Internal Ex-Post Project Evaluation 2013

Evaluation Report

May 2023

Japan International Cooperation Agency

（JICA）

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List of Internal Ex-post Evaluation

Type of Assistance	Project Start Year*	Type of Evaluation	Country	Sector/Theme	Project Name	Project Number
G	2004	Ex-post Evaluation	Kiribati	Fisheries	The Project for Kiritimati Island Coastal Fisheries Development in the Republic of Kiribati	0414600
G	2005	Ex-post Evaluation	Indonesia	Roads	The Project for Bridge Construction in the Province of NUSA TENGGARA TIMUR	0500100
G	2006	Ex-post Evaluation	Timor-Leste	Ports	The Project for the Rehabilitation of Dili Port	0600400
T	2005	Ex-post Evaluation	Philippines	Health / Health Care	The Project on the Strengthening of Local Health System in the Province of Benguet	200600796
T	2004	Ex-post Evaluation	Philippines	Electrical Power	Sustainability Improvement of Renewable energy （RE） Development in Village Electrification	200600806
T	2006	Ex-post Evaluation	Philippines	Fisheries	Comprehensive Outreach and Fish Breeding Project	200600936
T	2007	Ex-post Evaluation	Philippines	Regional Development Planning	Capacity Enhancement Program of Metropolitan Iloilo-Guimaras Development Council and Banate Bay Resource Management Council Inc.	200600958
T	2005	Ex-post Evaluation	Cambodia	Forestry / Forest Preservation	The Project for the Capacity Building for the Forestry Sector Phase II	200601305
T	2000	Ex-post Evaluation	Laos	Higher Education	Development of the Faculty of Economics and Management of National University of Laos	200601468
T	2005	Ex-post Evaluation	Laos	Health / Health Care	Project for Human Resource Development of Nursing/Midwifery	200601506
T	2006	Ex-post Evaluation	Laos	Weather / Earthquakes	Meteorological and Hydrological Services Improvement Project	200601532
T	2005	Ex-post Evaluation	Viet Nam	Health / Health Care	Project for Improvement of Medical Service in the Central Region	200601704
T	2005	Ex-post Evaluation	Viet Nam	Health / Health Care	Project for Strengthening Capacity for Measles Vaccine Production	200601761
T	2006	Ex-post Evaluation	China	Environment Issue	The Project on Eco-environment Rehabilitation and Poverty Reduction in Yanmenguan Region, Shanxi Province	200602073
T	2006	Ex-post Evaluation	China	Chemical Industry	Project on Scientific and Technological Capacity Building for Work Safety in China	200602074
T	2005	Ex-post Evaluation	Bangladesh	Agriculture / General	Participatory Rural Development Project （Phase II）	200602297
T	2006	Ex-post Evaluation	Sri Lanka	Regional Development Planning	The Project on Rural Livelihood Improvement in Hambantota District （SouthCAP）	200602652
T	2007	Ex-post Evaluation	Guatemala	Tourism / General	The Project for Capacity Development of the Tourism Self-Management Committee	200603071
T	2006	Ex-post Evaluation	Jamaica	Water Supply	Capacity Building of Water Maintenance	200603129
T	2002	Ex-post Evaluation	Mexico	Environment Issue	Coastal Wetland Conservation in Yucatan Peninsula	200603159
T	2006	Ex-post Evaluation	Mexico	Machine Tool Industry	The Project on Technology Transfer for Supporting Industry （Stamping Technology）	200603172
T	2005	Ex-post Evaluation	Nicaragua	Livestock Industry	Improvement of Cattle Productivity for Small and Medium Scale Farmers Project in the Republic of Nicaragua	200603208
T	2007	Ex-post Evaluation	Iran	Vocational Training	The Project for Strengthening Technical and Vocational Training Management Skills in Technical and Vocational Training Organization	200603928
T	2006	Ex-post Evaluation	Malawi	Education	The Project for Supporting District Education Plan Institutionalisation Programme	200604837
T	2006	Ex-post Evaluation	Tanzania	Roads	Project for Capacity Strengthening on Labour-Based Technology Training at ATTI	200605045
T	2007	Ex-post Evaluation	Laos	Health / Health Care	Project for Medical Education and Research for the Setthathirath Hospital	200607141
G	2006	Ex-post Evaluation	Republic of North Macedonia	Health / Health Care	The Project for Improvement of Medical Equipment for Primary Health Care Services （Phase II）	0607800
T	2008	Ex-post Evaluation	Uzbekistan	Banking / Finance	Improvement of The Tax Administration of the Republic of Uzbekistan	200608961
T	2006	Ex-post Evaluation	India	Health / Health Care	Reproductive Health Project in the State of Madhya Pradesh （Phase 2）	200609246
G	2006	Ex-post Evaluation	Senegal	Education	The project for the construction of classrooms of elementary and lower secondary schools	0612500
T	2008	Ex-post Evaluation	Sri Lanka	Tourism / General	Project for the Development of Culture-oriented Tourism in Sigiriya	200701462
T	2008	Ex-post Evaluation	Cambodia	Information / Public Relations	Strengthening of CMAC Function for Human Security Realization	200701732
G	2007	Ex-post Evaluation	Morocco	Fisheries	The Project for Construction of Central Laboratories of the National Institute of Fisheries Research （Le Projet de construction des laboratoires centraux de l'Institut National de Recherche Halieutique）	0709100
G	2007	Ex-post Evaluation	Lesotho	Education	Project for Constriction of Secondary Schools in the Kingdom of Lesotho	0715500
G	2008	Ex-post Evaluation	Indonesia	Government / General	The Project for Improvement of Port Security System	0805100
G	2008	Ex-post Evaluation	Malaysia	Water Transport / Ships	The Project for Strengthening the Capabilities for Preventing Sea Smuggling and Other Illegal Activities	0805200
G	2008	Ex-post Evaluation	Viet Nam	Ports	Project for Reinforcement of Customs Function at the Tan Cang Cat Lai Port of Ho Chi Minh City	0806400
G	2008	Ex-post Evaluation	Cambodia	Health / Health Care	The Project for Infectious Disease Control	0867810
G	2008	Ex-post Evaluation	Uzbekistan	Health / Health Care	Project for Improvement of Equipment for National Center of Rehabilitation and Prosthesis of Invalids	0867910
G	2007	Ex-post Evaluation	Kyrgyz Republic	Roads	The Project for Reconstruction of Bridges in Chui Oblast	0867920
G	2008	Ex-post Evaluation	Burundi	Health / Health Care	Project for Improvement of Health Facilities in Bujumbura City	0868120
G	2008	Ex-post Evaluation	Paraguay	Water Resources Development	The Project of Development for Grand Water in Rural Areas	0868190

Type of Assistance	Project Start Year*	Type of Evaluation	Country	Sector/Theme	Project Name	Project Number
G	2006	Ex-post Evaluation	Mongolia	Culture	The Project for the Construction of Kharakhorum Museum	0868290
G	2008	Ex-post Evaluation	Ethiopia	Water Resources Development	The Project for the Improvement of the Equipment for Groundwater Development	0868500
G	2008	Ex-post Evaluation	Marshall Islands	Fisheries	The Project for Construction of Fish Market Center at Majuro Atoll	0868530
G	2009	Ex-post Evaluation	Djibouti	Broadcasting	Project for Rehabilitation of Program Production Equipment for RTD	0868650
G	2009	Ex-post Evaluation	Philippines	Transportation / Traffic / General	The Project for the Bridge Construction for Expanded Agrarian Reform Communities Development	0960040
G	2009	Ex-post Evaluation	Nicaragua	Roads	Project for Capacity Strengthening of Road and Highway Maintenance in the Republic of Nicaragua	0960380
G	2009	Ex-post Evaluation	Cambodia	Water Resources Development	The Project for Rural Drinking Water Supply in Memot District of Kampong Cham Province	0960510
G	2009	Ex-post Evaluation	Bhutan	Agricultural Machinery	Project for Improvement of Machinery and Equipment for Construction of Rural Agricultural Road (Phase 2)	0961440

Internal Ex-Post Evaluation for Grant Aid Project

conducted by Fiji Office: July 2014[1]

Country Name	The Project for Kiritimati Island Coastal Fisheries Development in the Republic of Kiribati
The Republic of Kiribati	

I. Project Outline

Project Cost	E/N Grant Limit: 739 million yen		Contract Amount: 732 million yen
E/N Date	January 2005		
Completion Date	April 2006		
Implementing Agency	Central Pacific Producers Ltd. (CPPL) (Responsible Agency: Ministry of Fisheries and Marine Resources Development (MFMRD))		
Related Studies	Basic Design Study: May 2004 to January 2005		
Contracted Agencies	Consultant	ICONS International Cooperation Ltd.	
	Contractor	Penta-Ocean Construction Co. Ltd.	
	Supplier	NBK Corporation	
Related Projects	Japan's cooperation: Project for Coastal Fisheries Development (1979, Grant Aid)		
Background	In Kiritimati Island, Kiribati, fishing is the key industry and the economic backbone of the island. It supported the livelihood of 104 households (23% of total households) on the island as its main source of income (source: 2000 census). Central Pacific Producers Limited (CPPL), a company owned by the Ministry of Fisheries and Marine Resources Development (MFMRD), run shipping services between Tarawa and Kiritimati (Fanning and Washington). However, its landing/processing facilities and equipment were deteriorated. At the time of ex-ante evaluation of this project, CPPL Kiritimati Branch could not increase frozen fish production to transport it to Tarawa. Therefore, it was necessary to renovate landing facilities such as slipway and fish processing and preservation facilities.		
Project Objectives	Outcome To increase the volume of fish catches and shipping in Kiritimati Island and of frozen fish supply to the capital by rehabilitation and construction of unloading facilities, construction of fish handling facilities and procurement of equipment for unloading /handling/ processing activities.		
	Outputs Japanese Side: ・ Renovation of existing slipway and repair of revetment ・ Construction of handling place for fishery products, Generator House, Meeting Hall, Drainage ・ Equipment and Machinery for Facility：Refrigeration Equipment, Generator, Septic Tank, Water Tank, Fuel Oil Tank ・ Equipment / Materials to be procured：Fishing boats, Working Tables, Packing Machine, Band Saw, Weighting machine, Cleaning tools, Truck with crane, Transport equipment, Chest freezer, Winter clothes, Tables and chairs for meeting room Kiribati Side: ・ To secure the temporary uploading land during the construction ・ To remove the storage building for fishing equipment and damaged jetty where the new facilities are to be constructed. ・ To install the electric power meters, electricity divergent boxes and connect the telephone lines ・ To install the water divergent box and water measurement box.		

II. Result of the Evaluation

Summary of the Evaluation

The project has been highly relevant with Kiribati's development policy, development needs as well as Japan's ODA policy at the time of both ex-ante and ex-post evaluation.

The project, however, has not achieved its objectives, "to increase the volume of fish catches and shipping and of the frozen fish supply to the capital." CPPL Kiritimati Branch was not able to send frozen fish to Tarawa as periodical shipment service has stopped since 2007 because the refrigeration facilities of vessels were broken down by unexpected accidents[2]. The volume of fish catches per day has remained the same in 2003 and in 2012, while the processing volume of fish catches per year has been improved and achieved the target of 10 ton per year. According to the interviews with some fishermen in 2012, after the rehabilitation of revetment by the Project, fishing boats can safely depart and return at the quay and it has become easier to unload the cargoes. As for sustainability, the implementing agency has some problems in terms of technical and financial issues and the status of operation and maintenance. The CPPL Tarawa provided trainings to staff in Kiritimati Branch, focusing on repair and maintenance of equipment. At the time of ex-post evaluation, chest freezer did not well function because of gas leak, and the CPPL Tarawa is procuring the spare parts to fix it. They have strengthened the monitoring of budget balance. For efficiency, the project period slightly exceeded the plan.

