Cage with the Submersible Function in the Typhoon Stricken Areas”

<sup>28</sup> Interview with extension worker at BFAR VIII

<sup>29</sup> Interview with EVMC and JICA staff

<sup>30</sup> In this conference, it was stated that “disasters have demonstrated that the recovery, rehabilitation and reconstruction

Project aimed to contribute to the implementation of BBB and was aligned with this framework. From the perspective of coherence with other donors, the donor meeting at which RAY was announced (December 2013) became a scene where each donor competed for their own presence, and it was difficult to collaborate with other donors aiming for positive synergies.<sup>31</sup> On the other hand, the donors' cooperation was segregated and coordination took place at the time of planning to avoid duplication among donors.

However, after the start of the Project, a Philippines stakeholder who could not wait until the Project was implemented asked other donors for support on the same project, which was in charge of JICA. In that case, some adjustments were necessary to exclude such projects from cooperation to avoid duplication.<sup>32</sup>

#### < Fishery Sector >

There was an extensive need for restoration of fishing vessels lost due to the disaster, but because USAID and the EU handled those projects, JICA decided to cooperate in the aquaculture sector, thus avoiding duplication with other donors. On the other hand, cooperation in the field of aquaculture has helped foster the aquaculture industry as a countermeasure against the decline in marine resources instead of returning to the traditional fishing industry after the recovery from the disaster, which was expected to create a better society than before the disaster.

#### < Education >

Because reconstructing the elementary school under this Project took time, UNICEF and local NGOs collaborated to provide prefabricated school buildings so the children would not have to spend time in damaged classrooms.

#### < Health Sector >

Before the disaster, mainly the WHO and DOH had coordinated donors and a conducive atmosphere for collaboration had been prepared. Donors shared the results of the needs assessments study with each other, and with those results, other surveys were conducted effectively.

From the above, coherence with international arrangements was observed. In terms of collaboration with other donors, in the fisheries sector, collaboration for positive effects was difficult at the time of project planning, so coordination was conducted to avoid duplication. After

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phase, which needs to be prepared ahead of the disaster, is a critical opportunity to build back better, including through integrating disaster risk reduction into development measures, making nations and communities resilient to disasters.

(<https://www.mofa.go.jp/mofaj/files/000081166.pdf>) (Accessed on August 9, 2022)

<sup>31</sup> Interview with JICA staff and consultant contracted to this Project.

<sup>32</sup> Interview with JICA staff.

the start of the Project, coordination to avoid duplication was the main task, but regarding the social infrastructure (education and health), coordination was conducted to produce positive effects, and concrete outcomes were observed.

Regarding relevance, the Project was consistent with the Philippines' development policy and needs at the time of planning and post-evaluation, and it was consistent with Japan's ODA Policy at the time of planning. In addition, although various opinions were expressed regarding the BBB approach in the project plan, JICA made appropriate decisions as an organization. In terms of internal coherence, the collaboration among the projects in the region was expected at the time of planning, but at the time of the post-evaluation, concrete results were seen in the health sector but limited in the fishery sector. In terms of external coherence, while the health and education sectors showed collaboration and outcomes at the time of planning and at post-evaluation, the fishery sector focused on coordination to avoid duplication at the time of planning and at post-evaluation. Therefore, its relevance and coherence are high.

### 3.2 Efficiency (Rating: ③)

#### 3.2.1 Project Outputs

This Project's status of achievement is as follows.

**Table 1 The Project's status of achievement**

Sub-project name	Contents	Type of sub-project	At the time of planning	Achievement	Reason for difference
Programme for Rehabilitation and Recovery from Yolanda					
Recovery of Basic Human Needs					
Reconstruction of disaster-resilient elementary school	Elementary School	Facilities	8 schools	7 schools	One school reduced because other donor supported it. JICA excluded it from its targets.
Reconstruction of disaster-resilient regional medical facilities	EVMC	Facility Equipment	1 facility 1 set	1 facility 1 set	Number of facilities to receive cooperation was the same. In this facility, additional work and equipment were provided.
	RHU	Facilities	4 facilities	1 facility	Due to bidding failure, only one facility was executed. Among the remaining 3, 2 were implemented by QIPs and one was responded to by the Philippines side.
	RHU	Equipment	4 sets	4 sets	Once, plan was suspended due to budget shortage, but with the surplus budget, originally planned medical equipment was provided
Recovery of Economic Activity (Short-term economic activity)					
Equipment for the Electricity Rehabilitation	-Boom truck with bucket and winch -Boom truck with digger and crane	Equipment	7 units for each	7 units for each	As planned
Construction Equipment	Construction equipment	Equipment	17 units	17 units	As planned

Equipment for the Airport Rehabilitation	Airport operation related equipment	Equipment	1 set	1 set	As planned
Recovery of Livelihood Activity (medium-long term industry development)					
NMP Equipment	NMP-activity-related equipment	Equipment	1 set	1 set	As planned
GMFDC Equipment	Fishery centre laboratory equipment set	Equipment	1 set	1 set	As planned
Rehabilitation of disaster prevention system					
Rehabilitation of Guiuan Meteorological Radar System	Rehabilitation of meteorological radar system	Facility	1 location	1 location	As planned
Reconstruction of Municipal halls in Lawaan and Marabut Municipalities					
Reconstruction of municipal halls	Reconstruction of disaster-resilient municipal halls	Facility	2 locations	2 locations	Approximately as planned (partially modified)

(Source: Elaborated by evaluator based on the ex-ante evaluation and result of the study)

Each sub-project's status of achievement is as follows.

- 1) Recovery of Basic Human Needs
  - (1) Reconstruction of disaster-resilient elementary school

The following facilities were reconstructed as planned.

**Table 2 Reconstructed elementary school (facility)**

School name/ sub-project site	Number of rooms	stories	Area(m <sup>2</sup> )	School name/ sub-project site	Number of rooms	stories	Area (m <sup>2</sup> )
Santo Niño/ Tanauan	8	2	722.03	Osmeña/ Marabut	6	1	552.23
San Roque/ Tanauan*	8	2	722.03	Tolosa/ Tolosa	6	1	552.23
MacArthur/ MacArthur	6	1	552.23	Dulag/ Dulag	6	1	552.23
Giporlos/ Giporlos	8	1	721.23				

(Source: Documents provided by JICA)

\* The two elementary schools in Tanauan were set up in a piloti structure which set the spatial area on the ground floor.

At the time of planning, eight schools were planned to be reconstructed, but one was excluded from the cooperation because it was to be built by USAID and Plan International, an NGO. In reconstructing the elementary school, an opinion was expressed that it should be relocated and reconstructed to prevent another disaster. However, because the schools needed to be located in areas where children could go to school and because early restoration was required, schools not located in non-residential areas, 40 m interior from the coastal line, were selected as targets for restoration<sup>33</sup> and would be quickly reconstructed without the need to relocate. The elementary schools (two schools in Tanauan) that were still at risk of storm surge damage were to be two-story piloti-type structures to avoid storm surge effects. Because they were also expected to be used as evacuation centres, Japanese structural design standards were combined with Philippine building standards, and the quantity of concrete and reinforcing rebar was increased by 20-30%

<sup>33</sup> *The urgent development study on the project on Rehabilitation and Recovery from Typhoon Yolanda in the Philippines, Final Report (I), Volume 2: General Grant aid Project, 2015, p.3-6*

from DPWH standards to increase structural strength and durability.<sup>34</sup> With these innovations, the elementary schools were reconstructed to serve as a model for future projects by the Philippine government. The elementary school that USAID/Plan International was expected to support was also reconstructed as planned, and all eight elementary schools were rehabilitated as planned.

(2) Reconstruction of disaster-resilient regional medical facilities (facility, equipment)

< Eastern Visayas Medical Centre >

The following facility reconstruction and equipment procurement was implemented as planned at Tacloban.

**Table 3 Reconstructed EVMC**

Name of the facility	Area (m <sup>2</sup> )
Outpatient Department (hereinafter referred to as “OPD”)	5,453.87
Utility building 1	86.00
Utility building 2	36.00
Connecting corridor	42.75
Total	5,618.62



Facade of reconstructed EVMC

(Source: Documents provided by JICA)

After the construction sub-project began, identification of soft ground and ground improvement work was carried out. Some additional construction works were also completed, including exterior construction work the Philippine side was to handle: installation of fire alarm receivers, emergency broadcasting equipment, and high-voltage power supply to the OPD as well as construction of a connecting corridor between the main building and the OPD. The additional construction costs were funded with surplus funds from the overall Project.

After the disaster, DOH planned to relocate EVMC to higher ground the said department owned. Although the flat area of the higher ground was limited and the facility’s layout had to be devised, the EVMC was reconstructed in accordance with DOH’s plan, with the highest priority given to rapid restoration.

**Table 4 Recovered EVMC Equipment at OPD**

Department	Procured equipment
Ophthalmology	Green laser, Yag laser, A-scan ultrasound, B-scan ultrasound, slit lamp biomicroscope, applanation tonometer, refraction system, automatic perimeter
Dental	Dental treatment unit, light cure, ultrasonic scaler, cutting bur set, clean air compressor, refrigerated air dryer, after cooler, treatment vacuum motor, orthopantomography, dental imaging system
Internal medicine	Safety cabinet
TB inspection	Safety cabinet
Obstetrics and	Ultrasound machine for obstetrics and gynecology
Paediatric	Ultrasound machine for paediatrics

(Source: Documents provided by JICA)

<sup>34</sup> Ibid., p.3-23

The provision of medical equipment to EVMC was not originally planned but was implemented at the DOH's request to enhance the hospital's functions.

<Regional Health Unit (Facility) >

**Table 5 Rehabilitated RHU**

	Stories	Area (m <sup>2</sup> )	Remarks
Marabut RHU	2	679.66	Piloti structure is set on the ground floor

(Source: Documents provided by JICA)

Four RHUs (Marabut, Lawaan, Dulag, and Abuyog) were planned to be rehabilitated, but only one was rebuilt (for reasons, see 3.2.2.1 Project Cost). Of the three excluded facilities, two (Dulag and Abuyog) were rehabilitated by QIPs and one (Lawaan) by the Philippine side.

<Regional Health Unit (Equipment)>

The surplus funds from the entire Project budget allowed for the provision of the following medical equipment not only to the Marabut RHU, which this Project reconstructed, but all four RHUs that were originally planned for reconstruction.

**Table 6 Medical equipment Provided to RHU**

Department	Equipment	Sub-project site
Laboratory	Centrifuge, hematocrit centrifuge, chemistry analyser, water bath, refrigerator for chemical goods, blood analyser	Marabut Lawaan Dulag Abuyog
TB laboratory	Safety cabinet	
Labor room	Fetal Doppler detector, labor bed	
Delivery room	Delivery table, operating-light stand, autoclave, refrigerator for vaccine	
Recovery room	Recovery bed, nebulizer	
Dental room of out patient	Dental treatment unit, desktop high-pressure autoclave, dental forceps set, light cure, ultrasonic scaler	
Backup facility	Solar power system	
Transportation	Ambulance	

(Source: Documents provided by JICA)

2) Recovery of Economic Activity (short-term economic activity)

(1) Recovery of equipment for electricity rehabilitation (equipment)

The following equipment was provided to the four electrification cooperatives (hereinafter referred to as "EC") as planned.

**Table 7 Electricity equipment procured to EC (unit: unit)**

Name of EC	Boom truck with bucket and winch	Boom truck with digger and crane	total
LEYECO II/Tacloban	2	2	4
DORELCO/Tolosa	2	2	4
SAMELCO I/Paranas	1	1	2
ESAMELCO/Borongon	2	2	2
Total	7	7	14

(Source; Documents provided by JICA)



Boom truck with bucket and winch



(2) Recovery of construction equipment (equipment) (location: Palo)  
 Dump truck (7 units), payloader (2 units), excavator (wheel) (3 units), excavator (crawler) (2 units), motor grader (1 unit), and concrete crusher (2 units) were provided to the DPWH region VIII as planned.



Excavator (crawler)

(3) Recovery of equipment for airport rehabilitation (equipment) (location: Tacloban)

Airport rescue firefighting vehicle (2 units), security equipment, held baggage X-ray inspection system (2 units), cabin baggage X-ray inspection system (1 unit), and walkthrough metal detector (3 units) were provided as planned.



Airport rescue firefighting vehicle

3) Recovery of Livelihood Activity (medium-long-term industry recovery)

(1) Rehabilitation of equipment for NMP (equipment) (location: Tacloban)

Fast rescue boat with Davit, totally enclosed lifeboat with Davit, various safety equipment, engine simulator by full mission,<sup>35</sup> and a Global Maritime Distress and Safety System (GMDSS) device were provided. The boat size changed, but that did not affect its use.



