conducted by Myanmar Office: April 2018

Country Name	**Project for Construction of Primary School-cum-Cyclone Shelters in the area Affected by Cyclone "Nargis"**
Republic of the Union of Myanmar	

I. Project Outline

Background	Myanmar was hit by the Cyclone Nargis on May 2008 and suffered from huge damages, totaling an estimated 4 billion US dollars (USD) with some 140,000 people killed or missing. Many buildings, including some 4,000 primary school buildings, collapsed in the disaster area stretching from the Ayeyarwady (Irawadi) Delta to Yangon. JICA conducted a project formulation survey in August 2008 and a preparatory study in November 2008, which found great needs for construction of school buildings with a function of evacuation at the cyclone-hit areas.			
Objectives of the Project	To improve the educational environment and ensure evacuation spots in the target schools by constructing 20 primary school buildings with a function as shelters at the time of cyclones in Townships of Labutta and Bogale of Ayeyarwady Region, thereby contributing to the increase in enrollment in primary schools and mitigation of the cyclone disaster risks in the nearby area.			
Contents of the Project	1. Project Site: Townships of Labutta and Bogale of Ayeyarwady Region 2. Japanese side: Construction of 13 school buildings with hygiene facility and procurement of classroom furniture. 3. Myanmar Side: Securing and leveling of construction sites and demolition work, installation of fences and gates, construction of access roads, etc.			
Project Period	E/N Date	December 4, 2009	Completion Date	June 18, 2013
	G/A Date	December 23, 2009		
Project Cost	E/N Grant Limit: 581 million yen		Actual Grant Amount: 581 million yen	
Executing Agency	Ministry of Education (MOE) (changed from the Ministry of Social Welfare, Relief and Resettlement in 2010)			
Contracted Agencies	Main Contractors: Trust & Gain Co., Ltd., Triangle Links Engineering Co., Ltd., System Engineering Co. Ltd., Marvels Wealth Construction Co., Ltd., Civil Tech Co., Ltd., Ngwe Eain Nin Co., Ltd. Main Consultant: Yachiyo Engineering Co., Ltd. Agent: Japan International Cooperation System			

II. Result of the Evaluation

<Special Perspectives Considered in the Ex-Post Evaluation>

- At the ex-ante evaluation, the target year was set as 2014 which was 3 years after the project completion. However, the project was completed in 2013, and therefore the target year was reset as 2016 at the ex-post evaluation.
- Qualitative indicators to assess effectiveness of the project were set as 1) improved educational environment, 2) reenrollment of the disaster-affected children, 3) improved learning, 4) mitigation of disaster risks and 5) living in peace. Among them, the Indicator 1) was used as a qualitative indicator. The Indicator 2) was verified as an impact indicator. The Indicator 3) was not used as it is an impact and there are many other factors affecting pupils' learning than the school infrastructure. Indicators 4) and 5) were used as indicators for the impact by asking in a more concrete way.
- While it took much time before the start of the project, due to the internal procedure at the Myanmar side such as the change of the implementing agency in August 2010 and personnel change after the general election in December 2010, all of the 20 school buildings which had been originally targeted at the time of the ex-ante evaluation had been constructed by the Government of Myanmar or other donors. As a result of the project detailed design study conducted by JICA, 14 schools which had not been equipped with sufficient functions of disaster-prevention facility were decided to be reconstructed by the project, and 13 schools were actually constructed. At the ex-post evaluation, achievement at the constructed 13 schools was verified for effectiveness/impact, and the excess of the project period and reduction of the outputs were considered for judgement of efficiency.

1 Relevance

<Consistency with the Development Policy of Myanmar at the Time of Ex-Ante and Ex-Post Evaluation>

After the Cyclone Nargis, the Government of Myanmar developed the "Post-Nargis Recovery and Preparedness Plan" (PONREPP) in 2008 to work for recovery from severe damages. In PONREPP, education was one of the priority areas and reconstruction of the schools damaged by the cyclone was included in the plan. In the "Myanmar Action Plan for Disaster Risk Reduction" (2009-2015) which was updated in October 2017, school safety and construction/maintenance of the multi-purpose community safe facilities are mentioned as prioritized programs. Thus, the project has been consistent with the development policy of Myanmar until the ex-post evaluation.

<Consistency with the Development Needs of Myanmar at the Time of Ex-Ante and Ex-Post Evaluation >

Myanmar was hit by Nargis on May 2008 and suffered from huge damages, totaling an estimated 4 billion USD with some 140,000-people killed or missing. Many buildings, including some 4,000 primary school buildings, collapsed in the disaster area stretching from the Ayeyarwady Delta to Yangon. It is located near the Bay of Bengal where many cyclones occur and therefore it easily suffers from them. Thus, there have been needs for disaster risk reduction since the ex-ante evaluation.