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

[1] This ex-post evaluation was carried out by using site survey results in 2012 as well as questionnaires to and e-mail communications with the implementing agency.

[2] The liners got shipwrecked or stranded, resulting in ceasing the operation.

1 Relevance

This Project has been highly relevant with the National Development Strategies (2000-2003) and the Kiribati Development Plan (2012-2015), focusing on economic growth and poverty reduction through increasing the fishery production, and the development needs "to promote the fishing industries and to maintain the fishery processing and preservation facilities and related equipment[3]", as well as Japan's ODA policy (the 3rd Japan-Pacific Islands Forum Summit Meeting's Joint Action Plan toward Pacific Islanders including Kiribati) at the time of both ex-ante and ex-post evaluation. Therefore, relevance of this project is high.

2 Effectiveness/Impact

This Project has not achieved its objectives, increasing the volume of fish catches and shipping in Kiritimati Island and of frozen fish supply to the capital. No frozen fish has been shipped to Tarawa, because the refrigeration facilities of vessels for regular shipping line have been broken down since 2007 (Indicator 1). The volume of fish catches per day has not attained its target value. The reason is that only two out of six fishing boats have been operative and thus, there was no increase of catches per day recorded in 2012 (Indicator 2). Some positive project effects identified are that the processing volume of fish catches per year increased to 16.6 tons/year in 2011, achieving the target of 10 tons/year for 2008 (Indicator 3). The project has somewhat contributed to meet growing demand for fish in Kiritimati island as the processed fish is either shipped to Hawaii or consumed in the Kiritimati island instead of being shipped to Tarawa. According to the interview with some fishermen in 2012, fishing boats can now safely depart and return at the quay and it has become easier for the fisherman to unload the cargoes after the rehabilitation of revetment by the Project. With the renovated slipway, it has become possible to wharf the fishing boats and to carry out the regular inspection as well.

As for the status of the equipment procured by the Project, weighing machines and generator have been utilized effectively and some fishing boats and chest freezer have not been utilized due to the unavailability of spare parts. The truck with crane had not been in use after a collision accident in 2011 that had resulted in an extensive damage to the truck body, but was replaced by second hand truck sent by CPPL headquarters in October 2013; and band saw blade was also repaired. CPPL headquarters is planning to send spare parts to repair the chest freezer which is not well functioned.

Therefore, effectiveness/impact of this project is low.

Quantitative Effects

Indicator(unit)	baseline value (2003)	target value (2008)	actual value (2008)	actual value (at ex-post evaluation) 2012
1) Volume of frozen fish shipped (from Kiritimati) to Tarawa per year	16.5 ton/year	72 ton/year	0 ton/year	0 ton/year (No fish shipment to Tarawa since 2007)
2) Volume of fish catches per day	(actual value) 200 kg (2 Boats)	(planned value) 600 kg (6 Boats)	na	206kg (Jun. – Dec. 2012) Only 2 out of 6 boats available *2 boats under maintenance *1 boat drifted; 1 boat discarded because of break down[4].
3) Processing volume of fish catches per year	None	10 ton/year	na	16.6 ton (May 2011 to April 2012)

Source : Interview to CPPL staff

Fish handling facilities

Weighting Machine

Band saw

3 Efficiency

The project cost was within the plan (ratio against the plan: 99%). The project period slightly exceeded the plan (ratio against the plan: 102%) because some equipment could not be delivered on time since there is only monthly shipping service between Tarawa and Kiritimati Island[5].

Therefore, efficiency of this project is fair.

[3] The agricultural production is limited to the Copra due to the soil texture of coral reef in Kiritimati Island.

[4] Two (2) out of four(4) boats procured by the Project currently catch 100kg/per day as planned in Basic Design. The two (2) boats had been owned by CPPL before commencement of the Project and broke down at the time of the ex-post evaluation due to the lifetime.

[5] It takes 3 weeks to reach Kiritimati Island due to the distance between Tarawa and Kiritimati.

4 Sustainability

The facilities/equipment constructed/procured by the Project are maintained by CPPL Kiritimati Branch which is owned by the MFMRD. CPPL has some problems in terms of technical and financial aspects as well as current operation and maintenance status, but no problem is observed in the structural aspect.

With the organizational reform of CPPL in 2012, CPPL Kiritimati Branch has been well managed with the assistance from its headquarters (CPPL Tarawa), and the number of staff in Kiritimati Branch Office has been increased to seventeen, the twice of that before the Project. As for the technical aspect, although the staff has no problems in daily operation of facilities and equipment, there are some difficulties to repair and maintain the equipment such as chest freezer. The CPPL Tarawa provided trainings to staff in Kiritimati Branch, focusing on repair and maintenance. As for the financial aspect, the income of CPPL decreased along with the decrease of fish catches while operating expenses increased partly because the CPPL had to rent a truck to supplement the broken one as well as it had to pay the high cost of oil and fuel for transportation. However, the CPPL has made much effort to improve their financial status by collecting the debt and obtaining the financial assistance from foreign donors. In 2013, they started to strengthen the monitoring procedure by preparing the annual income and expenditure plan, and reports the plans to the government. Although some problems were found in the current status of operation and maintenance such as chest freezer, which was damaged by gas leak, the facilities constructed by the Project such as Fish Handling Building and Slipway are well managed, and the inspection of equipment is carried out regularly. CPPL headquarters has a plan to procure spare parts of the chest freezer for its repair. Also, budget for the procurement of spare parts and the daily maintenance of equipment and machineries plans to be allocated to Kiritimati Branch at the beginning of 2014.

Therefore, the sustainability of this project is fair.

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

It is strongly recommended that CPPL urgently carry out repairs for the equipment that have remained unrepaired after the breakdown. Once the equipment is fully operational, CPPL Kiritimati Branch should carry out the regular inspection and report the results to the CPPL headquarters.

Lessons learned for JICA:

In an island country like Kiribati, most spare parts need to be transferred from main island and/or be imported from overseas. In addition, it is often the case that, as an implementing agency's organizational structure, the section for operation and maintenance is located geographically far from the section for procuring spare parts. Taking them into consideration, during a project planning stage, it is essential to carefully check (i) whether there is an organizational set-up necessary for the timely reporting of maintenance issues on equipment between the OMM section and the procurement section in a main island; and (ii) whether the procurement section would keep the updated information on spare-parts suppliers and would have the secured budget to responds to the reporting promptly.

Internal Ex-Post Evaluation for Grant Aid Project

conducted by Indonesia Office: January 2015

Country Name	The Project for Bridge Construction in the Province of NUSA TENGGARA TIMUR
Republic of Indonesia	

I. Project Outline

Background	The economic gap between the urban and rural areas was a major issue to be addressed of the Government of Indonesia (GOI) in the early 2000s. The East Nusa Tenggara (NTT) and the West Nusa Tenggara (NTB), for example, were in the less developed regions with per capita Gross Regional Domestic Products being one third to a half of the average of the nation (2005). Insufficient infrastructure in the rural areas was regarded as a cause of the regional economic imbalance and the GOI put the high priority on establishing the road network.				
Objectives of the Project	To ensure all year smooth traffic in the southern part of NTT by constructing Menu Bridge and Fatuat Bridge				
Outputs of the Project	1. Project Site: NTT 2. Major Project Component: Construction of Menu Bridge (260m),and Fatuat Bridge (129.7m) 3. Indonesian Side: To secure the land necessary for the execution of the Project such as the land for site offices, working areas, storage yards, plant facilities and others.				
Ex-Ante Evaluation	2005	E/N Date	29 August, 2005	Completion Date	10 April, 2008
Project Cost	E/N Grant Limit: 938 million yen, Actual Grant Amount: 937 million yen				
Implementing Agency	Ministry of Public Works and Housing				
Contracted Agencies	Katahira & Engineers International and Hazama Corporation				

II. Result of the Evaluation

1 Relevance

This project has been highly relevant with the Indonesia's development policies at both ex-ante and ex-post evaluations which prioritize improvement of access to road network and rectification of imbalance of road network as set in the national development plan (PROPENAS: 2000-2004), Medium Term Development Plan 2010-2014 and other documents. The project has also been highly consistent with development needs at both ex-ante and ex-post evaluations: Menu Bridge and Fatuat Bridge are part of main components across the overall arterial route of major cities in the southern part of NTT and the construction of the bridges supports the social and economic development of the target areas. It was also consistent with Japan's ODA policy which prioritizes providing assistance to set up the public goods (water, sanitation, roads, electricity, etc.) necessary for village development and local development under the Country Assistance Program to Indonesia (2004) at ex-ante evaluation. Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project has partly achieved its objective, "to ensure all year smooth traffic in the southern part of NTT by constructing Menu Bridge and Fatuat Bridge". Indicators of quantitative effects, such as the number of days for bridge closure and travelling time from the sites to major cities show improvement at both target year and the time of ex-post evaluation in comparison with the time before the project. However, the approach road to Fatuat Bridge on the right bank collapsed and the the bride was not used accordingly from April 2011[1] until December 2013 when the reconstruction of approach road and minor repair of the main structure of the bridge was completed by Ministry of Public Works and Housing.

Although no quantitative data was available, according to the provincial government, the bridges are used mainly by motorcycle and followed by dump truck and cars which distribute goods, such as agricultural products (beans, corn, and banana), plantation products (tamarind), livestock (sheep, pork, lamb, and chicken), and services for a weekly market near the project sites. The number of cargo trucks has increased compared to the situation before the project, especially those for distribution of Kolbano stone and manganese. Also access to basic services, especially to medical and education center/schools at New Autonomous District of Malacca has improved. However, it cannot be said that the number of road users, which was expected to increase as an impact of the project, increased as expected according to short-time site surveys after the completion of the project, including the one at the time of ex-post evaluation[2]. The reason might be that the construction works of roads around Fatuat Bridge and Menu Bridge have not been fully completed due to the delay in contractor's construction work (although the budget is secured)[3],

[1] The main cause of the bridge damage is the erosion of river banks because of a huge flood after the continuous rainfall in April 2011 which also damaged the bridges nearby which were constructed by the Indonesian government. The bridges shared the common conditions that (1) the rivers were rapid stream river, and (2) the area is the debris flow prone area due to the geological and geomorphological conditions, (3) many landslides occurred after the heavy rainfall and ground became weak due to water permeation. In addition, in the case of Fatuat Bridge, unique causes of the damage were also found that (1) There was a huge landslide at upstream of Snuel river in 2010, a huge amount of debris was accumulated on river bed, (2) There was the irrigation channel at the right bank of Snuel river; this channel could guide the flood water to the river, and (3) The debris flow in Oeleo river which is neighboring Snuel river, overflowed and brought debris into Snuel river. The damage was caused by these multiple situations. Although a single cause might have been predicted, it can be said it was impossible to predict these multiple causes to happen simultaneously (JICA internal document).

[2] There is no complete official data set.

[3] The construction by the Indonesian side was agreed at the time of Exchange of Notes.

No negative impact on natural environment has been observed. Land acquisition was completed in accordance with domestic law and with full consent of the landowner and there was no resettlement as the site was uninhabited. No dispute has happened before, during and after land acquisition. Positive impacts were found that after the completion, the construction base camp built by the Japanese contractor was provided to the local authority and is used as a local elementary school at the time of the ex-post evaluation.

Therefore, effectiveness/impact of this project is fair.

Quantitative Effects

Indicator	Year 2004 (before the project) Actual value	Year 2008 (target year) Target value	Year 2008 (target year) Actual value	Year 2014 (ex-post evaluation year) Actual value
Indicator 1 Number of days for bridge closure	90 days	0 days	0 days	0 days
Indicator 2 Travelling time from the sites to major cities	190 minutes from Boking to Kolbano (in dry season)	160 minutes from Boking to Kolbano (in dry season)	160 minutes from Boking to Kolbano (in dry season)	145 minutes from Boking to Kolbano (in dry season)

(Source) For 2004: Basic Design Study Report. For 2008: Provincial government of NTT. For 2014:measured during the project site visit on 16 October, 2014.