Engine simulator by full mission

(2) Rehabilitation of equipment for GMFDC (Equipment) (Location: Guiuan)

Equipment to raise fry, laboratory equipment to check the quality and appropriateness of feed for fry (water quality analyser and marine study equipment), seeds and seedling production equipment and other supporting equipment were provided as planned.



Laboratory equipment

4) Rehabilitation of Disaster Prevention System

The rehabilitation of the facility and provision of equipment were conducted as planned.

**Table 8 Rehabilitation of disaster prevention system**

Site	Facility	Equipment
Guiuan	Restoration of meteorological radar system, meteorological radar tower building	Meteorological radar data system, meteorological data demonstration system, meteorological data satellite communication system
Virac	Reinforcement in advance of the same damaged part of the Guiuan radar station	

(Source: Documents provided by JICA)



Meteorological radar station

<sup>35</sup> INMARSAT Fleet was excluded (was not applicable to the vessel to be used).

5) Reconstruction of Local Government Office

**Table 9 Reconstruction of Municipal Halls**

Name of LGU	Stories	Area (m <sup>2</sup> )	Name of LGU	Stories	Area (m <sup>2</sup> )
Marabut	2	832.25	Lawaan	1	840.00
				Total	1,672.25

(Source: Documents provided by JICA)

Some had the opinion that the municipal hall should be relocated and reconstructed to prevent another disaster, but because the municipal hall needed to be located in a place that was easily accessible to residents and because it needed early restoration, these two facilities were chosen<sup>36</sup> among the government buildings whose



Marabut municipality hall

main structures had been severely damaged and that were not located in a non-residential area, 40 m interior from the coastal line. The government building (at Marabut) that was vulnerable to storm surge and flooding was reconstructed using the piloti method, and the one that was not at risk of storm surge flooding (at Lawaan) was constructed, elevated to prepare for a flood.<sup>37</sup> Because the government building is also expected to be used as an evacuation centre, Japanese structural design standards were combined with Philippine building standards to enhance the building's structural strength and durability. In addition, concrete strength, reinforcing steel, roofing, and wall, floor, and ceiling materials that can withstand wind speeds of 250 km/h were used in accordance with the new Philippine building standards to prevent future typhoon damage.

3.2.2 Project Inputs

3.2.2.1 Project Cost

**Table 10 Project Cost** (unit: one million yen)

Name of the programme/project	Japanese side		Philippine side	
	Plan	Actual	Plan	Actual
Programme for Rehabilitation and Recovery from Yolanda	4,600	4,214 (91.6%)	707	N.A.
Project for Reconstruction of Municipal Halls	507	502 (99.2%)	71	N.A.
Total	5,107	4,716 (92.3%)	778	N.A.

(Source: Documents provided by JICA)

This Project began as a single project (the Programme for Rehabilitation and Recovery from Yolanda) at the time of planning. However, because the package bidding for the reconstruction of the elementary school, the construction of RHUs and the reconstruction of municipal halls exceeded the estimated price by a large margin, the municipality hall reconstruction project was made a separate project (“Project for Reconstruction of Municipal Halls”), and the number of

<sup>36</sup> *The urgent development study on the project on Rehabilitation and Recovery from Typhoon Yolanda in the Philippines, Final Report (I), Volume 2: General Grant aid Project, 2015, p.3-17*

<sup>37</sup> *Ibid.*, p. 3-88

RHUs to be reconstructed was reduced from four to one to keep the Project cost within the plan. The reasons for the unsuccessful bidding for the Programme for Rehabilitation and Recovery from Yolanda were the soaring cost of materials and equipment as well as labor due to the higher demand for reconstruction; increased management costs due to the dispersed target sites across 12 cities and municipalities; the small number of companies available to bid for the grant aid project at the regional sites; and the trend in yen depreciation (yen depreciation of 20% from the time of planning to the time of bidding<sup>38</sup>).<sup>39</sup> The Project for Reconstruction of Municipal Halls, which was cut out as a separate project, was approved by the Cabinet in June 2015 (with a ceiling of 507 million yen) and was implemented.

The Philippine side's shared budget was 778 million yen at the time of the plan. Although the actual amount expended to this Project was not obtained from the DOF, which is the department responsible for budget management, the Project's implementation was not affected due to the lack of budgetary support from the Philippine side<sup>40</sup>.

As a result, the project cost fell within the plan.

### 3.2.2.2 Project Period

**Table 11 Project Period**

Name of the programme/project	Plan	Actual	
		Exchange of GA	From detailed design study to completion of construction
Programme for Rehabilitation and Recovery from Yolanda	May 2014 - April 2017 (36months)	May 2014	May 2014 - September 2017 (41months) (114% of plan)
Project for Reconstruction of Municipal Halls	July 2015 - October 2016 (16months)	December 2015	December 2015 - May 2018 (30months) (188% of plan)
Total period	May 2014 - April 2017 (36months)		May 2014 - May 2018 (49months) (136% of plan)

(Source: documents provided by JICA)

The main reasons for the extension of the project period were the unsuccessful bidding for the Programme for Rehabilitation and Recovery from Yolanda (see 3.2.2.1 Project Cost for details) and the additional work implemented at the EVMC (see 3.2.1 Outputs). In addition, the exterior construction required the relocation of several street vendors, which took time to address and delayed the construction.

The project period for the Project for Reconstruction of Municipal Halls was also extended due to unsuccessful bids. The project cost was not within the estimated ceiling amount due to the increase in administrative costs caused by the two project sites, unforeseen circumstances in the typhoon-prone area, and foreign-exchange-risk expenses. In addition to poor bidding, delays in procurement of casting equipment and workers due to high construction demand also affected the

<sup>38</sup> It has depreciated from Jpy2.39/Php to Jpy 2.87/Php.

<sup>39</sup> From documents provided by JICA.

<sup>40</sup> Interview with consultant contracted to this Project.

project’s duration. Cabinet approval was granted in June 2015 and the EN was signed in October 2015, but bidding in April 2016 was unsuccessful, and only in September 2016 was the bidding awarded; therefore, construction finally began in November of the same year.

Because of the above, the project period exceeded the plan.

As above, the project period for the programme and project exceeded the plan (136% of the plan), but the project cost was within it (92.3% of the plan). Therefore, efficiency of the Project is high.

### 3.3 Effectiveness and Impacts<sup>41</sup> (Rating: ③)

#### 3.3.1 Effectiveness

##### 3.3.1.1 Quantitative Effects (Operation and Effect Indicators)

In the Programme for Rehabilitation and Recovery from Yolanda, the operational indicators set at the time of the ex-ante evaluation were for outputs and not for project outcome. To assess the project’s effectiveness in this ex-post evaluation, the evaluator set alternative indicators based on the narrative outcome as a project objective (i.e., “to restore the public services and economic activities, strengthen public facilities, and restore the weather forecasting and warning system”), and the project’s effectiveness was evaluated. Because no target value was set, the consultant contracted for this Project checked some indicators that needed judgment regarding the degree of achievement, and those whose achievement levels were appropriate were judged “achieved.” However, the Project for Reconstruction of Municipal Halls was assessed based on the achievement level of the indicators set in the ex-ante evaluation and the supplementary indicators added by the evaluator.

#### 1) Recovery of Basic Human Needs

##### (1) Reconstruction of Disaster-Resilient Elementary School

**Table 12 Operation Status of Elementary Schools During Typhoon Attack<sup>42</sup>**

Super typhoons and their year Schools	Number of days to resume classes after super typhoon hits the area (unit: days)					Schools used as evacuation centres (○ : used X : not used)				
	2013 Yolanda	2014 Rubby	2016 Lawin	2020 Rolly	2021 Odette	2013 Yolanda	2014 Rubby	2016 Lawin	2020 Rolly	2021 Odette
Dulag	90	30	30	0	0	×	○	○	○	○
Giporlos	190	30	30	0	0	×	○	○	○	○
Osmeña	120	45	45	0	0	×	○	○	○	○
San Roque	90	40	40	0	0	×	○	○	○	○
Santo Niño	110	22	22	0	0	×	○	○	○	○

(Source: Answers from the questionnaire)

<sup>41</sup> When providing the sub-rating, Effectiveness and Impacts are to be considered together.

<sup>42</sup> Sub-projects were conducted at seven sites, but the judgment was done based on information about the condition of five sites from where questionnaires were collected.

Since 2017, when the reconstruction of elementary schools was completed, no school has been unable to resume classes due to damage to school buildings, even during super typhoons.<sup>43</sup> Each school is also used as an evacuation centre. Based on the above, it can be judged that public services in the education sector have recovered and educational facilities are more resilient than before.

(2) Reconstruction of disaster-resilient regional medical facilities (facility, equipment)

< Eastern Visayas Medical Centre >

**Table 13 Operation Status of Facility and Equipment at EVMC at OPD**

Indicator	Department	2018	2019	2020	2021
Utilization status of equipment (/year)	Ophthalmology equipment	Every day	Every day	Every day	Every day
	Dental equipment	Every day	Every day	Every day	Every day
	Internal medicine equipment	Every day	Every day	Every day	Every day
	TB inspection equipment	Every day	Every day	Every day	Every day
	Obstetrics equipment	Every day	Every day	Every day	Every day
	Pediatric equipment	Every day	Every day	Every day	Every day
The number of days EVMC could not provide medical service due to damage from the typhoon (/year)		0	0	0	0
If the EVMC was used as an evacuation centre (/year)		×	×	×	×

(Source: Answers from questionnaire and interview with EVMC related stakeholders and patients)

The EVMC remained open and was able to provide services all days, which were not hindered by damage caused by the typhoon. The equipment provided is also being used daily. EVMC has not been used as an evacuation centre because it is located far from residential areas and is therefore inconvenient for the residents.

Based on the above, it is judged that public services in terms of the medical sector have been restored and medical facilities are more resilient than before.

< Regional Health Unit >

**Table 14 Operation status of RHU (at Marbut RHU and Dulag RHU)<sup>44</sup>**

	2018	2019	2020	2021
<b>Marbut RHU</b>				
The number of days Marabut RHU could not provide medical service due to the damage from the typhoon(/year)	0	0	0	0
<b>Dulag RHU</b>				
Frequency of utilization of testing equipment(/year)	Every day	Every day	Every day	Every day
Number of deliveries using the equipment provided (/month)	8 times	8 times	8 times	8 times
Times the ambulance is used (/month)	5-8 times	5-8 times	15-20 times	15-20 times
Number of days medical service cannot be offered due to outage (/year)	0	0	0	0

(Source: Answers from the questionnaire, interview with RHU staff and residents)

<sup>43</sup> A typhoon with speeds of 220 km/h or more is called a “super typhoon.” (Refer to footnote 15)

<sup>44</sup> Medical equipment was provided to four RHUs, but the questionnaire was collected only from Dulag RHU. The information about Marabut RHU was collected when the local consultant visited the site, and also from the report provided by NEDA.

The Marabut RHU was able to provide medical services every day, which were not hindered due to damage from the typhoon. Information about the status of equipment utilization could not be collected. Dulag RHU was constructed according to the QIPs scheme, and medical services were provided every day despite the typhoon. The status of utilization of the equipment provided by the Project is adequate according to the consultant contracted for this Project, as mentioned above. The medical equipment is fully utilized in a condition in which medical services are always available through reconstruction of RHUs.

Based on the above, it is judged that in general, public services in terms of the medical sector have been restored and medical facilities are more resilient than before.

## 2) Recovery of Economic Activity (Short-Term Economic Activity)

### (1) Rehabilitation of electricity-recovery equipment

**Table 15 Operation Status of Electricity Recovery Equipment**

EC	Type of equipment*	Number of days of the equipment on operation (/year)					Hours utilized for the maintenance work(/time)				
		2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
LEYECO II	(1)	314	314	314	314	314	8	8	8	8	8
	(2)	314	314	314	314	314	8	8	8	8	8
DORELCO	(1)	240	240	240	When necessary		8	8	8	When necessary	
	(2)	240	240	240	240	240	8	8	8	8	8
SAMELCO	(1)	240	240	240	240	240	8	8	8	8	8
	(2)	240	240	240	240	240	8	8	8	8	8
ESAMELCO	(1)	24	40	60	115	35	8	8	8	8	8
	(2)	24	45	65	120	35	8	8	8	8	8

(Source: Answers from the questionnaire)

\* (1): Boom Truck with Bucket and Winch; (2): Boom Truck with Digger and Crane

LEYECO II, DORELCO, and SAMELCO are using the equipment provided for maintenance and inspections for 8 hours almost every day. DORELCO did not have a working plan for daily inspections during 2020-2021 due to the COVID-19 infection situation. However, it had a working plan to respond to the needs and is working accordingly based on this plan. ESAMELCO only uses the equipment JICA provided on special occasions and otherwise uses its existing equipment. Therefore, the number of utilization days is limited.<sup>45</sup>

The basic utilization time is 8 hours/day for normal inspection work, but in case of emergencies such as disaster response, LEYECO works an average of 10-11 hours (maximum 16 hours); DORELCO also works longer hours than usual.<sup>46</sup>

Except for ESAMELCO, the equipment provided is used every day, and public services related to electricity supply are considered to have been restored.