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

As the Japan's ODA policy for Myanmar, new economic cooperation projects had been suspended since 2003 considering the political situation in Myanmar, but there were exceptions of projects with urgency and humanitarian purposes and aiming at capacity building for democratization and economic structural reform to be implemented after careful consideration of project components. This project was consistent with humanitarian purpose of exceptional project to be implemented by Japan' ODA[1].

<Evaluation Result>

In light of the above, the relevance of the project is high.

[1] Ministry of Foreign Affairs (2009), "ODA Databook 2008."

2 Effectiveness/Impact

<Effectiveness>

The project aimed at improving the educational environment and ensuring evacuation spots as shelters at the time of cyclones at the 14 target schools. It is judged that the project objective was mostly achieved from the following points. At the 13 schools constructed ultimately by the project, the number of the enrollment increased mostly to the planned figure in 2016, and the physical capacity for accommodating people at the time of cyclones was enlarged as planned.

As qualitative effects, firstly, the educational environment has been improved. All of the interviewed 23 teachers of the seven target schools answered that the constructed buildings had a "very good" or "good" teaching environment in terms of the space, lightness and ventilation, and eight pupils of the four schools answered that they enjoy a "very good" or "good" learning environment from the same viewpoints. Secondly, accessibility to the school as a shelter has been improved for community residents in the target sites. In all the target sites, according to the interviewed community leaders, consideration is given to the socially vulnerable groups. For example, persons with disabilities are given priority for evacuation to the school. All the residents have been informed on the evacuation use of the constructed schools by the community leaders working closely with the school committee.

<Impact>

Firstly, pupils have been motivated for schooling at school. Both the 23 interviewed teachers and 8 pupils of Grade 4-5from the four visited schools answered that they are "very motivated" or "motivated for studying at the improved environment (space, lightness and ventilation). Secondly, all of the 90 interviewed residents of the seven visited sites answered that they feel "very secure" or "secure" against disasters due to the shelters. In particular, the school in Shwe Goneis the only nearby evacuation place for the residents, where, before the project, it used to take them 5-6 hours by boat to reach the nearest safe place (Township of Labutta). Thirdly, it can be said that disaster risks have been mitigated. In fact, the people in the affected areas hit by three strong cyclones in 2016 and 2017 were safely evacuated to the school shelters constructed by the project and no one was killed. The numbers of evacuators were as follows: 4,155 persons for the Cyclone Roanu in May 2016, 1,528 for the Cyclone Kyant in October 2016 and 597 for the Cyclone Mora in May 2017), respectively.

<Evaluation Result>

In light of the above, although the less number of schools were constructed than planned, pupils' enrollment has increased mostly as planned and the capacity as a shelter for disaster prevention has been expanded as planned at the constructed schools. Furthermore, the educational environment has been improved and also the accessibility to the school as a shelter has been improved. Therefore, the effectiveness/impact of the project is high.

Quantitative Effects

Indicator	Baseline 2009 Actual	Target 2016 3 year after completion	Actual 2013 Completion year	Actual 2014 1 year after completion	Actual 2015 2 year after completion	Actual 2016 3 year after completion	Actual 2017 4 year after completion
1. Number of the pupils who were enrolled at the schools constructed by the project	0	2,932 (1,888)[1)]	1,633[2)]	1,712[2)]	1,718[2)]	1,754[2)]	2,158[2)]
2. Number of the persons who can be received by the schools constructed by the project at the time of cyclones	0	Approx. 25,000 (16,350)[1)]	16,350[3)]	16,350[3)]	16,350[3)]	16,350[3)]	16,350[3)]

Source: MOE.

Note: [1)] Construction of 20 schools was planned at the time of the ex-ante evaluation, but actually 13 schools were constructed after JICA's study and coordination with MOE. The target figures set at the ex-ante evaluation were those for 20 schools. At the ex-post evaluation, also target figures for the 13 constructed schools which are in parentheses were referred to. [2)] The figures are the numbers of the pupils who were enrolled at the 13 constructed schools. 3) 16,350 = Area for evacuation (4087.9 m^2) divided by the area necessary for one person's evacuation at the 13 constructed schools. (0.25 m^2).

3 Efficiency

Outputs were produced less than planned. In other words, as mentioned earlier, construction of 14 school buildings was planned at the time of the detailed design, but actually 13 school buildings were constructed by the project. Though the project cost was as planned (ratio against the plan: 100%), since there was deduction of one school from those planned, cost-efficiency can be judged fair. Meanwhile, with regard to the project period, as mentioned at the beginning, it took much time from the Grant Agreement (G/A) to the construct of the consultants, but after the contract of the consultants, construction work was completed more early than planned. Still, the project period in total exceeded the plan (ratio against the plan: 156%).

Therefore, the efficiency of the project as a whole is low.