3 Efficiency

The outputs of the project were completed as planned, and both the project cost and the project period were within the plan (ratio against the plan: 99%, 87%). Therefore, efficiency of this project is high.

4 Sustainability

The operation and maintenance (O&M) of the bridges has been carried out by the provincial government of NTT, while the Ministry of Public Works is in charge of the road and bridge construction, and the reconstruction of approach road of Fatuat Bridge was carried out by the Ministry. The institutional set up of the both organizations remains the same as the status at the time of ex-ante evaluation, and assumed to be sufficient to cover all necessary infrastructure related activities. Technical level of the O&M related activities is not sufficient as those activities have not been conducted properly for the reasons mentioned below, and there are problems of lack of skilled human resources and lack of internal training.

Financially, the provincial government does not have sufficient budget for O&M as necessary budgetary steps cannot be taken until the internal administrative procedure is finished. Because the budget has not been allocated for the provincial government for the routine O&M for existing /new roads and bridges, regular maintenance activities have not been appropriately carried out. However, once the internal administrative procedure is completed, appropriate O&M activities are expected to be carried out since the other projects which had already terminated the procedure has successfully received their budget and been appropriately managed.

During the time of road closure, there was one traffic accident that a motorcycle travelling the approach road of Fatuat Bridge run off from the bridge and the driver was injured, as the traffic sign of the road closure had been destroyed. Both bridges were observed in good condition at the time of ex-post evaluation survey.

Thus, as some problems were observed in technical and financial aspects as well as the current status of O&M, the sustainability of the project effect is fair.

5 Summary of the Evaluation

The project has partly achieved its objective, “to ensure all year smooth traffic in the southern part of NTT by constructing Menu Bridge and Fatuat Bridge”. The project solved the problem of the bridge closure in the rainy season and reduced the travelling time from the sites to major cities, which means the project achieved its objectives. However, since Fatuat Bridge was closed due to the collapse of the approach road from April 2011 to December 2013, while it has been already fixed, it can be said that it to some extent affects the effectiveness of the project. Although the road users such as motorcycle and dump truck have increased, the number of users is not increased as expected. Positive impacts were identified such as increase in the distribution of goods and services and improved access to basic services. As for sustainability, institutional set up is appropriate, however, there are problems in the technical and financial aspects as well as current status of operation and maintenance, as the budget for O&M is not sufficient and regular maintenance activities have not been appropriately carried out accordingly.

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

III. Recommendations & Lessons Learned

Recommendations to implementing agency:

1. The provincial government of NTT is recommended to accelerate the procedure for obtaining budget for O&M structure and to take an appropriate measure to improve technical capacity for O&M in order to secure sustainability of the bridges.
2. Ministry of Public Works and Housing should (a) complete their internal administrative procedure and (b) push contractors and provide them any incentive/penalty to accelerate the construction works of roads around the bridges as soon as possible in order to secure connectivity for traffic between major habitats.

Lessons learned for JICA:

JICA should confirm the Implementation Agency's budget allocation plan for O&M and construction plan for the roads around the project, to maximize the effectiveness of the project. In case of this project, sufficient budget for O&M should have been allocated continuously and construction of roads around the bridges should have been completed before/when NTT bridges construction were completed in order to secure connectivity for traffic between major habitats.

Fatuat Bridge

Menu Bridge

Internal Ex-Post Evaluation for Grant Aid Project

conducted by Timor-Leste Office: Month, 2014

Country Name	Project for Rehabilitation of Dili Port
The Democratic Republic of Timor-Leste	

I. Project Outline

Background	The Democratic Republic of Timor-Leste (hereinafter referred to as 'Timor-Leste') has seven ports including fishing ports. Dili Port, which was constructed in 1999 by the Indonesian Government and that could accommodate 2000 gross registered tonnage (GRT) class vessels, was the sole international port in this country. In 2002, however, Dili Port was not utilized fully because some parts of concrete slabs and beams of the wharves were damaged accidentally and some defects were found in the wharves. In order to meet the increasing cargo demand, rehabilitation and improvement of the port was necessary.				
Objectives of the Project	To recover safe and smooth operation of Dili Port by rehabilitation of the existing wharf.				
Outputs of the Project	1. Project Site: Dili 2. Japanese side • Block 1 and 2: Demolition and re-building of superstructure (1,800m^2) • Block 3 and 4: Demolition and re-building of superstructure (1,080m^2) • Block 7: Demolition of superstructure, retaining wall, reclamation and concrete pavement (216m^2) • Block 9: Demolition of transit shed and enlargement of wharf (720m^2) 3. Timor-Leste side: • Demolition of existing transit shed • Allotment of site for stockyard of the rehabilitation works • Allotment of site for disposal waste				
Ex-Ante Evaluation	2005	E/N Date	May 18, 2006	Completion Date	February 1, 2010
Project Cost	E/N Grant Limit: 922 million yen, Actual Grant: 920 million yen				
Implementing Agency	Ministry of Transports and Communications (MTC)				
Contracted Agencies	International Development System Inc. (changed the name to Ideas Inc. in November 2007) Wakachiku Construction Co., Ltd.				

II. Result of the Evaluation

1 Relevance

This project has been highly consistent with Timor-Leste's development policy, such as the development of port infrastructure under "the Five-Year National Development Plan (NDP 2002-2007)" and "NDP 2011-2015", and development needs to improve the capacity of Dili Port for responding to the increasing cargo demand at the time of both ex-ante and ex-post evaluation. It is also consistent with Japan's ODA policy for development and maintenance of infrastructure in Timor-Leste under the Japan's Country Assistance Program for Timor-Leste (2005) at the time of ex-ante evaluation.

Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project has largely achieved its objectives of "recovering safe and smooth operation of Dili Port by rehabilitation of the existing wharf." The indicators regarding the improvement of cargo handling capacity of Dili Port such as volume of cargo (indicator 1), volume of containers (indicator 2) and number of arriving vessels (indicator 3) have fully met their target value in 2010 and shown the further progress in 2013. Since the increased number of arriving vessels from 2010 to 2013 are mainly other types of vessels such as tankers, the volume of containers has not substantially increased and volume of cargo remained almost same level from 2010 to 2013. Regarding improvement of efficiency of cargo handling at Dili Port, the target has been achieved mostly at the time of ex-post evaluation. For example, time required to handle 100 tons of cargo (indicator 7) and container handling volume per hour (indicator 8) fully met their target value in 2010,while the achievement of average time of vessels standing by (indicator 5) and cargo handling volume per hour (indicator 6) could not be verified due to lack of information. However, looking at cargo handling volume per hour by item-wise, it improved from less than 20 ton/hour to 30 ton/hour for cement, and from less than 20 ton/hour to 20 ton/hour for rice. For the safety issues, no significant accidents are reported after the project completion except one accident with fatality in 2013. According to the interview with Dili Port officials, they perceived that the safety of loading and unloading works of cargo has been improved by rehabilitation of the port facilities. However, the safety of port workers still remains an issue because compliance with the safety procedures and safety equipment and protective gears such as helmets and safety foot wares are not fully observed among the workers at the time of ex-post evaluation.

As for the impacts, the project has positive impacts on reduction of transport cost for export and import goods and promotion of availability of goods in Dili city. According to the interview results with export and import companies in Dili, they recognized the reduction of the transport cost. They suggested that reduction of cargo handling time achieved by the project would be one of the contributing factors for the reduction of the transport cost. Also the local shops who sell construction materials and daily commodities perceived the improvement in availability of goods in the market. No negative impact on natural

environment was observed. The Maritime Department of MTC monitors the disposal of waste in Dili Port such as oil and garbages produced by the cargo ships and controls the natural environmental impact in the port. There was no land acquisition and resettlement of people associated with the project.

Therefore, effectiveness/impact of this project is high.

Quantitative Effects

Indicators	(Before the project) 2006 Actual	(After the project) 2010 Target	2010 Actual	(Ex-post Evaluation) 2013 Actual
Indicator 1 Volume of cargo (ton)	N.A.	90,000	233,607	232,101
Indicator 2 Volume of containers (TEU) (Note1)	N.A.	29,000	36,816	41,846
Indicator 3 Number of arriving vessels (Number)	N.A.	324	378	667
Indicator 4 Operating hours of Dili Port (hours)	24	24	24	24 (2012)
Indicator 5 (Note 2) Average time of vessels standing by (hours)	12	12	N.A	N.A.
Indicator 6 (Note 3) Cargo handling volume per hour (ton/hour)	21.7	23.2	N.A	N.A.
Indicator 7 Time required to handle 100 tons of cargo (hour/100 tons)	4.5	4.3	2.0	2.0 (2012)
Indicator 8 Container handling volume per hour (TEU/hour)	10	20	20	20
Indicator 9 (Note 4) Number of accidents during loading and unloading of container/cargo from vessels (Number)	1	0	0	1
Indicator 10 (Note 4) Number of death in associated with the accidents (Number)	1	0	0	1

Source: Dili Port

Note 1: TEU: Twenty-Foot Equipment Unit. This is the unit of measuring the amount of the container handled (1TEU = 5.9mx2.3mx2.3m)

Note 2: Average time of vessels standing by means average mooring time per vessel at wharf of Dili Port for loading and unloading of cargos.

Note 3: Cargo handling efficiency = Volume of cargo (indicator 1) / Number of arriving vessels (indicator 3) / Average time of vessels standing by (Indicator 5)

Note 4: The accident and the death in associated with the accident were not caused by the defects of the design and/or works of the project.

3 Efficiency

Although the project cost was within the plan (ratio against the plan: 99%), the project period exceeded the plan (ratio against the plan: 139%)[1]. Therefore, efficiency of this project is fair. The project period exceeded the plan because i) the undertakings by the Timor-Leste side (e.g. removal of the existing building, provision of sites for material stock yard and temporary project office) was not conducted as planned and the commencement of the construction works were delayed, ii) the repair works of the concrete cracks at Block 3 and 4 were needed to satisfy the quality standard required by the project[2]. As a result of these repair works, the outputs of the project were produced as planned.

4 Sustainability

The operation and maintenance of Dili Port including port facilities rehabilitated by the project have been carried out by the Port Authority of Timor-Leste (APORTIL). The structure for the operation and maintenance is sustained as it was considered desirable at the time of ex-ante evaluation. However, there are still more than 30 vacant positions in APORTIL. Regarding this issue, APORTIL has already submitted a proposal to MTC for filling the existing vacant positions in 2014, and recruiting 44 new staff or more in 2015. As for the technical aspect, the technical staff received technical training by the foreign donors including JICA and the maintenance manuals provided by the project is utilized. However, the technical capacity of APORTIL needs to be further improved because the damages in some parts of structures in block 1-4 are left unattended at the time of ex-post evaluation. These damages were created by strong stacking by containers, since monitoring of the cargo handling of port users and strict enforcement of overloaded and oversized cargo/containers were not conducted to prevent these damages as a part of operation and maintenance activities. For the operation and maintenance, APORTIL conducts weekly inspection

[1] The project period is calculated from the date of the E/N to the date of the Certificate of Completion of the works for Final Payment of Term 3. In this project, it is 44.5 months (from May 2006 to February 2010) and it was 12.5 months over against 32 months, which was planned at the ex-ante evaluation.

[2] The concrete cracks were found at Block 3 in May 2008 and necessary measures had been taken in August 2008. After the several repair works, the Certificate of the First Substantial Taking-Over was issued in September 2008. Based on the certificate, the operations (Block 3, 4, 7 and 9) and the rehabilitation works (Block 1 and 2) had started. However, concrete cracks had been found at Block 3 and 4 even after the repair work. In order to meet the conditions set by the certificate, the additional repair works were conducted at Block 3 and 4 in parallel with the works at Block 1 and 2.

and has conducted the maintenance dredging for safe mooring of ships in 2013-2014. Regarding the financial aspect, sufficient budget for maintenance has been allocated based on the annual action plan of APORTIL submitted to Ministry of Finance by MTC.