<sup>45</sup> Interview with ESAMELCO.

<sup>46</sup> Interview with LEYECO II and DORELCO.

(2) Recovery of construction equipment

**Table 16 Operation Status of Construction Equipment**

(Accumulated working days/year)

	Number of units	2016	2017	2018	2019	2020	2021
Dump Truck	7	169	684	664	452	536	567
Pay Loader	2	154	155	147	98	147	87
Excavator (Wheel)	3	144	341	383	159	355	274
Excavator (Crawler)	2	216	297	182	252	80	85
Motor Grader	1	20	71	42	47	52	75
Concrete Crusher	2	NA	NA	NA	NA	NA	NA

(Source: Answers from questionnaire)

Although differences exist in the operation rate according to the type of machinery, with the exception of 2016, all equipment was utilized monthly 20% to 60% of the time<sup>47</sup> for routine road maintenance and disaster recovery work. According to the consultant contracted for this Project, these operation rates are adequate.

The equipment is usually located at the DPWH Region VIII office. However, it is used at various locations within the Region VIII area in accordance with the working plan. In the event of a typhoon, construction equipment is moved to the area that is predicted to be affected based on the typhoon information, before it hits the area, and necessary restoration activities are carried out promptly after the typhoon passes through. At the time of the field survey of this ex-post evaluation study by the local consultant (late April 2022), Typhoon Agaton was hitting Leyte Island, and the equipment was moved in advance to the assumed disaster area, Abuyog, and restoration work was conducted.<sup>48</sup>

Based on the above, it is concluded that public services in road maintenance and management have been restored.

(3) Rehabilitation of airport equipment

**Table 17 Operation status of airport equipment**

	2016	2017	2018	2019	2020	2021
Airport Rescue Firefighting Vehicle (days/year)	305	365	365	365	365	365
Held Baggage X-ray Inspection System (days/year)	305	365	365	365	365	365
Cabin Baggage X-ray Inspection System (days/year)	305	365	365	365	365	365
Walkthrough Metal Detector (days/year)	305	365	365	365	365	365
Frequency of Training of Rescue Firefighting Vehicle (times/year)	2	2	2	2	2	2

(Source: Answers from questionnaire)

As shown in Table 17, the provided equipment is used daily,<sup>49</sup> and the trainings of Rescue Firefighting Vehicles are conducted semi-annually. No major fires requiring the dispatch of a Rescue

<sup>47</sup> The number of operating days was divided by the number of vehicles in 12 months to calculate the number of operating days per month per vehicle. We assumed 20 operating days per month to calculate the utilization rate. 2016 was excluded from the calculation because the vehicles were not available for 12 months due to vehicle registration procedures, etc.

<sup>48</sup> Interview with DPWH Region VIII.

<sup>49</sup> According to interviews with airport officials, the rescue firefighting vehicles are in operation daily to be ready in case of crashes during airplane takeoffs and landings.

Firefighting Vehicle have occurred.<sup>50</sup> Based on the above, public services related to air transportation and logistics are considered restored.

### 3) Recovery of Livelihood Activity (Mid-Long-Term Industry Development)

#### (1) Rehabilitation of NMP equipment

**Table 18 Type and number of the seafarer training courses utilizing the NMP rehabilitation equipment**

	2017	2018	2019	2020	2021
Number of training courses provided at NMP	15	15	15	15	15
Ratio of the training courses that have utilized the training equipment for the entire courses (%)	38	38	36	36	33
The number of trainees who were qualified certificate requested by STCW* convention (persons)	2,275	2,154	2,435	1,965	2,611
The number of trainees who have participated in training courses that utilized the training equipment procured (persons)	2,490	2,426	2,947	2,016	2,693
Total number of trainees (persons)***	6,552	6,384	8,186	5,600	8,160
Number of Philippines seafarers registered (persons)**	213,806	196,278	183,208	NA	NA
Ratio of NMP trainees among all the registered Philippines seafarers (%) ***	3.1%	3.3%	4.5%	NA	NA

(Source : Answers from questionnaire)

\*STCW (Standards of Training, Certification and Watchkeeping for Seafarers convention): Convention of criteria regarding the seafarer training, qualified certificate and on duty<sup>51</sup>

\*\*Maritime Industry Authority "Statistical Report 2016-2019"

\*\*\*Calculated by evaluator based on the data collected

The NMP conducts training courses that are accredited by the Maritime Industry Authority (hereinafter referred to as "MARINA") as being in accordance with the STCW Convention. Among the more than 100 seafarer training schools in the Philippines<sup>52</sup>, the number of seafarers trained by the NMP accounts for 3-4% of all registered Philippines seafarers, and the NMP plays a major role in seafarer education in the Philippines by accepting trainees for courses that are only available at the NMP.

Based on the above, it is concluded that economic activity related to seafarers' activities on ocean-going vessels has recovered.

#### (2) Rehabilitation of GMFDC equipment

**Table 19 Species of the fry and marine product raised by the equipment provided**

Year	Number of species	Species of the fry and marine product for aquaculture
2013	10	Milkfish, Blue swimming crab, sea cucumber, ass's ear abalone, giant clam, oyster, grouper, snapper, abalone, scallop
2022	13	Milkfish, blue swimming crab, sea cucumber, ass's ear abalone, giant clam, oyster, grouper, snapper, abalone, mangrove crab, freshwater prawn, tilapia, seaweed

(Source: Answers from questionnaire)

<sup>50</sup> Interview with Tacloban airport officials.

<sup>51</sup> <https://www.mlit.go.jp/sogoseisaku/kotsu/bunya/kaiji/stcw.html> (accessed on August 9, 2022)

<sup>52</sup> From MARINA's "Statistical Report 2016-2019"



All the eggs, hatchlings, fry, and marine products for aquaculture raised at GMFDC were washed away by Typhoon Yolanda. However, parent fish were collected again, eggs were hatched, and juveniles and fry have been raised. New varieties of fry have been bred in addition to those raised before the disaster. Although specific figures on the number of types of feeds produced by using the equipment provided were not available, at least the feeds that were previously inspected are still being inspected.<sup>53</sup>

Based on the above, it is concluded that the economy in the aquaculture sector of the fishery industry has recovered

#### 4) Rehabilitation of Disaster Prevention System

**Table 20 Operation status of meteorological radar station**

	Site	2016	2017	2018	2019	2020	2021
Number of hours to observe weather condition(hours/day)	Guiuan	24	24	24	24	24	24
	Virac	24	24	24	24	24	24
Frequency to report to PAGASA headquarter when the typhoon outbreak(times/day)	Guiuan	24	2	24	24	24	24
	Virac	24	24	24	24	24	24
Number of days that radar station cannot report the weather information during the storm(days)	Guiuan	0	0	0	0	0	0
	Virac	0	0	0	0	0	N.A.

(Source: Answer from questionnaire)

Because radar with Doppler function has been installed through this Project, the rainfall and typhoon movements can be monitored at all times, which allows PAGASA headquarters to transmit typhoon information and typhoon warnings quickly. Prior to this Project, the information and warning were transmitted every 6 hours, so observation capability has been improved.

Based on the above, it is judged that the restoration of the weather forecasting system has been accomplished.

#### 5) Reconstruction of Municipal Halls

The expected timing by which to judge the achievement of the target value was 2019 at the time of ex-ante evaluation (3 years after the project completion), but the project completion was delayed in 2018. Therefore it was judged based on the condition in 2021.

<sup>53</sup> Interview with GMFDC official.

**Table 21 Operation status of Municipal Halls**

Indicator	Baseline value (2015)	Target value (2019)	Actual value			
			2018 Year of completion	2019 1 year after completion	2020 2 years after completion	2021 3 years after completion
Number of days that the municipality could not provide public service because of the natural disaster* (days/year)	N.A.	0	N.A.	*M:0 *L:0	M:0 L:0	M:0 L:0
Ratio of municipality hall area where municipality can continue to provide public service during the recovery from natural disaster (%) **	0	1,672 m <sup>2</sup>	0	M:100% ***L:100%	M:100% L:100%	M:100% L:100%
The number of evacuees that municipality hall can receive during a storm (persons)	0	450	0	M:100 L:60-100	M:100 L:60-100	M:100 L:60-100
(Additional alternative indicator) Number of times used as an evacuation centre(times)			M:0 L:0	M:1 L:1	M:0 L:0	M:1 L:1

(Source: Answers from questionnaire)

\* M: Marabut town; L: Lawaan town

\*\*The target value in the preliminary evaluation form was set in terms of area (square metres), but the question was changed to a ratio (%) to confirm the answer because it was considered difficult to obtain a response in square metres. The total area rehabilitated by the project was 1,752.2 m<sup>2</sup>, and it was judged to have been achieved if it exceeded 95% (= 1,672/1,752.2).

\*\*\* In Lawaan, approximately 40% of the city hall is used for evacuation-related responses.

In Marabut municipality, before Typhoon Yolanda, it took 3-4 weeks to normalize operations after the typhoon hit, but there has been no interruption in operations since the completion of the Project for Reconstruction of Municipal Halls. The same is true for Lawaan municipality.<sup>54</sup> The indicator related to the municipality hall space used to continue operations after the typhoon hit has also met the target value. As for the not meeting the target number of evacuees, according to the Municipality Disaster Risk Reduction Management Plan (MDRRMP) of both LGUs, at the time of the disaster, evacuation centres set up in the barangay (e.g., schools, churches, and day care centres) are to be used first, and then the municipality hall is to be used when the centres at barangay are full. That is the reason for not meeting the target number of evacuees.<sup>55</sup>

Although the target number of evacuees was not achieved, as mentioned above, the reason is appropriate, and other indicators have been achieved. Based on the above, it is judged that the goals of this Project have been achieved.

### 3.3.1.2 Qualitative Effects (Other Effects)

The following qualitative effects on the operation of each facility and equipment were identified.<sup>56</sup>

<sup>54</sup> Answers from questionnaire and interview with both LGUs.

<sup>55</sup> Interview with LGU.

<sup>56</sup> Qualitative effects were not set as indicators at the time of planning, confirmed effects are described.

## 1) Recovery of Basic Human Needs

### (1) Services provided at elementary schools, EVMC and RHUs during and after disasters

During the typhoon, no damage to the elementary schools, EVMC, and RHUs occurred that prevented them from providing their original services, and they have continued to provide classes and medical services as usual since the disaster. The EVMC and RHUs are also utilizing the equipment provided, so the quality of medical services provided has improved.<sup>57</sup>

### (2) Functions as a Disaster Prevention Centre

The elementary schools restored under the Project are being used as evacuation centres, providing residents with safe and robust places to shelter during a disaster. When used as evacuation centres, food, water, and hygiene items prepared in advance by each municipality are distributed to the evacuees.<sup>58</sup>

## 2) Recovery of Economic Activity (Shor-Term Economic Activity)

### (1) Recovery of Electricity Recovery Equipment

Before the provision of the boom truck with bucket and winch, they used ladders to inspect and repair utility poles. After the provision of the equipment, they can work safely.<sup>59</sup>

## 3) Recovery of Livelihood Activity (Mid- to Long-Term Industry Development)

### (1) Recovery of NMP Equipment

The seafarer program has improved with the installation of engine simulators and GMDSS simulators, which allow the training to be similar to actual working practice. While there are about 100 private and public seafarer training schools in the Philippines, the NMP is the only seafarer training school in the Philippines that uses practical equipment, and trainees appreciated that the training using the same model of equipment as in practice is useful and practical, making it easier for them to acquire skills.<sup>60</sup>

### (2) Recovery of GMFDC equipment

The quality of feed for fry raising has been improved by the equipment provided, which enables inspection of the quality of feed. Because of the improved quality of feed and the use of seedling production equipment to check the raising conditions, fry raised in the GMFDC have a higher survival rate and are larger in size. The hatching rate of fertilized eggs is also high.<sup>61</sup>

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<sup>57</sup> Interview with EVMC and patients.

<sup>58</sup> Interview with LGUs and residents.

<sup>59</sup> Interview with ECs.

<sup>60</sup> Answers from questionnaire and interviews with NMP and its graduates.

<sup>61</sup> Interview with GMFDC.