4 Sustainability

<Institutional Aspect>

The Department of Basic Education (DBE) of MOE is responsible for operation and maintenance (O&M) of the schools constructed by the project. MOE has district offices in Labutta and Bogale which receive claims on the breakdown from the schools, but they cannot deal with technical matters because no engineer is assigned by DBE. Daily O&M is undertaken by each schools. At each of the 13 target schools, the Parent-Teacher Association (PTA) has been established, which is in charge of maintenance of the duct space, roof and septic tank. It has 9-13 members varying among PTAs, which is sufficient, according to interviewed PTA members. PTA forms the School Development Committee[2] (SDC) together with the principals, teachers, and community leaders for school management including supervision of O&M of the school buildings.

<Technical Aspect>

MOE has no sufficient knowledge and skills for inspection and supervision of the school buildings at either regional or district level, as no engineer has been assigned due to the personnel shortage. At the school level, minor breakdowns are solved by some skillful community members, including damaged window locks, door handles and water tank. When damages are beyond their capacity, they are repaired in

[2] Depending on each school, the name varies (School Development Committee, Community Development Group, School Development Council, and so on.)

alternative or downgraded ways, such as change of the door material from the wood to aluminum. Materials for repair can be purchased without difficulty by most schools, except two schools in the remote area of Bogale Township. DBE answered that they contact the private company when the breakdowns are severe, but so far they have been managed by each school.

<Financial Aspect>

The financial data of DBE was not available at the ex-post evaluation, but no financial support has been provided to the schools for O&M purposes by DBE. SDC of each school manages the School Development Fund from which expenses for the repair are borne as the miscellaneous item. The fund (around 50,000 kyat for six months) is given by MOE. Besides the fund, some schools ask community residents for financial contribution or gain profits by selling vegetables grown at the school land. However, the budget is not sufficient for repair which technically cannot be dealt with the community residents, according to SDC members of all of the seven interviewed schools.

<Current Status of Operation and Maintenance>

At all of the 13 target schools, all classrooms have been utilized, but there are some problems in most schools. For example, observation conducted at the ex-post evaluation found wall crack in 11 schools, water leak from the transom windows in 10 schools, damaged door handle in nine schools, damaged window lock in six schools, door distortion in five schools, and so on. O&M for checking the doors, windows, classrooms and toilets is conducted daily by teachers and pupils. Maintenance of the duct space and roof is conducted every month, and the septic tank, every year, by SDC under the responsibility of the principal.

<Evaluation Result>

In light of the above, some problems have been observed in terms of the institutional, technical and financial aspects of the implementing agency, but not at the school level. Therefore, the sustainability of the project effect is fair.

5 Summary of the Evaluation

The project aimed at improving the educational environment and ensuring evacuation spots as shelters at the 20 target schools, but among these schools, buildings were constructed at 13 schools by the project. At the 13 constructed schools, the number of the enrollment increased mostly as planned, and the physical capacity for accommodating people at the time of cyclones was enlarged as planned. On the other hand, outputs (construction of schools) were produced less than planned and the project period much exceeded the plan. Regarding the sustainability, DBE has not assigned engineers and specific budgets for inspection and O&M of the constructed schools, while daily O&M and minor repair has been conducted by each school in collaboration with the community.

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

III. Recommendations & Lessons Learned

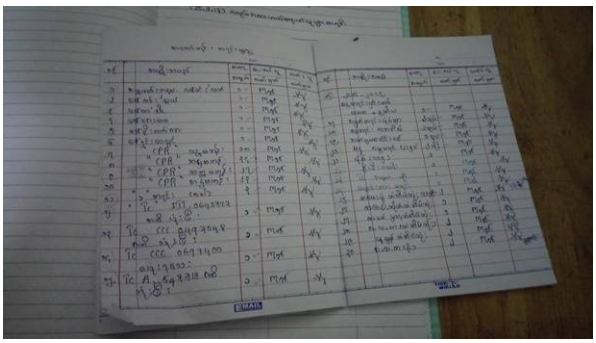
Recommendations to Implementing Agency:

- It is recommended to DBE to assign engineers at the regional level so that schools could receive technical advices when the facility breakdown is beyond their technical capacity for repair.

Lessons Learned for JICA:

- Due to the internal procedure at the Myanmar side, it took long time to initiate the project after G/A was exchanged. As a result, all of the 20 target school buildings had been constructed by the Government of Myanmar or other donors before detailed design survey. In the projects of facility construction as disaster recovery assistance, JICA should have asked the Government of Myanmar, even before G/A, to carefully coordinate various donors' support in order to avoid the duplication, as there might have been intensive assistance for disaster recovery. It was necessary to make sure to let the Government of Myanmar understand the scheme and process of the grant aid before the pledge was made. Furthermore, even after G/A, JICA should have collected information related to other donors' support in school construction in the chaotic period right after the disaster, and shared its support with other donors.

Classroom at Kyat Thang Chaung School



Facility check note at Chan Thar Kone School