Therefore, as there are some problems in the institutional aspect, the technical aspect, and the aspect of current status of operation and maintenance, the sustainability of this project effect is fair.

5 Summary of the Evaluation

The project has largely achieved its objectives of "recovering safe and smooth operation of Dili Port by rehabilitation of the existing wharf." The volume of cargo, volume of containers and number of arriving vessels have fully met their target value. The efficiency of cargo handling of Dili Port has been improved as time required for handling 100 tons of cargo and handling volume of container per hour fully met their target values. No significant accidents are reported after the project completion except one accident with fatality in 2013, but the safety of port workers still remains an issue. As for the impacts, the project has positive impacts on reduction of transport cost for export and import goods and promotion of availability of goods in Dili city.

As for sustainability, there are some problems in the institutional aspect, technical aspect, and the aspect of current status of operation and maintenance since there are still many vacant positions in APORTIL and the technical capacity of APORTIL needs to be improved.

As for efficiency, the project period exceeded the plan for 12.5 months due to the delay of undertakings by the Timor-Leste side and repair works for concrete cracks at Block 3 and 4.

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

III. Recommendations & Lessons Learned

Recommendations to implementing agency:

- It is recommended that APORTIL makes efforts to recruit the staff especially engineers and technicians necessary for conducting operation and maintenance
- It is recommended that APORTIL in collaboration with MTC should take necessary preventive measures to avoid the damage of the port structures caused by strong stacking by containers. For example, establishment of the monitoring system for cargo handling of port users and enforcement system for overloaded and oversized cargo/containers may help to solve the above issue.

Block no. 3 to the end of block no.4

Back side of wharfs

Internal Ex-Post Evaluation for Technical Cooperation Project

conducted by Philippine Office: December, 2014

Country Name	The Project on the Strengthening of Local Health System in the Province of Benguet
Republic of the Philippines	

I. Project Outline

Background	In the Philippines, the FOURmula One for Health (F1) was initiated in 2005 as an implementation framework of the Health Sector Reform Agenda (HSRA). F1 was aimed at establishing efficient and effective health system under the decentralized system of governance. Designed to improve quality, efficiency, effectiveness and equity of the health system in the country, F1 initially started in 16 selected provinces in 2005 and later implemented in all 81 provinces in the country by 2009. The Province of Benguet was selected for F1 implementation in 2008 and organized its Municipalities and District Hospitals into Inter-Local Health Zones (ILHZs) to improve the province's health referral system and to allocate resources efficiently, such as health staff, medical equipment and drugs among the health institutions under each ILHZ. However, the province was faced with several health governance issues, such as insufficient budget, limited health insurance participation, inadequate drug management, and insufficient quality of health services and its capability to address such issues was limited.				
Objectives of the Project	1. Overall Goal: Health Status of the people in the Province is improved through better health service delivery. 2. Project Purpose: Local health system is strengthened to improve quality of health service in the Province of Benguet.				
Activities of the project	1. Project site: Province of Benguet 2. Main activities: 1) Development of service implementation plan, the Provincial Investment Plan for Health and drug procurement plan; 2) trainings to receive Sentrong Sigla-II (SS-II)* certification by the Department of Health (DOH) and the Philippines Health Insurance Company (PhilHealth) accreditations**, and trainings of management skills and drug inventory management; 3) advocacy/publicity activities for promoting insurance participation; and 4) dissemination of information[1] by accepting study tours, publishing newsletter and updating the project's website. * SS II is a quality improvement initiative through a certification/recognition issued by the Department of Health. Health facilities are certified based on a set of standards. The system was stopped in 2011. **In a process to obtain PhilHealth accreditations, the qualifications and capabilities of health care facilities are verified in accordance with the guidelines, standards and procedures set by PhilHealth. 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 9 persons 2) Trainees received: 19 persons 3) Equipment: IEC equipment, copy machine, PCs, medical equipment, ambulances, monitoring vehicles, and so on. Filipino Side 1. Staff allocated: 51 persons 2. Land and facilities: spaces for trainings and meetings 3. Travel expenses and per diem, cost for renovation of medical facilities				
Ex-Ante Evaluation	2006	Project Period	March 2006 to March 2011	Project Cost	372 million yen
Implementing Agency	Provincial Government of Benguet and Provincial Health Office (PHO)				
Cooperation Agency in Japan	System Science Consultants Inc.				

II. Result of the Evaluation

1 Relevance

This project had been highly relevant to the Philippines' development policy and the development needs at the time of both ex-ante and project completion. It is consistent with the policy of "establishing efficient and effective health system under the decentralized set up of governance". This is expressed in policy documents including F1 (2005) and Kalusugan Pangkalahatan (Universal Health Care) (2010).[2] It is also consistent with the development needs of strengthening the local health system in the Province of Benguet. It was likewise consistent with Japan's policy at the time of ex-ante evaluation, which are the Country Assistance Plan for the Philippines (2000) and the Country Assistance Policy for Health and Medical Services (2004), both supporting the medical and health services targeting the poor population. Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project aims to strengthen local health system in the Province of Benguet in order to deliver better health service for the people in the Province through the following activities: revising and updating mid-term and annual health plans at both

[1] This activity was implemented in collaboration with DOH and the Center for Health Development of the Cordillera Administrative Region (CHD-CAR; the DOH representative office in the Region).

[2] In 2005, F1 was launched as the new health sector reform implementation framework. Universal Health Care (UHC), also referred to as Kalusugan Pangkalahatan (KP), was launched in 2010 to aim to ensure that every Filipino shall receive affordable and quality health benefits.

provincial and Inter-Local Health Zone (ILHZ) levels; establishing a system of providing quality health services at Rural Health Units (RHUs)[3]; advocacy activities for health insurance participation to increase payment from PhilHealth to health facilities; and strengthening drug stock management.

The Project Purpose was achieved at the time of project completion. Nine of 13 RHUs in the Province received SS-II certification and/or PhilHealth Accreditation which endorse fulfillment of quality standard of health service. Also, the annual health plans at the provincial and the ILHZ levels were prepared based on the mid-term plans. In addition, the total health budget of the Province, including budget of the Municipalities (LGUs: Local Government Units) increased during the project period. Moreover, the drug supply management system of the Province has been improved by maintaining stock record as well as record of days-out-of-stock.

Those project effects have been sustained after the project completion. The number of the RHUs that have the PhilHealth Accreditation increased, while SS-II certification ceased in 2011[4]. All the 13 RHUs are still continuously practicing IMCI (Integrated Management of Child Illness). The number of pregnant women having prenatal health check-ups and the number of parturient women having postnatal health check-ups also increased. Health facilities continuously record patient referrals, and the referral records are monitored by ILHZ and PHO. PHO continues to prepare the annual and mid-term health plan, and each ILHZ prepares ILHZ Work and Financial Plan every year. The health budget has increased to more than 300 million pesos after the project completion, partly because of the increased financial support from the Provincial Government for payments of PhilHealth premiums of sponsored indigent families. As a result of continuous advocacy activities for health insurance participation, the number of households insured by PhilHealth increased from 90,612 households in 2010 to 140,717 households in 2014. As to the drug supply management, the average number of days-out-of-stock continuously decreased mainly due to the improved procurement process. However, some health facilities do not maintain stock records on some of the indicator drugs.

For the Overall Goal, it is difficult to verify contribution of the project effects to improvement of Infant Mortality Rate and Maternal Mortality Ratio, while services for mothers and children have been improved as described above. The number of outpatients at the 6 provincial hospitals rather decreased from 143,000 in 2009 to 123,000 in 2013 because the RHUs' capability for health service delivery has improved and patients often go to RHUs instead of going to the hospitals. The number of deliveries at RHUs and hospitals have been decreasing since 2012 partly as a result of increasing number of deliveries at Barangay Health Stations (BHSs) whose capacity for health service delivery was also improved by the implementation of the JICA Technical Cooperation "the Project for Cordillera-wide Strengthening of the Local Health System for Effective and Efficient Delivery of Maternal and Child Health Services" (2012-2017). As a result, the facility based delivery rate considerably improved from 65 in 2009 to 81 in 2013. Further, and in connection to the indicators set forth in the project purpose, the number of tuberculosis (TB) patients under Direct Observed Therapy, Short-Course (DOTS) has increased since 2011. There was no negative impact brought about by the project.

Therefore, effectiveness/ impact of the project is high.

Achievement of project purpose and overall goal

<table>
<tr><th>Aim</th><th>Indicators</th><th>Results</th></tr>
<tr><td rowspan="2">(Project Purpose)
Strengthening local health system to improve quality of health service in the Province of Benguet</td><td>[Health Service]
Indicator1: Number of RHUs with SS-II certification and PhilHealth Accreditation are increased. (All 13 RHUs will be SS-II certified and PHIC OPB (Outpatient Package) and TB-DOTS (Tuberculosis Package) accredited and number of RHUs with PHIC MCP (Maternal Care Package) accreditation will be increased from 2 RHUs in June 2006)</td><td>(Project Completion) Achieved.
<table>
<tr><th colspan="2"></th><th>2006 (baseline)</th><th>2010 (completion)</th><th>2014 (Ex-post Evaluation)</th></tr>
<tr><td colspan="2">No. of RHU with SS-II certification</td><td>4</td><td>9</td><td>11*</td></tr>
<tr><td rowspan="3">No. of RHU with PhilHealth Accredi-tation</td><td>OPB</td><td>11</td><td>13</td><td>13</td></tr>
<tr><td>TB</td><td>7</td><td>12</td><td>13</td></tr>
<tr><td>MCP</td><td>2</td><td>4</td><td>10</td></tr>
</table>
(*) SS-II certification ceased in 2011.
(Ex-post Evaluation) See above table.</td></tr>
<tr><td>[Governance]
Indicator2: Annual Health Plan is developed in Province and ILHZs based on medium-term Plan for Health*

*Strategic provincial/ILHZ health plans are medium term (around 5 years) plans on health</td><td>(Project Completion) Achieved
- Province: Provincial Annual Health Plan for the year 2010 was prepared based on the Provincial Investment Plan for Health (PIPH, the Provincial Mid-term Plan, revised by the project in 2008) and the ILHZ Mid-term Plan (revised by the project in 2007).
- ILHZ: Annual Operation Plans in line with the ILHZ Mid-term</td></tr>
</table>

[3] Provincial Health Office (PHO), under the provincial government, coordinates/supervises health service delivery provided by municipalities including provincial hospitals providing tertiary medical care services. Rural Health Units (RHU), also called Main Health Units, are run by the Municipal Health Office (MHO) of the municipal government (City Health Office in the case of city government). RHUs, where a team of doctor, nurse, midwives and medical technologist station, normally provide primary medical care services. MHOs coordinate health care service delivery between RHUs and Barangay Health Stations (BHS) which are located in each of the barangay, the smallest administrative division. BHS provides basic primary medical care services through the midwives (and sometimes with nurses) and refers patients to RHUs or municipal/city hospitals requiring higher level of medical care. Barangay governments provide the services of the Barangay Health Workers (BHWs) and volunteers to BHS.

[4] In the past, PhilHealth required the SS-II certification for Out-Patient Benefit (OPB) package which was renamed Primary Care Benefit [PCB] package in 2012) accreditation, but such precondition (obtaining SS-II certification) became unnecessary. Thus, one of the benefits of stopping SS-II certification is that accreditation of PCB becomes faster and simpler.