#### 4) Rehabilitation of Disaster Prevention System

Since the previous meteorological data remain the equipment damaged by Typhoon Yolanda, the Project provided equipment with the same performance as the damaged equipment. In addition, radar observation using the Doppler function began, and the radome protecting the radar was strengthened to its strongest at the time of restoration.<sup>62</sup> Consequently, the accurate weather information during normal times and typhoon information and warnings when it comes could be disseminated in a timely manner.

#### 5) Reconstruction of Local Government Office

The achievement level of qualitative effects set at the time of planning is as follows:

**Table 22 Status of achievement of qualitative effects of restoration of administrative office buildings**

Effects set at the time of planning	Situation at the time of ex post evaluation
1. Ensure the continuity of administrative services in municipality hall during and immediately after a disaster	In both Marabut and Lawaan, normal administrative services are continuously provided because minimal damage occurs to the Municipal Halls even in the event of a disaster.
2. Improve the safety of local residents by serving as an emergency evacuation facility during a disaster, and accelerate regional recovery and reconstruction activities by serving as a post-disaster command centre	Both Marabut and Lawaan take action prior and after the outbreak of a disaster, according to the MDRRMP. Before the disaster, the municipality procured water, food, sanitary supplies, and other items for distribution (in Lawaan, cash is also provided). Thus, the evacuation centre in the barangay and the municipality hall's use for that purpose was proper. They also pre-position equipment for road maintenance after the disaster for smooth restoration. In addition, Municipal Halls are equipped with entrance ramps, nursing rooms, and children's play areas so that women, children, and disabled people are taken care of well. After a disaster, a rapid damage assessment and needs analysis are conducted. Information on damage (number of evacuees, number of collapsed houses, and damage to infrastructure, e.g., roads, telephone lines, and electricity supply), impact on industry (agriculture, fishing, etc.), and number of victims are collected from the barangays, followed by needs analysis and prioritization of recovery works. Restoration response is also conducted in coordination with the DepEd, DOH, military, police, DPWH and others. Municipal Halls serve as the bases for these activities.
3. Improve the durability and maintenance capacity of Municipal Halls	Durability of Municipal Halls is confirmed by quantitative effects ([5] Restoration of Municipal Halls), and maintenance capacity is confirmed by sustainability.
4. Improve administrative service functions	Status of administrative service functions is confirmed in 1 and 2
5. Contribute to the stability of the local residents' lives and promote the local industry	Confirmed by qualitative effects of impact (Recovery of People's Daily Life and Regional Economy and Promotion of Industries)
6. Lead to the stability and development of the entire region	Confirmed by qualitative effects of impact (Building Safer Cities, Recovery of People's Daily Life, and Recovery of Regional Economy and Promotion of Industries)

(Source: Elaborated by evaluator from the results of interviews)

### 3.3.2 Impacts

#### 3.3.2.1 Intended Impacts

The impact of both the programme and project is “to contribute to the early recovery and reconstruction of the damaged areas” (Programme for Rehabilitation and Recovery from Yolanda) and “to contribute to overcome vulnerabilities and stabilize the livelihood and production

<sup>62</sup> A radome is made-to-order. Considering the case of Typhoon Yolanda, the materials and structure were reinforced to reconstruct the new radome.

infrastructure” (Project for Reconstruction of Municipal Halls). To assess the Project has contributed to the region from the perspective of BBB, the quantitative and qualitative effects of each sub-project and project were confirmed to align with the basic policy of the rehabilitation and reconstruction: (1) Building Safer Cities, (2) Recovery of People’s Daily Life, and (3) Recovery of Regional Economy and Promotion of Industries. The relationship between the three perspectives and each sub-project and project is shown in Figure 3.

1) Recovery of Basic Human Needs

(1) Recovery of disaster resilient elementary school

The number of students using the classrooms at the reconstructed elementary schools is shown below (figures are for the pre-COVID 19 school year, as face-to-face classes had not resumed at the time when the study was conducted). In this



Use of piloti (San Roque)

sub-project, classrooms were reconstructed based on the assumption of 40 students per classroom in accordance with the Department of Education's standards, but the actual number of students using the classrooms was lower than that. The reason for the lower rate at Dulag Elementary School is that one of the classrooms is used for the reading room. The number of students who were prevented from losing the learning opportunity at the elementary school, excluding Dulag elementary school, is 1,000-1,100, which is 74% of the original plan.

**Table 23 Number of students who use the classroom of reconstructed elementary school**

(Unit: persons)

	San Roque/ Tanauan	Santo Niño/ Tanauan	Tolosa/ Tolosa	Dulag/ Dulag	MacArthur/ MacArthur	Giporlos/ Giporlos	Total number of users
Planned number of users	320	320	240	240	240	320	1,680
Actual number of users							
2017-18	355	NA	182	114	164	327	1,142
2018-19	302	NA	202	136	157	350	1,147
2019-20	264	225	175	136	168	331	1,299
Average ratio of utilization	96%	70%	78%	54%	68%	105%	

(Source: Provided by NEDA)

The schools are also used as evacuation centres. Although no information on the number of evacuated residents was available, it is believed that the number of residents who had suffered from disaster in the past due to not evacuating was reduced owing to the establishment of robust evacuation centres in the barangays. Many residents are happy<sup>63</sup> there is now an elementary school in their barangay that can be used as a robust shelter. With a safe place to evacuate nearby, residents’ behavior has changed to evacuate earlier, spontaneously, and calmer than they did

<sup>63</sup> Interview with residents.

before.<sup>64</sup> At the time of ex-post evaluation, hallway of school is utilized as a function hall during meetings and other school activities since it was designed and constructed wider than usual school so that it can be used as an evacuation center. At the elementary school with a piloti structure, the area is effectively used for teachers' study sessions during normal times and as a vaccination centre during the COVID-19 disaster.

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<sup>64</sup> Interview with residents and LGU officials.

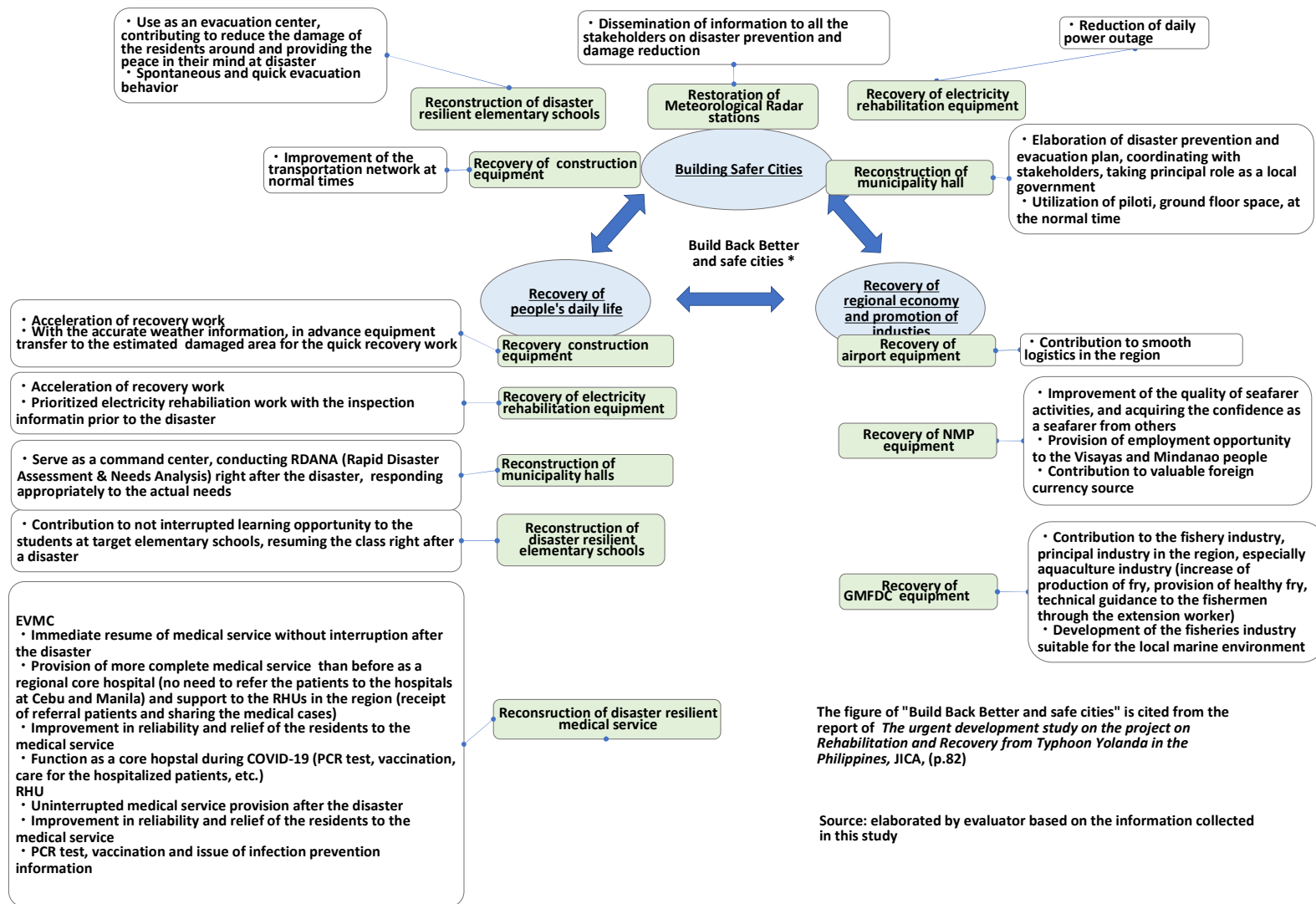


Figure 3 Contribution of each sub-project to realize the concept of BBB

## (2) Reconstruction of Disaster Resilient Medical Service

<Eastern Visayas Medical Centre>

**Table 24 Number of outpatients at EVMC OPD** (persons/year)

Department	2019	2020	2021
Ophthalmology	10,159	3,341	3,796
Dental	9,445	1,712	1,713
Internal medicine	19,767	6,392	4,892
TB inspection	4,489	2,187	2,612
Obstetrics and gynecology	12,694	2,711	1,164
Paediatric	19,261	3,734	2,965

(Source: Answers from questionnaire)

Concern was expressed that the relocation of EVMC from a convenient location in the city to higher ground might affect the number of outpatients upon completion of its construction, but it is now being used by more patients than before the relocation had occurred (the decrease in patients in 2020-2021 is attributed to COVID-19).<sup>65</sup> With more equipment and more departments available, patients who were previously referred to hospitals in Cebu or Manila can now be observed at EVMC. In addition, during the COVID-19 disaster, medical practice had continued, with partitions in place to avoid crowd and to provide treatment. EVMC is considered to be fulfilling its function as a regional hub hospital.

<Regional Health Unit (at Dulag)>

The number of medical personnel has increased with better equipment, and the facilities restored by the Project and QIPs have become more spacious; it was said that people can receive medical services with peace of mind. A variety of medical services is available at RHU, which has increased the sense of relief and satisfaction of the residents nearby.<sup>66</sup> In addition, during the COVID-19 outbreak, the Project contributed to the local people by providing PCR tests and vaccinations, as well as disseminating information on infection prevention.

## 2) Recovery of Economic Activity (Short-Term Economic Activity)

### (1) Recovery of electricity recovery equipment

The provision of equipment has increased the speed of operations, allowing quick inspections at normal time and restoration after a disaster.<sup>67</sup> The quick reaction to power outages and their shortened duration have also been highly evaluated by residents.<sup>68</sup>

Based on information regarding typhoons issued by the Disaster Risk Reduction Committee (hereinafter referred to as “DRRC”), each EC secures fuel, identifies areas likely to be affected, prioritizes restoration activities, and plans the deployment of engineers during restoration before a typhoon hits, and promptly conducted restoration activities after a typhoon passed.

<sup>65</sup> Interview with doctor at EVMC.

<sup>66</sup> Interview with patients.

<sup>67</sup> Answers to questionnaire to EC and interview with them.

<sup>68</sup> Interview with residents at Tacloban and Tolosa.



The provided electricity recovery equipment is used across the entire Region VIII, beyond the responsible area of each EC, and is lent out to other regions where an EC does not have enough recovery equipment,<sup>69</sup> through the coordination of NEA. The effects of the equipment provision spread to other regions, too.

## (2) Recovery of Construction Equipment

Operations have improved with the equipment provided, which has enabled work to occur faster than it did before.<sup>70</sup> DPWH’s Regional Office VIII identifies areas that are likely to be affected based on information regarding typhoons, transfers equipment to these areas in advance, and quickly conducts restoration activities after the typhoon passes.<sup>71</sup>

## 3) Recovery of Livelihood Activity (Mid-Long Term Industry Development)

### (1) Recovery of NMP equipment

**Table 25 Impact caused by recovery of NMP equipment**

	2017	2018	2019	2020	2021
Ratio of the trainees who are from the Visayas and Mindanao regions (%)	74	98	97	91	96
Ratio of graduates who have obtained employment on ocean-going vessels(%)	71	91	87	99	98
Overseas remittance amount by seafarer (million dollars)	5,870	6,139	6,539	N.A.	N.A.
Ratio of remittance by seafarers among entire overseas remittance amount (%)	21	22	22	N.A.	N.A.