<table>
<tr><td></td><td>based on which annual health plans are developed.</td><td>Plan had been developed and implemented from 2008.
(Ex-post Evaluation)
- The Provincial Annual Health Plan and ILHZ Work and Financial Plan are prepared every year since the project completion. ILHZ Mid-Term Plans are not prepared anymore, but PIPH comprises mid-term activity plans of each ILHZ.</td></tr>
<tr><td></td><td>[Finance]
Indicator3: Total health budget** is increased (baseline: 156 million pesos in 2005)

** Total Health Budget (budget of all the public health facilities in the Benguet province) consists of health budget from LGU, income from PhilHealth affiliation fee and retained user fee from patients.</td><td>(Project Completion) Achieved
<table><tr><td>2005 (baseline)</td><td>2010 (project completion)</td><td>2012</td><td>2013</td></tr><tr><td>167.5 million pesos*</td><td>310.3 million pesos</td><td>371 million pesos</td><td>308 million pesos</td></tr></table>(*)The baseline data indicated in the PDM for the total health budget in 2005 was 156 million pesos.
(Ex-post Evaluation) See above table.</td></tr>
<tr><td></td><td>[Drug Supply System]
Indicator4: Total number of days out of stock for indicator drugs*** is decreased.

*** Five indicator drugs are: 1) Paracetamol 500mg tablet, 2) Amoxicillin 500mg capsule, 3) Metoprolol 50mg tablet, 4) Co-trimoxazole 800/160mg tablet, 5) Co-trimoxazole 400/80mg tablet.</td><td>(Project Completion) Achieved
[Monthly average per drug per facility]
<table><tr><td>2007 (Jul-Sep) (baseline)</td><td>2010 (Oct-Dec) (project completion)</td></tr><tr><td>8.9 days</td><td>4.9 days</td></tr></table>(Ex-post Evaluation) Decreased.
<table><tr><td>2011</td><td>2012</td><td>2013</td></tr><tr><td>3.7 days</td><td>2.1 days</td><td>1.0 days</td></tr></table></td></tr>
<tr><td>(Overall goal)
Improvement of health status of the people in the Province through better health service delivery</td><td>Indicator1: Infant Mortality Rate and Maternal Mortality Ratio are decreased.</td><td>(Ex-post Evaluation)
<table><tr><td></td><td>2009</td><td>2010</td><td>2011</td><td>2012</td><td>2013</td></tr><tr><td>IMR</td><td>9.6</td><td>7.92</td><td>6.44</td><td>2</td><td>13</td></tr><tr><td>MMR</td><td>15.8</td><td>14.7</td><td>28</td><td>64</td><td>16</td></tr></table>(Source) PHO data</td></tr>
<tr><td></td><td>Indicator 2: Number of outpatients at public hospitals is increased.</td><td>(Ex-post Evaluation) Decreased as a result of improved capacity of RHUs' health service delivery.
[No. of outpatients at the target 6 public hospitals]
<table><tr><td>2009</td><td>2010</td><td>2011</td><td>2012</td><td>2013</td></tr><tr><td>142,628</td><td>118,864</td><td>124,042</td><td>125,503</td><td>123,075</td></tr></table></td></tr>
<tr><td></td><td>Indicator 3: Number of deliveries at RHU and hospitals is increased.</td><td>(Ex-post Evaluation) Achieved
[No. of deliveries at the target 13 RHUs and 6 hospitals]
<table><tr><td>2009</td><td>2010</td><td>2011</td><td>2012</td><td>2013</td></tr><tr><td>4,161</td><td>6,817</td><td>6,911</td><td>6,265</td><td>6,101</td></tr></table></td></tr>
</table>

Source : Project Completion Report, Interviews with counterparts and questionnaire survey results at the time of ex-post evaluation

3 Efficiency

The project cost and the project period were both within the plan (ratio against the plan: 98% and 100%). Therefore, efficiency of the project is high.

4 Sustainability

In the policy aspect, there is no significant change in the health sector policies to promote enhancement of local health system as set in the Universal Health Care (2010) and the PIPH 2014-2016. SS-II certification was ceased in 2011 because it was replaced by Philhealth accreditation system which is more in line with the current thrust of the DOH[5].

Institutionally, there is no significant change in the structure of health administration in the Province. The PHO structure remains the same and the ILHZs have been functioning as zonal health system, which contributes to enhancing referral system between RHUs and hospitals and drug supply system. In addition, all the 13 RHUs maintain the PhilHealth accreditation, which means that the RHUs are performing based on the national health service standards. While the number of staff of RHUs is fluctuating, and they only hire temporary staff as the need arises, the number of health staff of PHO and health facilities is sufficient to promote and manage health services.

In the technical aspect, the technical skills of administration staff at PHO and ILHZ are continuously upgraded through trainings on health program/project management including monitoring and evaluation. Health personnel and technical staff at RHUs and District Hospitals also have opportunities for trainings on health service delivery, hospital administration and drug supply management. The health workers have sufficient skills in operation and maintenance of equipment and facilities even though no training opportunities on this aspect were provided. A trained PHO staff assists the health workers in the maintenance of their equipment. PHO continuously updates and utilizes manuals and guidelines on ILHZ monitoring as well as PHO monitoring guidelines that were improved by the project.

As for the financial aspect, the Provincial Government has secured the annual health budget of 223 million pesos in 2011, which increased to 370 million pesos in 2013, for operation and activities of PHO, ILHZ, and District Hospitals. The financial sources established through the project were maintained, and the total health budget is increasing annually. It is sufficient to

[5] The current thrusts of the DOH are the following: (1) to improve financial risk protection (2) to improve access to quality health care facilities and (3) to achieve health related Millenium Development Goals (MDGs) to reduce child mortality and improve maternal health. [It is expected that both MDGs are achieved through implementation of the Basic Emergency Obstetric & Newborn Care.]

cover necessary costs for maintenance of health facilities and equipment, drug procurement, and provision of trainings for health service providers.

From these findings, it is considered that there is no problem in sustaining project effects. Therefore, sustainability of the project effects is high.

5 Summary of the Evaluation

This project has achieved the project purpose and mostly achieved the overall goal through improvement of quality of health services thus contributing to the improvement of health status of the people in the Province of Benguet. As for sustainability, the national health reform program has endorsed the continued promotion of local health system strengthening and sufficient budget to sustain the health administration and the health service delivery has been secured. Also, the administrative and technical staff of the Province are continuously upgrading their skills through regular training activities.

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

III. Recommendations & Lessons Learned

Recommendation for Implementing agency:

[To PHO]

It is recommended that PHO updates the ILHZ Monitoring Guidelines and Tools to make them more useful for ILHZ planning. After the project completion, indicators such as facility-based deliveries (FBD), maternal care and TB referral were officially added as the priorities of DOH. Therefore, it is desirable to update the ILHZ Monitoring Guidelines and Tools to contain those additional indicators and to reflect results of the monitoring on the ILHZ plans. For such updating, PHO utilize ILHZ point-persons who are conversant of the details of the existing ILHZ Monitoring Guidelines and Tools.

Recommendation for JICA:

[To JICA and the Department of Health, Cordillera Administrative Regional Office (DOH-CARO)[6]]

As one of the project outputs, the project shared the information and experience of the project with other provinces in collaboration with DOH and the CHD-CAR[7]. At the time of ex-post evaluation, the DOH-CARO is implementing "the Project for Cordillera-wide Strengthening of the Local Health System for Effective and Efficient Delivery of Maternal and Child Health Services" (2012-2017), which is supported by JICA, in Cordillera Administrative Region (CAR). It is recommended that the DOH-CARO continues to invite lecturers from PHO, District Hospitals and RHUs to share experiences of the project in trainings and seminars related to local health system strengthening in Benguet province with other provinces in CAR or even outside CAR, as appropriate.

Lessons learned for JICA

In improving the local health systems, it is important to include activities and outputs that promote cooperation among local authorities at different administration levels. Activities that promote collective pooling of local resources for health services will result in more efficient use of limited resources and improved referral system despite political differences of local leaders. In this project, the ILHZ played such coordination role and contributed to the collective activities among different administration levels.

(Patients line up in the treatment room of Buguias RHU)

(Stock of drugs are appropriately labelled in Abatan Emergency Hospital)

[6] The name of the Center for Health Development of the Cordillera Administrative Region (CHD-CAR) was changed to DHO-CARO in 2014.

[7] Being the DOH representative office in the Region, the DOH-CARO (previously known as CHD-CAR) is providing technical assistance to health workers of LGUs in addition to securing national standards of health services in the countryside.

Internal Ex-Post Evaluation for Technical Cooperation Project

conducted by Philippines Office/ July, 2014

Country Name	Sustainability Improvement of Renewable energy (RE) Development in Village Electrification
Philippines	

I. Project Outline

Background	In the Philippines, more than 6,200 barangays (villages) out of around 42,000 barangays in the country were not electrified because of the geographic conditions of the country, which is composed of more than 7,000 islands. Since the household electrification rate was still under 70%, about 20 million people lived without electricity. However, the most of the unelectrified villages are scattered in the mountainous areas or the islands with difficulty to connecting the transmission and distribution network of electricity. Therefore, the government of the Philippines planned electrification by stand-alone power source using renewable energy for the remote areas. Under the situation, it was essential to enhance sustainability of rural electrification by renewable energy through capacity development of implementing agencies.		
Objectives of the Project	1. Overall Goal: Village Electrification Program under Expanded Rural Electrification Program is successfully implemented. 2. Project Purpose: Capacity of the target group (note1) is enhanced to promote and manage sustainable RE based village electrification projects. 3. Assumed steps for achieving the project goals[1]: The project implements technical trainings and On-the-Job Training (OJTs) of Micro-Hydropower Plant (MHP), Photovoltaic (PV, solar power), Social Preparation (SP) and develops technical manuals and guidelines for RE village electrification projects. Through these activities, the project also implements model projects of RE village electrification as well as rehabilitation of the existing RE systems. By the trained persons, the project aims to enhance capacity of the implementing agencies and other related organizations in the Village Electrification Program. RE systems developed under the project and the RE village electrification projects are operated appropriately by the trained staff and thereby village electrification are promoted sustainably. (note 1) Renewable Energy Management Division/Department of Energy (DOE-REMD, currently Renewable Energy Management Bureau: REMB), Affiliated Non-conventional Energy Centers (ANECs, currently Affiliated Renewable Energy Centers: ARECs), Local Government Units (LGUs), Center for Micro-hydro Technology for Rural Electrification (CeMTRE).		
Activities of the project	1. Project site: Barangays in Antique Province, Kalinga Province, Leyte Province, Illoilo Province and Bohol Province, and the whole country. 2. Main activities: Technical trainings and OJTs for the staff of implementing and the related agencies, implementation of model projects and rehabilitation projects, development of technical manuals and guidelines for RE village electrification projects and others 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 1 for long-term23 for short-term 2) Trainees received: 13 persons 3) Third-country training (Indonesia): 8 persons 4) Equipment: PCs, portable GPS, solar sensors, PV training kit, etc. Philippine Side 1) Staff allocated: 16 persons 2) Land and facilities: project offices		
Project Period	June 2004 to June 2009	Project Cost	440 million yen
Implementing Agency	Department of Energy (DOE)		
Cooperation Agency in Japan	Tokyo Electric Power Company		

[1] Reviewed at the time of the ex-post evaluation.