(Source : Answers from questionnaire, MARINA “Statistical Report 2016-2019”)

Most of the trainees are working on ocean-going vessels, and the NMP plays a role as a mid-career training institute for seafarers. The experience of training using equipment similar to that used in actual work has had a positive effect in practice, such as the trainees gaining the trust of co-workers and being given opportunities to engage in various types of work. Positive effects was observed in practical work.<sup>72</sup> Most of the trainees are from the Visayas and Mindanao regions, which means NMP contributes to the creation of jobs in the region. Remittances from seafarers account for approximately 20% of the Philippines’ overseas remittances.<sup>73</sup> Because overseas remittances are an important source of foreign currency for the Philippines, the strengthening of the training school and the enhancement of seafarers’ skills are contributing greatly to the economic development of the country.

<sup>69</sup> It is called “Task Force Kapatid”. It has been lent to Bohol Island (Visayas) when Odette came (2021) and to Tuguegarao (northern Luzon) when Lawin hit (2018).

<sup>70</sup> Interview with DPWH Region VIII officials.

<sup>71</sup> During the field survey (late April 2022), Typhoon Agaton hit region VIII, so the equipment had already been moved from Palo to Abuyog and others.

<sup>72</sup> Interview with trainees.

<sup>73</sup> MARINA “Statistical Report 2016-2019”, p. 58

(2) Recovery of GMFDC Equipment

**Table 26 Provision of fry at GMFDC**

(unit: piece)

	2016-17	2018	2019	2020	2021
Milkfish		407,000	758,000	950,000	1,286,000
Sea cucumber	Fry was raised for stock enhancement, so it was not provided to others	24,290	49,819	36,605	29,986
Abalone		21,470	28,000	40,000	35,200
Scallop		57,968	59,884	143,500	94,900
Seaweed		825	154	207	415

(Source : Answers from questionnaire)

In the Philippines, the development of aquaculture is a fishery sector policy enacted due to declining marine resources and other issues. The GMFDC has been collecting parent fish that were spilled away due to the disaster and raising fry with the equipment provided. Now, the number of fries has been increasing annually. These fries are not for sale to the public, but they are provided to satellite stations of BFAR in Region VIII. Among them, some are provided free of charge to fishermen and fishermen's associations who apply for its provision through the LGUs' Fisheries Division. However, it is difficult to receive a particular fixed amount of fries on a regular basis from GMFDC through the satellite stations because the application process is complicated and time consuming. Consequently, fries are generally purchased from private companies for a fee.

The technical guidance for fishermen in Leyte and Samar is responsible for BFAR, Region VIII, and in Eastern Samar, it is responsible for GMFDC. There is a technical exchange between BFAR Region VIII and GMFDC, and research results from GMFDC are shared with BFAR Region VIII. Considering this mechanism, the effects of this Project could easily spread to regions other than Eastern Samar through BFAR Region VIII.

Although the supply of seaweed has not been increasing at the time of ex-post evaluation, BFAR focuses on increasing seaweed production because it can be grown at a low cost, its sales price is high, it is environmentally friendly, and men and women can easily handle it.<sup>74</sup>

GMFDC's role is to develop well-grown and healthy fry rather than to produce commercial fry. From this point of view, cooperation with GMFDC contributes to the development of the fishery industry suitable for the local marine environment and the revitalization of the local economy.

4) Reconstructing the Disaster Prevention System

At the time of the ex-post evaluation, LGUs, NMP, DPWH, EC, CAAP, and residents assessed the contents and timing of weather information and warnings from PAGASA as appropriate. This information is transmitted based on data transferred from radar stations. The assessors stated that the contents are more accurate and detailed (e.g., rainfall and wind speed) than before, and

<sup>74</sup> Interview with a BFAR Region VIII staff member, who said that BFAR Region VIII has been teaching the women's cooperative how to farm and it intends to increase production in the future.

residents are taking appropriate evacuation actions in response to TV and radio weather information and short-message warnings. In addition, LGUs issue mandatory evacuation orders to the residents in coastal areas when a Level 4 warning is transmitted, and they take proper action accordingly, receiving detailed local weather information from the PAGASA regional office and the Guiuan Meteorological Station.<sup>75</sup>

Risk reduction in advance is important so that the disaster's damage might be minimized. In this regard, it is significant that weather information, typhoon information, and typhoon warnings are now issued accurately and timely.

#### 5) Reconstructing the Municipal Halls

Utilizing hazard maps, both municipalities prepare MDRRMPs, including evacuation plans. Based on this, the Municipality Disaster Risk Reduction Management Committee (hereinafter referred to as "MDRRC") discusses disaster countermeasures, issues evacuation orders, and prepares other issues.<sup>76</sup>

When the MDRRMP is implemented, not only do municipalities provide supplies and shelters but also various parties, such as barangay captains (mobilization of local residents and outreach), volunteer groups (relief efforts), DPWH and municipality engineering department (road maintenance after the disaster), and the Department of Social Welfare and Development/Town Social Welfare and Development Department (relief efforts), are responsible for their own role. In this manner, the efficient responsive system is in place.

The piloti area is used for teachers' study sessions as well as for various events and gatherings residents attend during normal times. It was also used as a vaccination venue during the COVID-19 disaster.

#### 6) Synergies with Other Projects

The preparatory study for this Project was conducted as a part of an urgent development study on the Project of rehabilitation and recovery from Typhoon Yolanda, together with (1) Recovery and Reconstruction Planning and (2) QIPs. The following synergistic effects were observed between this Project and (1) and (2).

##### (1) Synergistic effects with the QIPs project (health and fishery sectors)

<Health sector >

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<sup>75</sup> Weather information is obtained from the regions, but the central PAGASA issues warnings with uniform standards throughout the country (hearing with consultants).

<sup>76</sup> The MDRRMP is attempting to be prepared based on the Barangay Disaster Risk Reduction Management Plan (BDRRMP). In the Marabut town, 20 out of 24 barangays have already prepared BDRRMPs. In Lawaan town, 3 out of 16 barangays have already prepared BDRRMPs on a trial basis.

### **Collaboration between Eastern Visayas Medical Centre and Regional Health Unit**

EVMC receives many referral patients from hospitals and RHUs throughout Region VIII, including the Dulag RHU (QIP19) and Abuyog RHU (QIP18), which were restored under the QIPs. One Dulag RHU user said, “I always gave birth at RHU. However, when I had a premature delivery, the RHU could not handle the case. I was transported to EVMC, and I was able to deliver the baby safely.” The Lawaan RHU also routinely sends patients to EVMC, and they greatly appreciated EVMC’s full medical services, adequate medical staff allocation, and patient-friendly atmosphere.

### **Coordination between Facilities and Equipment at Regional Health Unit**

In the Dulag RHU, QIPs restored the facilities and the Project provided the medical equipment. Some participants expressed their satisfaction with being able to receive qualified medical services with peace of mind that facility restoration and medical equipment were in place.<sup>77</sup>

#### <Fishery sector>

At the time of the QIPs implementation, collaboration between the QIPs and this Project was difficult because GMFDC was still trying to raise fingerlings. However, at the time of the post-evaluation, eggs and fingerlings that hatched at GMFDC were sent to satellite stations in Region VIII, where they were raised into fries and provided to fishermen in the region via the LGUs. The fries are provided to fishermen in Basay and Tanauan who continue to farm milkfish, and the fishermen regard the GMFDC’s fries as large.<sup>78</sup> In contrast, the grouper farming in Guiuan and oyster farming in Tanauan have not continued. The GMFDC’s research results using equipment this Project provided are shared with BFAR, and they are utilized to give fishermen in Tacloban, Tanauan, and Basay technical assistance through BFAR. Specifically, technical assistance regarding how to feed the fish and how to raise them have been provided.<sup>79</sup>

In the case of the food processing projects (QIPs 20 and 21), it was difficult to secure fish and establish sales channels for processed products after the QIPs ended. Furthermore, no processing activities are implemented in either municipality at the time of the ex-post evaluation. The processing facility (QIP21) in Basay was used for processing of other foods (e.g. peanut butter), but there was no linkage with GMFDC due to the different types of food they handle.

#### (2) Synergistic Effects with Recovery and Reconstruction Planning

In the technical assistance of recovery and reconstruction planning, hazard maps were prepared and provided to 18 LGUs that Typhoon Yolanda affected. Among them, 5 LGUs<sup>80</sup> were supported in formulating recovery and reconstruction plans, including revising comprehensive land use plans. The results were shared with all 18 LGUs in a seminar. The Marabut and Lawaan

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<sup>77</sup> Interview with patients.

<sup>78</sup> Interview with GMFDC.

<sup>79</sup> Interview with GMFDC.

<sup>80</sup> One city of Tacloban and four municipalities, Palo, Tanauan, Basay and Guiuan.

municipalities attended this seminar, and based on what they learned, they now conduct disaster-prevention-related activities (MDRRMP, evacuation planning, disseminating information on evacuation routes to residents, etc.) using hazard maps.

Regarding this Project, hazard maps had not been completed at the time of planning. It was difficult to relocate facilities for restoration and reconstruction while early restoration was required. The elementary school and municipal halls located 40 m interior from the coastline were selected and reconstructed in the same venue as before the disaster to avoid another disaster. Moreover, the second-best measures were taken to mitigate the damage by reinforcing construction standards and materials and by applying the piloti-type structure.

As described above, the two municipalities now can play the role of command centres during recovery and reconstruction, strengthening the proactive measures using hazard maps and the MDRRMP, rapid post-disaster reconstruction activities in accordance with the MDRRMP, and robust municipal halls that serve as the bases for such activities.

#### (3) Collaboration with UNICEF and other organizations in constructing the elementary school.

UNICEF and local NGOs provided prefabricated school buildings until the elementary school's reconstruction was completed, avoiding placing students in classrooms exposed to the rain.

#### (4) Collaboration in the Health Sector

Because donor coordination was already underway in the health sector before the disaster, the DOH and WHO played a central role in discussions among donors to compartmentalize their cooperation. Additionally, one donor's result of the needs survey was shared among other donors, which was utilized for their project planning, and enabled effective implementation of their projects.<sup>81</sup>

### 3.3.2.2 Other Positive and Negative Impacts

#### 1) Impacts on the Natural Environment

The Yolanda Rehabilitation and Reconstruction Project was classified as Category FI based on the JICA Guidelines for the Confirmation of Environmental and Social Consideration (April 2010) because the sub-projects could not be identified before JICA's assessment of the Project and some of them might have environmental impacts. The EVMC has installed ancillary facilities of appropriate size to treat wastewater and waste, and the impact on the natural environment is regularly monitored. No wastewater or waste hazardous to the natural environment has been identified.<sup>82</sup> Other facilities were assessed as "no impact on the environment, or if there is any, it is minor and no measures are required," based on the investigation at the time of planning.<sup>83</sup> No specific

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<sup>81</sup> Interview with JICA officials.

<sup>82</sup> Answers from questionnaire and interview.

<sup>83</sup> *The urgent development study on the project on Rehabilitation and Recovery from Typhoon Yolanda in the Philippines, Final Report (I), Volume 2: General Grant aid Project*, (2015) p.2-32-34

environmental impacts were identified during the interviews at the time of ex-post evaluation.

The Project for Reconstruction of Municipal Halls was classified as Category C based on the JICA Guidelines for the Confirmation of Environmental and Social Consideration (April, 2010) because the construction work was to be carried out on the same venue to restore the existing facilities and it was believed to have little undesirable impact on the environment and society. No opinions on environmental impacts were heard at the time of the ex-post evaluation.

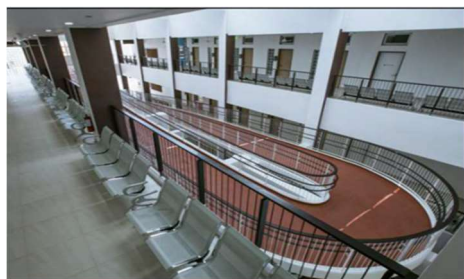
## 2) Resettlement and Land Acquisition

In the Programme for Rehabilitation and Recovery from Yolanda, which was classified FI under the Environmental Category, street vendors were relocated occurred during the reconstruction of EVMC. Although, this relocation did not violate the Environmental Impact Assessment of the Philippines and did not legally require compensation,<sup>84</sup> the land for relocation within the site was secured in accordance with the JICA Guidelines for Environmental and Social Considerations and adequately compensated for the street vendors' loss of livelihood. This took time and affected the construction period.<sup>85</sup> Facilities other than EVMC in this Project were rebuilt and restored in the same location as before the disaster; therefore, no resettlement or land acquisition was required.

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

About 30% of suppliers of fries GMFDC raised are women,<sup>86</sup> and women's cooperatives were also involved in the seaweed aquaculture activity that the BFAR promoted. It can be considered that strengthening the aquaculture sector brings benefit women, too.

In the restoration and reconstruction of facilities under this Project, socially vulnerable groups and human rights were well considered for their design and construction. Ramps were installed at each facility's entrances (elementary school, EVMC, RHU, and Municipal Halls), and in all but the RHU, toilets were wheelchair accessible and the EVMC secured a nursing room and space for children. In addition, when used as evacuation centres, elementary schools must provide



Ramp set at the center of building at EVMC  
(Source : External evaluator)

exclusive spaces for women, children, and people with disabilities, and providing spaces for people with disabilities is mandatory in the rules for municipal halls. Recognizing the evacuation centres as safe places is a prerequisite for promoting evacuation behavior. Establishing such facilities should help reduce the number of disaster victims. In particular,

<sup>84</sup> Interview with JICA officials and DOH officials.

<sup>85</sup> The relocation was completed when the Philippine side prepared a plot of land on the grounds of EVMC's main building and inpatient wing.

<sup>86</sup> Interview with GMFDC.

designing and constructing the EVMC went beyond considering the vulnerable and made us aware of “coexistence with the vulnerable” by installing a ramp in the centre of the building to facilitate them moving throughout the building (left photo). EVMC’s design was introduced as an excellent model by ex-DOH headquarter facility designer when she gave the lecture regarding the medical facility design.<sup>87</sup> On the other hand, as for the ramp at the elementary school building, some teachers complained that the access to the ramp is inconvenient due to the long distance from the main entrance of the school. The reason is that the schools were designed to be used as an evacuation center, and the corridor was set in the center of the building. Because of this, the entrances were located at both ends of the building rather than at the front, and a ramp was placed next to the entrance. Another issue of safety regarding the restroom was also raised, which was caused by not having them integrated with the school building. But it was heard that this design was in accordance with the opinion of the Philippine side saying that the restrooms should be separated from the classrooms because they were not well maintained and often emitted foul odours<sup>88</sup>.

The process of preparing the MDRRMP and BDRRMP has deepened communication and trust among LGUs and barangays,<sup>89</sup> and various stakeholders are involved in preparing and implementing the MDRRMP. This process has contributed to the development of a resilient city in the technical aspects.

As shown in Figure 3, each sub-project contributed to the realization of (1) Building safer cities, (2) the Recovery of People’s Daily Life and (3) the Recovery of Regional Economy and Promotion of Industries. From this, the Project has helped materialize the concept of “BBB and to Safety.”

It is not possible to judge the achievement level of each sub-project of Sector Grants in comparison with the target because no target value for quantitative indicators was set for each sub-project. However, the facilities and equipment are generally being utilized appropriately per each sub-project. Moreover, regarding for the qualitative effects, each sub-project helps build safer cities, recover people’s daily lives, and recover the regional economy. Synergistic effects were also observed not only among the sub-projects in this Sector Grants but also with QIPs and grassroots technical cooperation projects.

Considering the above, this Project has mostly achieved its objectives. Therefore, effectiveness and impacts of the Project are high.

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<sup>87</sup> Interview with ex-DOH architect of design section.

<sup>88</sup> Interview with consultant.

<sup>89</sup> Interview with LGU official at Lawaan.

### 3.4 Sustainability (Rating: ③)

#### 3.4.1 Policy and System

At the time of the ex-post evaluation, the PDP (2017–2022) and NDRRMP (2021–2030) were still in effect, and building a disaster resilient and robust society remains a high-priority project. In addition, the DILG has developed a guide for each LGU to formulate a Comprehensive Development Plan (hereinafter referred to as “CDP”) based on the MDRRMP and is promoting DRR implementation in LGUs.

Based on the above, there are no problems in continuing the project’s effects because policies and tools to ensure the project’s continuation have been prepared at the time of the ex-post evaluation.

#### 3.4.2 Institutional/Organizational Aspect

The executing agency and the operation and maintenance agency for each sub-project are as follows.

**Table 27 Executing agency and operation and maintenance agency for each sub-project**

Sub-project	Executing agency	Operation and maintenance agency	Sub-project	Executing agency	Operation and maintenance agency
<b>Recovery of Basic Human Needs</b>					
Elementary School/Facility	LGU	Elementary school/LGU/DepEd*	RHU/Equipment	DOH	RHU
EVMC/Facility, Equipment	DOH	EVMC	RHU/Facility	LGU	RHU
<b>Recovery of Economic Activity</b>					
Equipment for electricity rehabilitation	NEA	EC	Equipment for airport recovery	DOTCR	CAAP
Construction equipment	DPWH	DPWH Region VIII			
<b>Recovery of Livelihood Activity</b>					
Equipment of NMP	DOLE	NMP	Equipment of GMFDC	DA	GMFDC
<b>Rehabilitation of Disaster Prevention System</b>					
Rehabilitation of Meteorological radar system	PAGASA	Each meteorological radar station			
<b>Reconstruction of Municipal Halls</b>					
Municipal Halls	DPWH	Each LGU			

(Source: Answers from questionnaires and interviews)

\*The elementary schools perform daily inspections, but depending on the nature of the repairs, they consult with the LGU, and if that is beyond LGU’s capacity, they consult with DepEd Region VIII to take the necessary action.



**Table 28 Operation and maintenance management system for each sub-project**

Sub-project	Operation and maintenance system
<b>Recovery of Basic Human Needs</b>	
Elementary school/ Facility	4 staff at Dulag and San Roque elementary schools and 3 staff at Giporlos, Osmeña, and Santo Niño are assigned to take care of daily operation and maintenance. In no elementary school are operation and maintenance problems due to a staff shortage.
EVMC/Facility, Equipment	There are 2 physicians in ophthalmology, 4 in dentistry, 1 in internal medicine, 2 in tuberculosis, 2 in obstetrics and gynecology, for which no problems beyond their capacity for the operation and maintenance exist; 1 in pediatrics; 3 laboratory technicians; and 7 in charge to operate the facilities and equipment and to take care of operation and maintenance. The number of staff is insufficient, and they work overtime to cope with the shortage.
RHU/Facility, Equipment	At Marabut: Facility; at Dulag: Equipment In any RHUs, no specific information on the number of staff assigned was available, and no problems beyond their capacity for the operation and maintenance exist. There are no operation and maintenance problems due to a staff shortage.
<b>Recovery of Economic Activity</b>	
Equipment for the electricity rehabilitation	LEYECO: 46 staff are in charge of operation and maintenance in the Technical Services Department. There are 2 staff in charge of machinery and 5 staff working as heavy equipment operators. There are no operation and maintenance problems due to a staff shortage.
Equipment for airport rehabilitation	28 staff are assigned at Crash Fire and Rescue Unit (CFRU) of the Civil Aviation Authority of the Philippines operating the firefighting equipment, while there are 16 staff of the Office of Transportation Security (OTS) handling baggage X-rays and walkthrough metal detectors. There are no problems due to a staff shortage.
Construction equipment	45 staff are assigned (8 technical staff, 11 mechanical staff, 12 operators, 2 welders, 3 vehicle equipment inspectors, 3 procurement related staff, 1 nurse, 3 facility-related staff, and 2 managers). There are no operation and maintenance problems due to a staff shortage.
<b>Recovery of Livelihood Activity</b>	
Equipment of NMP	4 staff are assigned for equipment maintenance (2 preventive inspections staff, 1 machinery staff, and 1 marine machinery staff), and 8 faculty members are assigned to operate the equipment and run the course. When these 8 faculty members are insufficient to run the course, outside instructors are called in to help, so there are no major problems.
Equipment of GMFDC	9 regular and 23 contract staff, in total 32 staff are assigned. No staff were in charge of scallops before this Project. There was a vacancy of the regular staff in charge of seaweed (only with contract staff), and there was an overall reduction in the number of contract staff imposed on the staff to work by multitasking for their operations.
<b>Rehabilitation of Disaster Prevention System</b>	
Rehabilitation of Meteorological radar system	Guiuan: 5 staff assigned. There is shortage of staff, and 11 staff are requested. Virac: 6 staff assigned. 8 staff are requested. The shortage of staff is addressed through overtime work, e
<b>Reconstruction of Municipal Halls</b>	
Municipal halls	Marabut: 7 staff at the Engineering Department (4 regular and 3 contracted staff) (there are approximately 80 staff in the municipality). There are no operation and maintenance problems due to shortage of staff. Lawaan: 7 staff in the Engineering Department (there are approximately 60 staff in the municipality). There are no operation and maintenance problems due to shortage of staff. In some cases, carpentry needs more staff, such as to repair sanitary facilities (e.g., toilets) and doors. In this case, some staff are hired from the outside.

(Source: Answers from questionnaires)

As mentioned above, a shortage of personnel was noted at EVMC, the meteorological radar station, and Lawaan municipality, but no issues arose stemming from a staffing issue, and they have handled this situation with multitasking and overtime work. In other cases, no particular problems have arisen in operation and maintenance with the current staffing. Based on the above, generally, operations under the current structure might be possible to continue.

### 3.4.3 Technical Aspects

**Table 29 Status of technical support for each sub-project**

Sub-project	Technical support status
<b>Recovery of Basic Human Needs</b>	
Elementary school/ Facility	None of the schools are in trouble due to technical reasons because the inspection work is simple and the schools take action by using manuals. If special repairs are needed, the schools consult the LGU or the DepEd Region VIII office.
EVMC/Facility, Equipment	No technical problem arises from checking manual and using senior staff's technical guidance.
RHU/Facility, Equipment	No technical problem arises from checking manual and using senior staff's technical guidance.
<b>Recovery of Economic Activity</b>	
Equipment for the electricity rehabilitation	There are no problems with machine operation techniques. Other than receiving training at the time of delivering the equipment, the equipment is operated under manuals and senior staff's guidance.
Equipment for airport rehabilitation	There are no problems with machine operation techniques. Other than receiving training at the time of equipment delivery, the equipment is operated under manuals and senior staff's guidance (operation manuals are in place).
Construction equipment	Training is given once a year. Training topics cover preventive inspections, equipment inspection, and maintenance and operation skills of various construction equipment. Other than these trainings, equipment is operated under manuals and the senior staff's guidance (operation manuals are in place).
<b>Recovery of Livelihood Activity</b>	
Equipment of NMP	The operation of training machines is the faculty members' responsibility and its maintenance is responsible for facility staff. Faculty members who do not have sufficient expertise or knowledge of the training machines receive special training. For proper maintenance, basic cleaning, inspection, and maintenance are the main tasks because they are special training machines. A specialized contractor handles any breakdowns. Facility staff take action, referring to manuals as necessary.
Equipment of GMFDC	There is no problem in handling of equipment because they used the same equipment before the disaster.
<b>Rehabilitation of Disaster Prevention System</b>	
Rehabilitation of Meteorological radar system	The staff who have mastered the meteorological field are assigned, so there are no technical problems related to basic machine operation. In cases when the staff in change is rotated, they refer to the manual and receive guidance from senior staff and receive theme-specific training. The staff received the training on machine maintenance in 2015 and 2016 from Japan Radio Co., Ltd. (hereinafter referred to as "JRC") and others.
<b>Reconstruction of Municipal Halls</b>	
Municipal halls	Marabut: Municipal staff can handle their own repairs except for some special cases in which they hire an outside contractor for repair of special equipment, such as air conditioners. The operation and maintenance staff receives training from DILG twice a year on the building's structure. Lawaan: They hire outside contractors for repairs that they cannot handle on their own, such as generator and electrical system malfunctions. The operation and maintenance staff receives training from DILG twice a year on the building's structure.

(Source: Answers from questionnaire and interview)

Except for the NMP and the meteorological station, none of the technical requirements are complex, and operation and maintenance are adapted accordingly by putting manuals in place. The staff or faculty members at NMP and the meteorological station have training opportunities to acquire the necessary skills, and no technical problems are observed. Based on the above, we do not see any problems with using facilities and equipment from a technical aspect.