Related Projects (if any)	Japan's cooperation: The Study on the Institutional Building for DOE under a Restructured Philippine Electric Power Industry (TC, 2002-2003), Joint Study for More Effective and Comprehensive Philippine Energy Plan Formulation (TC, 2007-2008), Rural Electrification Utilizing Mini-/Micro Hydro Power (Dispatch of expert, 2001-2004)

II. Result of the Evaluation[2] [3]

1 Relevance

This project has been highly relevant with the Philippines' development policy to target "Barangay Electrification of 100%" as set in policy documents including Philippine Energy Plan (2001-2011) and Expanded Rural Electrification Program, development needs of "sufficient technical and management capacity of DOE and other related organizations to promote village electrification by RE, as well as Japan's ODA policy to support improvement of gaps including rural electrification at the time of both ex-ante and project completion. Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project focuses on enhancement of technical capacity of REMB, CeMTRE, ARECs and LGUs to promote village level RE-based electrification. Although the achievement of the Project Purpose was not able to be verified by the indicators specified by the Project Design Matrix, at the time of ex-post evaluation, the achievement was able to be confirmed by the alternative indicators. As of 2012, 50 MHP projects out of 67 projects (75% of MHP projects), are operational. Among the rehabilitated MHPs, 1 MHP has been well-functioning with the Electronic Load Controller (ELC) to stabilize frequency and voltage. Other 5 MHPs have been functioning but having troubles of busting of bulbs and fluctuation of voltage because of the uncontrolled electricity load without using ELC. Therefore, the project purpose has been mostly achieved at the time of ex-post evaluation.

As for the overall goal, the electrification rate at barangay level reached 99% in 2011. 41,960 barangays in the country have access to electricity. At the household level, the electrification rate of 78.6%, covering 14 million households, has been still on the way to achieve the target of 90% for year 2017. The progress of rural electrification brought some positive changes in rural life such as more activities in evening time and less consumption of kerosene and gas. Also, the local governments gave priority on improvement of access roads connecting to villages as economic growth has moved at a much better momentum in the rural areas previously not electrified. It is important to note, however, that while the project has contributed to the overall goal of electrification at the barangay and household levels, there are other contributing factors that are not directly within the purview of the project such as the high level of prioritization on RE of the Philippine Government as pronounced in the Philippine Energy Plan for 2009-2030 and in the Renewable Energy Act (Republic Act No. 9513) that expedited the electrification in the countryside.

In addition, the project contributed to the enactment of "the Renewable Energy Act" (Republic Act No. 9513) and the scale up of the former DOE-REMD to the Renewable Energy Management Bureau with more staff and budget in order to promote rural electrification based on renewable energy. Furthermore, the personnel trained by the project have been involved in in-house trainings and some technical staff, who have directly been trained or were trained by DOE personnel involved in the project, have actually been tapped by JICA as instructors in RE-related training activities for other developing countries such as Solar PV Trainings in Bhutan[4], Zambia[5], and Japan[6]; a significant south-south cooperation initiative made possible by JICA support.

. Therefore, effectiveness/ impact of the project is considered fair.

Achievement of project purpose and overall goal

Aim	Indicators	Results
(Project Purpose) Enhancement of capacity of the target group for promotion of sustainable RE based village electrification projects.	80% of RE systems developed under this project and BEP (Barangay Electrification Program) during the Project Period are operational appropriately.	(Project Completion) Not verifiable within the timeframe of the project period, the project purpose was verified by an alternative indicator "establishment of necessary coordination system between central and local level for provision of necessary knowledge, skills and technologies in order to promote the Village Electrification Program. It was achieved by the coordination system between DOE-REMD, ARECs and LGUs which was well established. （Ex-post Evaluation）Mostly achieved. As of 2012, 75 % of MHP projects are operational.[7]

[2] Constraint of Evaluation: (1) The project did not set indicators for overall goal. (2) Ministry of Agriculture has only part of the production data.

[3] This report is based on the information till October 2013 before Bohol Earthquake of October 15, 2013 and Typhoon Haiyan that have affected the project sites in November 2013.

[4] October 11-29, 2009; April 18 to May 15, 2010; and February 4-16, 2011.

[5] October-1-23, 2011 and October 3-28, 2012.

[6] February 7-11, 2011; January 16-21, 2012; November 13-17, 2012; and August 18-23, 2013.

[7] At the time of ex-post evaluation, the data concerning the overall operational status of PV and SV was not available. However, by the field survey of ex-post evaluation, it was verified that at least two PV sites (Alumar and Balugo) are operational.

	In case of trouble, 80% of troubled RE systems mentioned above are repaired or rehabilitated.	(Project completion) Not verifiable within the timeframe of the project. (Ex-post Evaluation) The project was able to repair/ rehabilitate nine existing projects (2PV and 7 MHPs)
(Overall goal) Successful implementation of Village Electrification Program under Expanded Rural Electrification Program	100% barangay level electrification is accomplished by year 2009.	(Ex-post Evaluation) Mostly achieved. As of 2011, 99% of barangays (41,960 out of 41,975) are electrified.
	90% of household level electrification is accomplished by year 2017.	(Ex-post Evaluation) Mostly achieved. As of 2011, 78.6% of households (14 million out of 18 million) are electrified.

Source：Project Completion Report, Interviews with counterparts

3 Efficiency

While the inputs were mostly appropriate for producing the outputs of the project, and the project period was as planed (ratio against the plan: 100%), the project cost was higher than the plan (ratio against the plan: 133%) primarily because of increase in the number of short-term experts dispatched and the third country training in Indonesia. Therefore, efficiency of the project is fair.

4 Sustainability

In the policy aspect, this project is endorsed by the “Renewable Energy Law” aiming at promotion of utilization of renewable energy, including renewable energy based rural electrification.

As for the institutional aspect, with the RE law, the new REMB is created with enhanced functions in the promotion of the development and utilization of RE resources, thus securing the organizational sustainability of REMB as an organization and consequently rural electrification as a mission. Consequently, the number of REMB personnel is increased, from only 25 in 2007 to 71 positions since 2009. While 2 out of the 4 ARECs did not renew their partnership with DOE after the completion of the project, a new partnership was established with a new AREC, bringing the total number of functioning ARECs to 3 at the time of ex-post evaluation. According to the DOE, this number would still be optimal for sustaining the activities as the new partner ARECs. There is no issue with proximity as the AREC that did not renew was replaced by another AREC which is nearby. The project has also brought about the creation of Barangay Power Association (BAPAs) in different areas which previously did not have electricity and most of them are located in the project sites. This expansion has continued even until the time of ex-post evaluation, in line with the expansion of electricity services in the communities.

Regarding the technical aspect, with more new staff joining the REMB, in-house trainings on RE policy and systems, MHP and PV technologies as well as social preparation became unavoidable. DOE reports that the project counterparts continue practicing acquired skills and techniques in line with the Household Electrification Program (HEP) which is a continuing program of DOE that is closely aligned with the completed project In addition, manuals and guidelines for RE projects developed by the project have been made available for use by REMB. REMB reports that these have been crucial inputs for their evaluation activities given their role in screening RE development projects by private developers seeking DOE endorsement. The project also trained BAPA members as “technicians” for PV and “operators” for MHP, working jointly with ARECs in their areas. Partnerships with ARECs would ensure that the "technicians" and "operators" would gain access to support from ARECs as needed.

In the financial aspect, the RE law effectively increased the financial resources of REMB, thus securing its financial sustainability. DOE being a government agency is bound to adhere to strict liquidation procedures. On the other hand, some partner ARECs were reported to have difficulty working on liquidation documentations, and as such, the only recourse for DOE was to hold the project-related funds until such time the ARECs are able to rectify their liquidation reports. At the grassroots level, some BAPAs encountered challenges in their operation and maintenance costs, and this is mainly due to the difficulty of collecting electricity fees. With the end goal of making these kinds of grassroots organizations self-sustaining, DOE (particularly the REMB) would be looking into finding ways to better empower BAPAs to enable them to eventually become financially self-sustaining organizations

As there are some problems in the financial aspects, the sustainability of this project effect is fair.

5 Summary of the Evaluation

This project has partially achieved the project purpose to enhance capacity for promotion of sustainable RE based village electrification projects since most of MHP projects developed under the project are operational and the troubled RE system were repaired or rehabilitated at the time of ex-post evaluation. In addition, the Village Electrification Program has been successfully implemented and attained 99% of the barangay level electrification, but the contribution of the project could not accurately be confirmed. As for sustainability, the renewable energy based rural electrification is endorsed by the “Renewable Energy Law” and the former DOE-REMD was scaled up to REMB with more staff and budget for promotion of rural electrification by using renewable energy. In addition, the project counterparts continue practicing acquired skills and techniques as well as using the manuals and guidelines developed by the project. On the other hand, some partner ARECs were reported to have difficulty working on liquidation documentations, and some BAPAs have financial difficulty caused by the limited collection of electricity fee. As for efficiency, the project cost was exceeded the plan due to the increase in the short-term experts dispatched and the third country training. In light of the above, the project is evaluated to be partially satisfactory.

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

- Due consideration by DOE should be provided in terms of ensuring partner agencies (ARECs) in order to be aware of government financial management standards (especially in liquidations).
- Partnering agencies (ARECs) should support the BAPAs concerning collecting fees and proper in-site financial management to ensure sustained financial capabilities of the sites.
- ARECs should also endeavor to further support BAPAs in terms of technical skills.

Lessons learned for JICA

- It is important to examine the appropriate steps for achieving the project goals when designing a project. The project indicates the necessity of i) setting the realistic project purpose and overall goal and measurable indicators, ii) considering causal link between overall goals and project purpose and iii) incorporation of appropriate activities such as development of manuals.

Solar Home System in Leyte

Load Controller

Internal Ex-Post Evaluation for Technical Cooperation Project

conducted by JICA Philippines Office: October, 2014

Country Name	Comprehensive Outreach and Fish Breeding Project
Republic of the Philippines	

I. Project Outline

Background	The fishery industry was recognized as one of the prominent industries with high potential for more job creation and effective land utilization. The supply of wild milkfish fry, however, was decreasing due to deterioration of coastal resources. To address this situation, millions of artificially produced fry were imported from Indonesia and Taiwan in early 2000s, but these fry were said to suffer high mortality rate due to the long transportation time. On the fish farmers' side, small fish farmers had been facing difficulties in improving their livelihood due to various factors such as high price of feeds and inappropriate operation of fish farming. In addition, intensive aquaculture development led to serious environmental problems such as deterioration of water quality of fish ponds. It resulted in mass mortality of reared fish in the ponds and negatively affected farmers' income and livelihood.				
Objectives of the Project	1. Overall Goal: Livelihood of fish farmers is enhanced in the pilot municipalities. 2. Project Purpose: Aquaculture outreach functions in the pilot municipalities.				
Activities of the project	1. Project site: Region I, III, and IV-B. (Pangasinan, Pampanga, and Oriental Mindoro) 2. Main activities: (i) Formulation of the plan to improve fry production and hatchery management; (ii) Preparation of the technical manual for hatchery workers and implementation of the training; (iii) Establishment of Philippine Bangus Development Plan (PBDP) hatchery network; (iv) Preparation of the technical manual for extension workers and fish farmers and implementation of the training; and (v) Support for farmers' knowledge sharing. 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 9 persons 2) Trainees received: 1 person in Japan, 5 persons in Indonesia 3) Equipment: 3.14 million peso including vehicles, engine pump, etc. Philippine Side 1. Staff allocated: 10 persons. 2. Land and facilities: Land, laboratory and equipment necessary for the project activities, office space and facilities, etc. 3. Local cost: 25.5 million pesos				
Ex-Ante Evaluation	2006	Project Period	November 2006 to April 2010	Project Cost	295 million yen
Implementing Agency	Bureau of Fisheries and Aquatic Resources, Department of Agriculture (DA-BFAR), National Integrated Fisheries Technology Development Center (NIFTDC)				
Cooperation Agency in Japan	IC Net Limited and Fisheries & Aquaculture International Co., Ltd.				

II. Result of the Evaluation

1 Relevance

This project has been highly relevant with Philippines' development policy of "development of the fishery sector, notably aquaculture sector" as set in policy documents including the Medium Term Philippine Development Plan (2004-2010) and PBDP (2013-2016) at the time of both ex-ante evaluation and project completion. It has been consistent with development needs for sufficient and stable supply of milkfish fry. The project was relevant also with Japan's ODA policy at the time of ex-ante evaluation: Country Assistance Program (2002), in which agricultural and rural development was considered as one of the means for alleviating poverty and redressing regional disparities.

Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project aimed to strengthen aquaculture outreach functions in the pilot local government units (LGUs) in the Provinces of Pangasinan, Pampanga and Oriental Mindoro, through the formulation of the improvement plan for fry production and hatchery management, training of hatchery workers and extension workers, establishment of PBDP hatchery network[1], and support for farmers' knowledge sharing. The Overall Goal was set for improving the livelihood of fish farmers in the pilot LGUs through raising the profitability level of milkfish aquaculture[2].

The Project Purpose was mostly achieved by the time of project completion. NIFTDC's supply of milkfish fry increased after the project started but the supply of milkfish eggs decreased. The decrease of egg supply was due to the suspension of milkfish production of satellite hatcheries damaged by typhoons and decreased needs from the private hatcheries. Regarding fry production in the off-season (July to February), it had been increasing every year during the project period and contributing to the supply of fry throughout the year. As to the NIFTDC's outreach function and activities for fish farmers, 80% of pilot fish

[1] PBDP targeted 5 central hatcheries and 12 satellite hatcheries and planned to add 10 public satellite hatcheries and 10 private satellite hatcheries as of 2006.

[2] Experiments were done during the project period to develop and verify an environment-friendly milkfish aquaculture technique mentioned below that is inexpensive and adoptable in the field by fish farmers; (1) Effective use of natural food, (2) Improvement of income generation through fingerling production, and (3) Income generation with group approach. (Page 14-17 of Final Report April 2010)

farmers had applied the knowledge and skills introduced by the project on milkfish aquaculture and hatchery management before the project completion. It was also confirmed that 93.6% of non-pilot fish farmers who participated in the training had applied learned knowledge and skills by the end of the project.

After the project completion, some of the project effects have continued. NIFTDC totally stopped supply of milkfish eggs, as nearby PBDP hatcheries in Region I have closed down their operation or shifted to production of other species. Fry supply had been decreasing after the project completion, attributed to poor water quality at NIFTDC, prolonged breakdown of the seawater intake system, and frequent typhoons. They have increased in 2013, but have not returned to the same level at the project completion for both high- and off-seasons. For the stable supply of milkfish fry, backyard hatchery system[3] was recommended by the Terminal Evaluation Team but it has not been introduced at the time of ex-post evaluation. Besides fry, in 2014, NIFTDC has started supplying milkfish fingerlings[4] to BFAR regional offices to ensure high survival rates. Regarding the continuity at the farmers' level, more than half of both of the pilot and non-pilot fish farmers have continued their learning from the project, although some farmers quitted milkfish aquaculture because of the typhoons' damages on their fishponds.

Regarding the Overall Goal, the project has proven that the use of natural food (e.g. lumut and lablab) and fermented rice bran reduced feed cost by as much as 50% compared to commercial feeds. But the improvement of the livelihood of fish farmers in the pilot municipalities as a whole was not confirmed at the time of ex-post evaluation. As the profitability of milkfish aquaculture was not verified by the quantitative data and the official statistics at the ex-post evaluation, profitability was examined by the information collected by the interview with fish farmers about the production cost and sales[5]. All the interviewed fish farmers answered that the production cost has increased, approximately 10%, annually. They feel that this has been caused by increase in the cost of farm inputs including commercial fish feeds[6], fertilizers and labor. On the other hand, 54% of the interviewed fish farmers responded that the production sales have increased more than the cost increase. They assume that the contributing factors to the sales increase were higher stocking density, improved water quality resulting from increased use of natural food and LGUs' intensive monitoring, and increased farm-gate price of milkfish.

So as to other impacts, the project experience has been spread to outside pilot municipalities through NIFTDC's biannual training on milkfish production and hatchery management and some LGUs' efforts. It is observed that the number of fish processing enterprises increased in Dagupan and Lingayen and more female workers have been hired and involved in fish feeding and vending. There has not been negative impact on the environment. Rather, the water quality of fish ponds has improved because of the promoted use of natural feed and water quality monitoring conducted by LGUs. There was no land acquisition and resettlement.

Thus, achievement of the Project Purpose was mostly achieved at the time of completion, but the achievement of the overall goal in the pilot municipalities as a whole was not confirmed. Therefore, effectiveness/ impact of the project is fair.

Achievement of the Project Purpose and Overall Goal

<table>
<tr><th>Aim</th><th>Indicators</th><th>Results</th></tr>
<tr><td rowspan="2">(Project Purpose)
Aquaculture outreach functions in the pilot municipalities.</td><td>1) Supply of milkfish eggs and fry of NIFTDC are increased compared to those before the actual operation of the project started. (Those figures for 2006 are 27.46 million and 2.03 million, respectively.)</td><td>(Project completion)
Supply of milkfish eggs: Not achieved
Supply of milkfish fry: Achieved
(Ex-post Evaluation)
Supply of milkfish eggs: Not achieved.
After the project completion, milkfish eggs have not been produced at NIFTDC
Supply of milkfish fry: Achieved
. Fry supply decreased to 2012 but increased in 2013.
(million)
<table>
<tr><th></th><th>2006</th><th>2007</th><th>2008</th><th>2009</th><th>2010</th><th>2011</th><th>2012</th><th>2013</th></tr>
<tr><td>Egg supply</td><td>27.4</td><td>1.2</td><td>1.1</td><td>1.6</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>Fry supply</td><td>2.0</td><td>2.5</td><td>3.7</td><td>12.7</td><td>15.8</td><td>10.7</td><td>7.7</td><td>9.7</td></tr>
</table></td></tr>
<tr><td>2) NIFTDC produce fry in off-season month (July-February) every year.</td><td>(Project Completion) Achieved.
- NIFTDC produced fry in off-season months every year.
(Ex-post evaluation) Still producing every year but decreased drastically after the project completion.</td></tr>
</table>

[3] Backyard hatchery system is a system which has a central hatchery (such as NIFTDC) that produces milkfish eggs and excess of milkfish eggs can be provided to small-scale hatcheries (backyard) for pilot testing. With assistance from a central hatchery, the technology on construction of hatchery facilities, larval rearing, harvesting, packing, and distribution among others, will be transferred to local fishermen eager to become involved in the milkfish egg production. This is called as "Bali model" in Indonesia and NIFTDC counterparts observed the effectiveness of the model during their training in Indonesia.

[4] Fry are fish just after they are hatched. They are very small and often actually look like dirt in the water. Fingerlings vary in size, but generally are older. http://www.answers.com/Q/What_is_the_difference_between_fry_and_fingerlings_in_Aquaculture

[5] Interview was conducted with 48 fish farmers in 6 pilot municipalities in 3 target provinces, namely, Dagupan City and Lingayen of Pangasinan Province, Sasmuan and Masantol of Pampanga Province, and Bongabong and Naujan of Oriental Mindoro Province.

[6] It is observed at the time of ex-post evaluation that most of the fish farmers would resort to using commercial feeds as an alternative in case production of natural foods is difficult. For instance, source of organic manure was not an issue during project implementation due to the presence of poultries in Pangasinan. However, at the time of ex-post evaluation, it was informed that there has been a decrease in the number of poultries in the area and thus affecting production of organic manure. As such, it became more convenient for fishermen to resort to commercial feeds which are readily available in the market. During focus group discussions with fish farmers, it was learned that farmers are using commercial foods because production of natural foods such as "lab-lab" and "lumut" has become a challenge due erratic weather (for instance, lumut or algae can only grow during rainy season) and limited source of organic manures (such as chicken manure) necessary for natural food production. Further, particularly for Pampanga's case, fishponds cannot be drained on a regular basis because of flooding and/or their river is silted with lahar.

		(million) 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 Production of fry in off-season: 0.21 | 0.90 | 2.35 | 2.72 | 6.36 | 0.67 | 0.56 | 2.60
	3) 50% of fish farmers, who participated in trainings but not pilot farmers, apply skill and knowledge introduced by the project.	(Project completion) Achieved. - 93.6% of fish farmers (not pilot farmers) who participated in training applied skill and knowledge introduced by the project. (Ex-post evaluation) Effects being continued. - 68% of the interviewed fish farmers (not pilot farmers) who participated in training continue applying skill and knowledge introduced by the project.
	4) 70% of fish farmers, who participated in pilot activities, continue to apply knowledge and skill on milkfish aquaculture and management introduced by the project.	(Project completion) Achieved. - 80% of fish farmers who participated in pilot activities answered that they would continue to apply knowledge and skill on milkfish aquaculture and management introduced by the project. (Ex-post evaluation) Effects being continued. - 77% of the interviewed fish farmers who participated in pilot activities have continued applying knowledge and skill introduced by the project.
(Overall goal) Livelihood of fish farmers is enhanced in the pilot municipalities.	Profitability of aquaculture production of a fish farmer in the pilot municipalities is improved (decrease in production cost and increase in sales) compared to the one before the actual operation of the project started.	(Ex-post evaluation) Increase in the profitability in the pilot municipalities as a whole was not confirmed - All the interviewed fish farmers answered that the production cost has increased. Among them, 54% answered that the sales has increased more than the cost increase, while the rest (46%) answered that it has not changed.

Source: Completion Report, NIFTDC records, and interview with fish farmers, LGU-MAO staff.

3 Efficiency

While the project period was within the plan (ratio against the plan: 100%), the project cost exceeded the plan (ratio against the plan: 118%), mainly due to extended months of the experts' dispatch to recover delayed activities. Therefore, efficiency of the project is fair.

4 Sustainability

In the policy aspect, the project is still given importance in the current development policy. PBDP is effective, and the fishery sector remains a priority in the Medium Term Philippine Development Plan (2010-2016). Also, the National Fishery Sector Development Program identifies milkfish as a priority commodity, and BFAR has been promoting the development of mariculture parks managed by the LGUs with milkfish aquaculture as a predominant activity.

Institutionally, the organizational responsibility of BFAR and NIFTDC is the same as the one during the project period. However, the network of PBDP hatcheries strengthened by the project has not been functioning. The reasons are (i) Nearby PBDP's milkfish hatcheries have terminated their operation after being damaged by typhoons, and (ii) several private hatcheries have closed down their operation due to low profitability, as imported milkfish is reportedly sold at a lower price. Outreach activities for fish farmers have not continued because of insufficient human resources of LGUs; Among the six interviewed LGUs, four LGUs do not have sufficient extension workers. As a result, milkfish farmers' meetings to share the good practices have not been organized after the project completion.

Regarding the technical aspect, most of NIFTDC staff specialized in milkfish and hatchery workers remain in the same position, and the on-the-job training is given to the newly employed staff at NIFTDC. The technical manuals developed by the project have been utilized at NIFTDC. They have been also distributed to all PBDP hatcheries, but their utilization has not been monitored. Outreach activities such as technical advice and dispersal of fingerlings have been conducted in the four of the interviewed six pilot LGUs, but it is not sufficient to cover all the needs of fish farmers. In the two LGUs in Oriental Mindoro where NIFTDC and BFAR stopped technical support after the project completion, no extension services have been provided. These areas are dependent on rice and rice production has been more prioritized even since before the project.

Also in the financial aspect, there have been minor problems. For NIFTDC, necessary budget has been allocated for milkfish hatchery management, outreach activities and operation and maintenance of the equipment. However, the sufficient budget is not secured at the LGUs level. For example, among the interviewed 6 LGUs, the five LGUs lack adequate budget for extension activities, even despite BFAR's financial support. LGUs' prioritization in other commodities such as rice and corn is another factor for insufficient budget allocation for fishery extension services.

From these findings, it is considered that the project has some problems in institutional, technical and financial aspects of the implementing agency; therefore, sustainability of the project is fair.