### 3.4.4 Financial Aspects

**Table 30 Budget secured for each sub-project**

(Unit: thousand pesos)

Sub-project		Items	2019	2020	2021	Observations
Disaster-resilient schools			N.A.	N.A.	N.A.	There is no problem due to shortage of budget, according to the schools.
Disaster-resilient medical service	RHU/Dulag	Personnel	N.A.	N.A.	N.A.	There is no problem due to shortage of budget, according to RHU/Dulag.
		OM*	357	345	1,558	
		Total	357	345	1,558	
	EVMC	Personnel	623,409	653,695	873,412	Personnel amount covers OPD and the administrative main building. There is no problem due to shortage of budget, according to EVMC.
		OM	1,966	2,404	7,737	
		Revenue	454,068	417,718	486,643	
Equipment for electricity recover	LEYECO	Personnel	50	50	50	Personnel expense for ESAMELCO was not available due to management by a separate department. None of the ECs have problems due to shortage of budget, according to them. NEA rates each EC with criteria of the balance of revenue and expenditures, power supply availability, system losses, and frequency of power outages. The 4 target ECs are rated the highest (AAA) and have no problems with revenue and expenditures.
		OM	100	100	100	
		Others	500	500	500	
		Total	200	200	200	
	DORELCO	Personnel	362	383	383	
		OM	521	820	788	
		Total	883	1,203	1,171	
	SAMELCO	Personnel	473	506	573	
		OM	137	145	165	
		Total	611	651	739	
	ESAMELCO	Personnel	NA	NA	NA	
		OM	160	160	160	
Total		160	160	160		
DPWH Regions VIII		Personnel	67	100	112	There is no problem due to shortage of budget, according to DPWH Region VIII.
		OM	2,369	2,277	1,473	
		Investment for facility	32,447	28,350	20,057	
		Total	34,883	30,727	21,642	
NMP		Personnel	1,842	1,303	2,147	There is no problem due to shortage of budget, according to NMP.
		OM	495	491	814	
		Total	2,337	1,794	2,961	
CAAP		Personnel	8,414	8,333	8,181	OM expenses are managed for the entire airport, so it is difficult to calculate the exclusive budget for the target sub-project. The amount for OM shown on the left is the one to have been spent when repairs occur, but there is no problem due to insufficient budget.
		OM	NA	10	170	
		Total	8,414	8,343	8,351	
GMFDC			N.A.	N.A.	N.A.	There is no problem due to insufficient budget, according to them.
Rehabilitation of disaster prevention system	Guiuan	Personnel	2,206	2,461	2,578	There is no problem due to shortage of budget, according to them.
		OM	5,714	5,714	5,714	
		Total	7,920	8,174	8,291	
	Virac	Personnel	2,706	2,853	3,554	
		OM	5,713	5,713	5,713	
		Total	8,419	8,566	9,267	
Reconstruction of Municipal Halls	Marabut	Revenue	86,314	104,681	104,193	Both municipalities had increased expenditures in 2019 due to earthquake response, but other than that, they have not incurred any significant deficits and are not
		Total				
		Personnel	40,583	47,725	49,434	
		OM	27,272	50,352	35,181	
		Others	16,702	22,797	22,555	

		Expense Total	84,557	120,874	107,170	hampered by insufficient budget.
		Balance	1,755	△16,194	△2,977	
	Lawaan	Revenue Total	79,297	95,045	111,818	
		Personnel	33,678	33,649	39,362	
		OM	10,495	6,908	17,636	
		Others	24,894	75,566	33,048	
		Expense Total	69,067	116,123	90,046	
		Balance	10,229	△21,079	21,772	

(Source: Answers from questionnaire and interviews)

\*Operation and maintenance is represented as “OM” in this table.

Although some sub-projects were not available to provide financial information, in general, no operational problems have arisen due to budget shortfalls. The municipal halls experienced a deficit in some year, but that situation improved the following year because of the specific circumstances of dealing with the earthquake. Based on the above, there are no financial problems to use facilities and equipment in any of the sub-projects.

### 3.4.5 Environmental and Social Aspects

The situation on this issue is as described in “3.3.2.2 Other Positive and Negative Impacts,” and from institutional/organizational, technical, and financial aspects in the sustainability, no major problems regarding environmental and social considerations are observed.

### 3.4.6 Preventative Measures to Risks

GMFDC is built in a no-building zone. Some of the equipment cannot be moved due to its nature; therefore, when typhoons hit, the equipment is covered with waterproof material and some measures are taken to stop flying debris and to prevent water and wind damage. In addition, the equipment now carries disaster insurance.

### 3.4.7 Status of Operation and Maintenance

**Table 31 Operation and maintenance status of each sub-project**

Sub-project	Status of operation and maintenance
Recovery of Basic Human Needs	
Elementary school/Facility	In all schools, responsible staff at elementary schools inspect roofs, windows, floors, and doors daily; ceilings on a weekly basis; and electrical, water, and toilets on a semi-annual or yearly basis. In the case that some issues are deemed necessary to repair, LGUs respond to them. For repairs that they cannot handle, the LGUs apply to the DepEd regional office and they take the action to them. With this system, no major problems have arisen.
EVMC/ Facility, Equipment	For equipment, inspection is done daily and preventive maintenance is performed weekly. Otherwise, necessary inspections and repairs are performed depending on the case. With this, no major problems have arisen.
RHU/ Facility, Equipment	Visual inspections are conducted daily, and cleaning is performed weekly. Safety tests, functional tests, and accuracy checks are conducted, and no major problems have arisen.
Recovery of Economic Activity	

Equipment for the electricity rehabilitation	At all ECs, regular inspection and replacement of the parts (checking the brakes, lights, brake engines, hydraulic oil and replacing the brake oil, hydraulic oil and tires, etc.) are performed. Parts are sometimes difficult to obtain. When suppliers do not have these parts, ECs purchase them through the Internet, coordinate with the manufacturer in Leyte, or use alternative parts. With this, there are no major problems, but some expertise in machinery and maintenance is not sufficient, and capacity building is still needed. In addition, vehicles provided to EC have not been officially registered to the Land Transportation Office (hereinafter referred to as "LTO") due to incomplete documentation; therefore, immediate registration procedures are needed.
Equipment for airport rehabilitation	Regular inspections and part replacement (such as oil, lights, tires, brakes, water spray/firefighting foam, and chassis) are performed. The CAAP have difficulties in obtaining the parts, and if it cannot find them from authorized suppliers, it searches for alternatives. Manuals are in place. Note that CAAP has not been able to locate documents to prove ownership of the equipment provided. The documents of project completion (of constructing facilities and delivering equipment) have been submitted to DOF, and DOF submitted a letter of concurrence. Document identification should be confirmed between CAAP and DOTR.
Construction equipment	In addition to daily visual inspections prior to work, the equipment's operation and maintenance is conducted in accordance with the New Equipment Preventive Inspection Policy, which DPWH issued in 2016 (in which the inspection items are set for every 1,000 km or 50 hours, 5,000 km or 250 hours, 10,000 km or 500 hours, and 20,000 km or 1,000 hours and requested to do it). Parts are procured based on an annual procurement plan. Comprehensive and preventive inspections are conducted using manuals.
Recovery of Livelihood Activity	
Equipment of NMP	In addition to daily equipment cleaning, monthly inspections are performed according to an inspection checklist specified for each equipment. In some cases, parts are not included in the budget and have to be purchased. In that case, the justification to purchase it is explained and approval is obtained. Parts that the supplier does not handle are purchased from alternative suppliers. Various manuals are also used.
Equipment of GMFDC	The periodic inspections are done, and some parts that are difficult to obtain in respective regions are obtained from a distributor in Leyte. The budget for parts is always included in the annual procurement plan. Various manuals are also used.
Rehabilitation of Disaster Prevention System	
Rehabilitation of Guiuan Meteorological radar system	Clean, inspect, and replace parts on a daily, weekly, monthly, semi-annual, or yearly basis for various voltage equipment, transmitters, batteries, DC AC electrical systems, radome, antennas, generators, etc. Staff at the meteorological radar station perform daily inspections and repairs, but when special problems occur, JRC is consulted to respond to the issue. Various manuals are also utilized.
Reconstruction of Municipal Halls	
Municipal halls	Daily cleaning and inspections to the building are done, and the sanitary facilities, generator, and electrical systems are also regularly inspected. Some parts are ordered from Manila, which is time consuming, but they are purchased in large quantities to be ready for the next part replacement. A manual is put in place and used for any problems or repairs.

(Source: Answers from questionnaire and interviews)

In all cases, no major problems have arisen because of regular daily inspections and early detection of problems. Furthermore, requests for action are sent to higher-level organizations or specialized contractors for problems that the operation and maintenance agency cannot handle. In contrast, the equipment for electricity rehabilitation has been used illegally without having been registered to LTO, and the airport equipment has been used without verifying the whereabouts of the documents proving ownership of the equipment at the sector in which the equipment is currently used. Although no direct inconvenience has been observed in their daily use of the equipment, the Philippine-related government needs to take immediate action on the equipment for electricity rehabilitation and the airport. Other than these issues, there are generally no problems with the operation and maintenance of the facility and equipment.

No major problems can be observed in the policy or systems, institutional/organizational, technical, environment and social aspect, and operation and maintenance. Although some financial issues have arisen regarding the unavailability of specific budget information for some sub-projects, no cases are likely to affect the project's continuation due to the problem of budget allocation. Issues related to electricity rehabilitation equipment and airport equipment need to be addressed as soon as possible. Regarding these issues, the Philippine government needs to take urgent action that is aligned with the recommendations in Section 4.2.

Slight issues have been observed in the financial aspect; however, there are good prospects for improvement/resolution. Therefore, sustainability of the project effects is high.

#### **4. Conclusion, Lessons Learned and Recommendations**

##### 4.1 Conclusion

This is an integrated evaluation study of the “Programme for Rehabilitation and Recovery from Yolanda” and “Project for Reconstruction of Municipal Halls.” The objective of the Programme for Rehabilitation and Recovery from Yolanda was to restore the public services and economic activities, strengthen public facilities, restore the weather forecasting and warning system by constructing various facilities, and procure equipment for social, economic, and disaster prevention infrastructure in the areas Typhoon Yolanda affected, thereby contributing to the early recovery and reconstruction of the damaged areas. The objective of the Project for Reconstruction of Municipal Halls was to strengthen the municipal halls' shelter function and improve administrative services by rebuilding the municipal halls in Lawaan municipality, Eastern Samar, and Marabut municipality, Samar, which Typhoon Yolanda destroyed, helping those communities overcome vulnerabilities and stabilize people's livelihood and production infrastructure.

Regarding relevance, this Project was consistent with the development policy and development needs of the Philippines at the time of planning and post-evaluation. At the time of planning, the appropriate programme and project were formulated in light of the specific situation in the Philippines at that time. The combination of sub-projects in various sectors, such as education, fisheries, health, and electricity, in the Sector Grants was also useful. Regarding coherence, the Project aligned with Japan's ODA Policy and international frameworks. Regarding internal coherence, a certain degree of coordination and outputs with other JICA projects was observed, and regarding external coherence, some adjustments were made to avoid duplication of cooperation with other donors, and a certain extent of outputs was confirmed. Therefore, the relevance and coherence is high. Although the entire project period exceeded the plan, the project cost was within the plan, so the efficiency is high. Regarding effectiveness, the indicators set for each sub-project at the time of planning were not appropriate to judge effectiveness, so the evaluators set alternative indicators at the time of the ex-post evaluation and assessed the effectiveness based on the degree of its achievement. The utilization of facilities and equipment

is appropriate, and it can be considered that the project objective has been achieved. Although some of the sub-projects showed limited qualitative effects, the outcomes were confirmed in each of them. In terms of impacts, quantitative and qualitative effects related to “Building safer cities,” “Recovery of People’s Daily Life,” and “Recovery of Regional Economy and Promotion of Industries,” which were this Project’s main framework of the basic policy of the rehabilitation and reconstruction, were observed as well as synergistic effects with other projects. The effects to be assessed positively were observed; therefore, effectiveness and impacts are high. In the programme and project, there are no problems in terms of policy and systems, institutional/organizational, technical, environmental, or social aspects or operation and maintenance. In terms of financial aspects, although there were some sub-projects without specific budget information, no sub-projects are likely to face difficulties in continuing their operations due to budget shortfalls. Therefore, the sustainability of the Project is high.

In light of the above, this Project is evaluated as highly satisfactory.

## 4.2 Recommendations

### 4.2.1 Recommendations to the Executing Agency

#### **Recommendations to DOF and DOTR:**

Locate the whereabouts of the documents showing the equipment ownership provided to CAAP, and share it with CAAP.

#### **Recommendation to NEA and EC (LEYECO II and DORELCO):**

It is illegal to operate on public roads without a vehicle registration number plate. The necessary documents for vehicle registration should be prepared and applied for registration with the LTO as soon as possible.

### 4.2.2 Recommendations to JICA

JICA will monitor implementation of the above recommendations to the executing agencies. In particular, immediate action is needed on the vehicle registration number plate, and JICA recommends that the status be checked and monitored to ensure the procedures are not delayed.

## 4.3 Lessons Learned

### **The Importance of Project Formation According to the Situation of Each Country**

One of the focal points of this Project was to find the compromise point between the pursuit of technical effect and respect for the intention of the recipient country in materializing BBB’s philosophy for the reconstruction assistance project to recover from the disaster.

If the technological effects were pursued, it would have been necessary to build a tidal embankment, establish no-dwelling zones, and reconstruct facilities to avoid these zones, and an easy and quick reconstruction might fix the vulnerability. A proposal was presented whereby even

if it took time, rehabilitation and reconstruction should be carried out in a way that prevents another disaster, and the top Philippine government officials approved the idea (the president and Secretaries of various departments). However, the Philippine government, as a bureaucracy, had a cautious opinion on large-scale public investment and requested improvement of livelihoods as soon as possible. Regarding the construction of a tidal embankment, several variations in height and materials were proposed as economical alternatives, but the Philippine government's request remained that of the rapid assistance for improvement of livelihoods rather than for the construction of seawalls.

The economic situation in the Philippines at the time also influenced the Philippine government's opinion. The Philippines had been in a long period of economic stagnation, but in 2013, the country was on the verge of an upgrade in its investment rating to float its economy. Therefore, the government wanted to refrain from large-scale public investment at the time, even though it was as a response to the disaster.<sup>90</sup>

JICA respected the partner government's decision to choose the sub-projects from the perspective of overall state management. For the grant aid project, JICA decided to implement projects to mitigate disaster to the maximum extent possible and cooperated in medium-to-long-term industrial promotion to contribute to BBB. However, from the viewpoint of disaster prevention, the technical advice for a feasibility study on a tidal embankment and elevated roads should be undertaken by the Philippine government in the future as part of Recovery and Reconstruction Planning. At the time of the post-evaluation, based on this advice, the tidal embankment and elevated roads were constructed as DPWH projects from Tacloban through Palo to Tanauan.

When assisting with the reconstruction from disaster, to examine the kind of cooperation that is appropriate, it is necessary to consider various factor, such as technical approaches; the type and frequency of disasters; the political, economic, and social situation of the partner country; the administrative capacity of the partner country; and the relationship between Japan and the country. Each country is in a different situation. Considering such circumstances, it is important that the parties involved in the project formulation and implementation make the best use of their respective expertise to find the best possible solution.

### **The Importance of Combing Sub-Projects in the Sector Grants**

In this Project, under a ceiling of 4.6 billion-yen, sub-projects were combined and implemented along the lines of (1) disaster prevention and mitigation, (2) disaster preparedness, (3) disaster response, and (4) recovery/reconstruction from disaster.

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<sup>90</sup> From the interview with the JICA official. The Philippines had its sovereign debt investment rating upgraded by S&P from BBB- to BBB on May 8, 2014. <https://news.abs-cbn.com/business/05/08/14/ph-gets-further-credit-rating-upgrade-sp> (Accessed on August 26, 2022)



Under this scheme, multiple grant aid projects can be implemented under a single EN), which might allow the achievement of higher-level goals more efficiently and effectively, if the common goals are set across multiple grant aid projects and combinations of specific sub-projects are appropriate. However, in reality, project formulation is not as simple as combining sub-projects based on theoretical logic. The sub-projects are selected in a pragmatic way, with a sideways glance of the other donors' cooperation, based on a variety of considerations and tactics. However, the scheme that allows the planning of multiple sub-projects at the same time has made it possible to at least draw a comprehensive picture and select sub-projects in line with that direction. In this Project as well, each sub-project not only produced individual outcomes and impacts, but also created synergy among the sub-projects, contributing to the formation of a safe and secure society.<sup>91</sup> In addition, although it took more time than expected in this Project due to the failure of the bidding, this scheme allowed the implementation of the Project in a shorter period than occurred before, from the preparatory survey to the implementation of the project.

The selection of multiple sub-projects within a certain budget ceiling requires clear selection criteria and consideration of priorities from various perspectives, but this process is not easy. However, the introduction of this scheme has made it possible to implement the grant aid projects quickly, efficiently, and effectively to meet diverse needs. To maximize the effectiveness of this scheme, it is important to set the common overall goals to be achieved through the implementation of multiple sub-projects and the combination of specific sub-projects.

## **5. Non-Score Criteria**

### 5.1. Performance

#### 5.1.1 Objective Perspective

None.

#### 5.1.2 Subjective Perspectives (Retrospective)

This section integrates the interviews with the Project's stakeholders (executing agencies, consultants contracted to this Project, Japanese local government and NPO officials, and JICA officials at that time) to discern which efforts were made during the start-up and implementation of the Project for the rapid recovery from the Typhoon Yolanda disaster in the Philippines.

##### 5.1.2.1 Starting Up the Project

On November 8, 2013, Typhoon Yolanda, which was described as "unprecedented in its scale," crossed the Visayas region of the Philippines. The damage caused by the typhoon was enormous,

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<sup>91</sup> Accurate warnings brought by the restoration of weather radar contributed to the effective use of equipment for construction and electricity restoration, the active use of primary schools as evacuation centre, and the use of municipal halls in responding to disaster recovery; the restoration of municipal halls had a synergistic effect in the use of primary school evacuation centre and the effective use of various equipment in the restoration of roads and electricity after the disaster.

and while aid agencies of various countries, international organizations, and domestic and international NGOs expressed intentions to cooperate, JICA was faced with the need to present a unique Japanese initiative in cooperation policy that other aid agencies could not imitate.

#### 5.1.2.2 Overcoming the Starting Situation and Formulating the Project

Unlike other industrialized countries, Japan has experience in recovery and reconstruction from many disasters, which is a unique experience that no other country can imitate. Based on this experience, the BBB as a basic philosophy for recovery and reconstruction made an appeal. This idea was strongly supported by the Philippine government and other donor countries at a donor meeting held in December 2013, where many donor agencies were competing over the amount of aid, and Japan's presence was greatly enhanced.

Although there were various opinions regarding the specific sub-projects to realize the BBB, JICA decided to carry out the sub-projects in line with the intentions of the Philippine government, while considering the balance between disaster prevention and the economic aspect. In this process, the role of the JICA Philippines Office cannot be overlooked. It presented to headquarters a clear policy, as only the office at a disaster-affected area could have, of "being there for the people in times of need." The JICA Philippine office took a stance that it could not let the affected area, as one of the poorest regions in the country and could become even poorer because of the disaster. As an office in the affected area, the staff demonstrated their unique information-gathering capabilities, communicated the plight and needs of those in the field to the related stakeholders, and influenced JICA's decision on cooperation policy.

#### 5.1.2.3 Dealing with Difficulties after Beginning the Project and Finding Ways to Achieve Outcomes

One of the features of the Project was the use of a newly established scheme called "Sector Grants." In this scheme, multiple grant aid projects can be implemented under a single EN, and the freedom in selecting sub-projects, the shortened period from preparatory study to Project launch, and prompt and seamless cooperation are the advantages of this scheme. However, the flexibility in sub-project selection, one of the advantages of the scheme, is a double-edged sword because it makes it difficult to prioritize the sub-projects. For the DOF to make objective judgments on the merits of sub-projects over multiple sectors, it was necessary to submit a variety of evidence, based on which the sub-projects were selected. In this process, the cooperation with NMP and GMFDC, with less emergency, were thrown questions about its necessity. However, for the affected areas that did not have many growth industries, seafarer education and the fisheries industry are among the few industries with economic benefits, which might play a central role in regional industrial development over the medium to long term. The need for cooperation on this kind of project was emphasized and approved.

The sub-projects selected through this complicated process covered a wide range of sectors and implementation areas (see Fig. 1 on p. 6 and Fig. 2 on p. 7). This coverage permitted the outcomes of cooperation to appear in many areas, but it also increased the administrative costs of the Projects and resulted in unsuccessful bids. Only 10 months after the EN was signed, the first bidding was done, which was shorter than before the scheme's introduction. However, due to the unsuccessful bidding, it took 1 year and 9 months before all the sub-projects were awarded and begun. In addition, the implementation and management of the multi-sectoral projects required coordination with multiple government departments and agencies, placing a heavy burden on the Philippine office and the consultants.

Under these difficult circumstances, the thorough information sharing and the unification of wills between the project field and office in the Philippines and JICA headquarters were pointed out as the most significant features of the project implementation process. In the reconstruction from disaster, the situation on the ground frequently changes, and a flexible response is required. In this Project, on-site information was shared in a timely manner between the Philippine government and Japanese stakeholders, as well as among Japanese stakeholders such as the JICA Philippine office, consultants, and JICA headquarters, to ensure communication in the implementation of the Project. This common understanding of what was happening on site made it possible to respond quickly to frequent changes at the site.

The Project was also implemented in parallel with the Recovery and Reconstruction Planning and QIPs components. Although each component had different activities and schedules, setting BBB as a top common priority made it possible to proceed with the activities, holding a centripetal force that led to achieving the goal. In this process, the project manager of each component properly grasped personnel allocation and activity progress, and the general manager of the overall three components appropriately kept track of advancement of each component. Moreover, the persons in charge of the responsible department in headquarters visited the site frequently to coordinate across components and promote information sharing and communication. Thus, a trustworthy relationship was fostered among the parties involved, which helped the smooth implementation of the Project.

Finally, but not least important, the cooperation of Higashi-Matsushima City of Miyagi Prefecture should not be forgotten in this Project. At a time when the recovery from the Great East Japan Earthquake was still in its infancy, the city officials shared their experience of recovery and reconstruction with the people in the Philippines from the perspective of being both a victim of the disaster as well as an implementer of recovery from disaster. The Philippine officials, who at first viewed the Japanese initiatives, such as construction of a tidal embankment, resettlement, and public disaster housing, as “an effort in a country with a budget,” keeping some distance, began to feel a sense of trust in the sincere attitude of the Higashi-Matsushima City officials, who shared their stories of failure, difficulties, and the importance of consensus building in

resettlement. Consequently, a comradely relationship based on sharing the same difficulties was fostered.

#### 5.1.2.4. Factors Contributing to Project Effectiveness

Although the Project involved many difficulties from its formulation through its implementation, the Project was successfully executed due to a variety of interrelated factors. Among them, the following factors are considered to have contributed to the success of the Project.

##### 1) Establishment of Common Goals

The establishment of BBB as the overall common principle enabled the three components to have centripetal force and to work on the project in essentially the same way with only minor differences. The Philippines office's will to be close to the affected areas and the activities to embody also moved all concerned in the same direction.

##### 2) Utilization of the Sector Grants

The introduction of this new scheme made it possible to implement multiple grant aid projects under a single EN and produced a wide range of project effects in response to the devastating disaster. Although there were some difficulties such as prioritization in the selection of sub-projects and poor bidding due to increased administrative costs, 11 sub-projects at 12 sites could be implemented in a short period, meeting a wide range of needs in the disaster-affected areas.

##### 3) What made "One Team"

The establishment of a common set of superordinate principles (BBB), the promotion of timely information sharing and communication, appropriate project management, and the assignment of the right personnel to the right positions, among other factors, helped ensure unity of intention among the Japanese stakeholders and enabled them to work as "One Team," each fulfilling his or her responsibilities. This one-team mentality on the Japanese side was also shared by the Philippines side, enabling timely information collection and honest communication based on the reliable relationship that had been cultivated over years.

##### 4) Cooperation from the Perspective of the Partner Country

In this Project, there were various opinions on the BBB's specific sub-project proposal, but in the end, the Project was implemented from the perspective of the partner country. Based on various proposals, including projects with high attention to disaster-prevention effects, projects requested by the Philippines government with certain disaster-prevention effects, and projects from the viewpoint of the affected people, the cooperation was finally implemented in alignment with the perspective of the Philippines government's national management. The process and the

project contents were appropriate in that technically effective and pragmatic projects were chosen that considered the intention to steer the national management of the partner country from a broad perspective, while staying close to the people's sentiments of the partner country.

The construction of seawalls and raised roads, proposed, endorsed, but not implemented in this Project, were later implemented by the Philippines government within its budget. An elevated road was constructed along the coast from Tacloban to Tanauan via Palo. This is a proof that the Philippine side understood the philosophy and usefulness of the BBB proposed by JICA.

#### 5) Cooperation that is Close to the Affected People

In this Project, not only did JICA and the consultants focus on the usefulness of the technical aspects of the project, but also Japanese local government officials shared their experiences of working on the reconstruction from disaster to give the feeling of being the same affected people. This process fostered empathy between with the Philippines people, in the same situation, and gave them courage to face the difficulties.

The facilitating factors for the project differed depending on each country and the target project. True cooperation can only be achieved by judging the situation in the partner country from various perspectives and doing the best by bringing together the wisdom of all concerned.

#### 5.2. Additionality

None.

(end)