5 Summary of the Evaluation

The project has mostly achieved the Project Purpose. As the Project Purpose, NIFTDC's supply of milkfish eggs and fry have increased, and the fish farmers who participated in the project activities have applied the knowledge and skills introduced by the project. For the Overall Goal, the improvement of the livelihood of fish farmers in the pilot municipalities as a whole was not confirmed at the time of ex-post evaluation but 54% of the interviewed fish farmers responded that sales from the milkfish production are increasing after the project started. Regarding the efficiency, the project cost exceeded the plan. As for the project sustainability, although BFAR and NIFTDC have maintained their function and resources, the pilot LGUs have not conducted sufficient extension services for farmers due to insufficient budget and staff.

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

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

For BFAR and NIFTDC:

- For stable supply of milkfish fry, it is desirable, as recommended by the Terminal Evaluation Team, to introduce a backyard hatchery system around NIFTDC, which was observed by the counterparts during their training in Indonesia that it worked effectively there. It could be piloted in Pangasinan, and if it is found successful, then expand the system to PBDP hatcheries.
- In order to reduce milkfish production costs, NIFTDC should continuously develop technologies to reduce the costs and disseminate such technologies to LGUs, which put priorities on milkfish farming. In this regard, regular monitoring visits by NIFTDC personnel to pilot LGUs are necessary to understand the problems faced by milkfish farmers.
- BFAR regional offices should intensify their technical support to LGUs, which put priorities on milkfish farming, such as farmers' training and techno-demo farms, especially in Oriental Mindoro, so that they strengthen outreach services. In this regard, technical assistance by NIFTDC to BFAR regional offices is essential.
- It is necessary to organize farmers' meetings for sharing good practices.

For pilot LGUs:

- It is recommended to continuously seek technical and financial assistance from agencies mandated to provide extension support services such as BFAR regional offices, NIFTDC, etc.

Lessons learned for JICA:

- After the project ended in April 2010, it was found out that no outreach services or technical support were conducted in some pilot LGUs, especially those located far from NIFTDC. To enhance sustainability of the project effects for the project which has counterparts both in the national level institution and local government units, it is important to formulate a common understanding about an appropriate exit plan or strategy to be conducted by each institution during project period.
- Despite the increase in production cost, some milkfish farmers were able to realize profits through improved stocking density. This was realized through the significant improvement in water quality resulting from increased use of natural food (not commercial fish feed) and intensive monitoring of water quality by the LGU. The project has proven that giving due importance to environmental aspects in milkfish aquaculture extension generates positive effects even in the short term.

(Nursery tanks used for milkfish production in Oriental Mindoro)


(Some parts of the Naujan Hatchery for broodstock management)

Internal Ex-Post Evaluation for Technical Cooperation Project

conducted by Philippines Office: March 2015

Country Name	Capacity Enhancement Program of Metropolitan Iloilo-Guimaras Development Council and Banate Bay Resource Management Council Inc.
Republic of the Philippines	

I. Project Outline

Background	In the Philippines, the responsibility of providing people with basic public services was transferred from the central government to Local Government Units (LGUs) in accordance with the Local Government Code of 1991. Under this circumstance, the LGU clusters, which are alliances of neighboring LGUs, were organized voluntarily by LGUs themselves in order to cope with development issues that were difficult to respond by a single LGU, such as metropolitan traffic and coastal resource deterioration. In Metro Iloilo, which includes Iloilo Province and Guimaras Province, poor traffic management resulted to traffic congestions in Iloilo-Guimaras area, hindering economic development despite progress of urbanization in the Region. Also deterioration of coastal environment became serious in Banate and Barotac bays, causing sharp declines in fisheries resources and consequent increase of poverty in the coastal villages. The LGU clusters had been making efforts to respond to the challenges: the Metropolitan Iloilo-Guimaras Development Council (MIGEDC) for traffic congestions; and the Banate-Barotac Bay Resource Management Council Inc. (BBBRMCI) for coastal resource deterioration. But the capacity of the LGU clusters at that time to address such development issues was limited. (Remarks) • The members of MIGEDC are Iloilo city, Santa Barbara municipality, San Miguel municipality, Oton municipality, Leganes municipality, Pavia municipality and Guimaras province. • The members of BBBRMCI are Anilao municipality, Banate municipality, Barotac Nuevo municipality and Barotac Viejo municipality
Objectives of the Project	This project consists of the following two subprojects: 1) The Multi-Stakeholder Transport Planning and Traffic Management Improvement in Metro Iloilo-Guimaras (Traffic Management Subproject) 2) Responsible Ecosystem-Based Management in Banate and Barotac Bay through Capacity Enhancement of Banate Bay Resource Management Council, Inc. (Bay Resource Management Subproject) <Traffic Management Subproject> 1. Overall Goal: LGU clusters for sustainable traffic management become functional in Metro Iloilo-Guimaras. 2. Project Purpose: Traffic Management Action Agenda for the Metro Iloilo-Guimaras is formulated in consultation with concerned LGUs, NGAs (National Government Agencies) and private sector stakeholders. <Bay Resource Management Subproject> 1. Overall Goal: LGU clusters for sustainable coastal resource management become functional in Iloilo Province. 2. Project Purpose: Inter-LGU coastal resource management system is strengthened in the Banate Bay and Barotac Bay Areas in the Province of Iloilo.
Activities of the project	<Traffic Management Subproject> 1. Project site: Metro Iloilo-Guimaras Area (Iloilo city, Santa Barbara municipality, San Miguel municipality, Oton municipality, Leganes municipality, Pavia municipality and Guimaras province.) 2. Main activities: 1) Data collection and analysis on existing traffic condition in Metro Iloilo-Guimaras Area, 2) selection of traffic management options, 3) implementation of social experiments on traffic management, 4) training for MIGEDC staff, member LGUs and traffic management-related organizations. 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 7 persons 2) Trainees received: None 3) Equipment: Computers, printers, facsimile, GIS software, GPS, equipment for social experiments, motorcycle, LCD projectors, cameras, handheld radios Philippine Side 1) Staff allocated: 23 persons 2) Land and facilities: Office space 3) Staff cost and training expense
	<Bay Resource Management Subproject> 1. Project site: Banate Bay and Barotac Bay Areas (Anilao municipality, Banate municipality, Barotac Nuevo municipality and Barotac Viejo municipality.) 2. Main activities: 1) Formulation of an integrated coastal resource management plan as well as its operation manual, 2) training for BBBRMCI staff and other related organizations, 3) implementation of coastal resource management activities such as river cleaning activities, mangrove reforestation, installation of artificial reefs, alternative livelihood activities through fisherfolks' associations (fishing gear rental, oyster and green mussel culture, tilapia culture and food processing activities), patrolling and law enforcement, 4) environmental education. 3. Inputs (to carry out above activities)

	Japanese Side 1) Experts: 6 persons 2) Trainees received: 1 person 3) Equipment: Computers, printers and other office equipment, GPS, projector, camera, patrol/monitoring boat, research boat, life vests, binoculars, communication equipment including public address system, SSB radio system (licensed handsets and base station), food processing equipment such as refrigerators, pressure cookers, etc., welding machine		Philippine Side 1) Staff allocated: 9 persons 2) Land and facilities: Office space and training center 3) Staff cost and training expense		
Ex-Ante Evaluation	2007	Project Period	October 2007 – October 2010	Project Cost	294 million yen
Implementing Agency	<Traffic Management Subproject> Metro Iloilo-Guimaras Economic Development Council (MIGEDC) <Bay Resource Management Subproject> Banate-Barotac Bay Resource Management Council, Inc. (BBBRMCI)				
Cooperation Agency in Japan	<Traffic Management Subproject> Katahira & Engineering International <Bay Resource Management Subproject> IC Net Limited				

II. Result of the Evaluation

1 Relevance

This project has been highly relevant to Philippines' development policy of "strengthening local governance including capacity development of LGU clusters" as set in policy documents including, the Medium Term Philippine Development Plan (MTPDP) 2004-2010 and the Philippine Development Plan (PDP) 2011-2016, development needs of improving the traffic management and coastal resource management in Iloilo Province through the capacity development of LGU clusters at the time of both ex-ante and ex-post evaluation. It is also consistent with Japan's Country Assistance Plan for the Philippines (2000-2007) and JICA's Country Assistance Strategy for the Philippines (2004) at the time of ex-ante evaluation.

Therefore, relevance of this project is high.

2 Effectiveness/Impact

<Traffic Management Subproject>

This subproject aims to formulate Traffic Management Action Agenda (TMAA) in Metro Iloilo-Guimaras in consultation with concerned LGUs, NGAs and private sector stakeholders. The subproject also expects that above TMAA is used as reference for developing traffic management agenda/plan of member LGUs. And ultimately, it is expected that sustainable traffic management by LGU clusters becomes functional in Metro Iloilo-Guimaras.

The project purpose of this subproject was achieved at the time of project completion. The final version of TMAA was officially submitted and explained to the Project Management Office (PMO)-MIGEDC in August 2010. After completion, the functions of Technical Working Group (TWG) of this subproject was transferred and integrated to the existing TWG of MIGEDC. The meetings of MIGEDC-TWG on traffic management have been organized once a month with participation of most of the stakeholders during the project period including representatives of member LGUs and private stakeholders. However, TMAA has not been updated and improved continually by MIGEDC after completion of this subproject because of the issues between Iloilo City and other member LGUs associated with the Perimeter Boundary Ordinance (2013) adopted by the Iloilo City Council in 2013. Since this ordinance regulates entry of public utility vehicles from municipalities outside of Iloilo City, it is criticized for giving the negative social and economic impacts on the commuters and local transporters coming from municipalities outside of Iloilo City including member LGUs. This became a political issue among the member LGUs, hence updating and improvement of TMAA has been suspended. However, as the ordinance is consistent with the orientation of TMAA, MIGEDC-TWG has been making an effort to promote the understanding of member LGUs as well as of local politicians for the objectives and social benefits of the ordinance through formal and informal communication channels including the regular meeting with member LGUs.

Regarding overall goal of this subproject, it has been achieved to some extent at the time of ex-post evaluation. TMAA has been utilized as reference material in the ongoing preparation of the Urban Transport Master Plan covering the MIGEDC area funded by the World Bank. At the LGU level, TMAA is used as reference for planning the transport map, identification of parking area, and review of existing traffic-related ordinances. However, TMAA-based Traffic Management Plans have not been formulated due to the following reasons: (i) limited human resources and institutional setting specialized in traffic management except Iloilo city and Oton municipality, (ii) difference in priority on formulation of traffic management plan among member LGUs, (iii) limited budget for planning and implementation of traffic management, and (iv) political reasons.

<Bay Resource Management Subproject>

This subproject aims to strengthen Inter-LGU coastal resource management system in the Banate Bay and Barotac Bay Areas in the Province of Iloilo. Then, it is expected that the experience, knowledge and skills for coastal resource management system in BBBRMCI is disseminated to and practiced in other LGUs in Iloilo Province.

The project purpose of this subproject was achieved at the time of project completion. Six Inter-LGU coastal resource management activities were conducted in the project site. BBBRMCI, LGU and Technical Working Group (TWG) collaborative relationship[1] was redefined and strengthened with the Memorandum of Agreement (MOA) signed in February 2010 between BBBRMCI and TWG member organizations such as Barangay Fisheries and Aquatic Resources Management Council (BFARMC), NGOs and fisherfolk organizations in member municipalities. The Comprehensive Coastal Resource Management Plan, the Three-Year Action Plan (2011-2013) and operational manual for resource management activities were formulated and

[1] The collaborative relationship of member-LGUs, BBBRMCI Secretariat and TWG is characterized in terms of resource-pooling (financial and human resources), harmonization of fisheries ordinances, joint law enforcement and collaborative undertakings pertaining to Marine Protected Areas (MPA).

then adopted by BBBRMCI.

After the project completion, BBBRMCI has implemented actions according to the Management Plan and the Three-Year Action Plan. However, Anilao and Barotac Nuevo municipalities suspended their participation in the activities of BBBRMCI and withdrew their staff from BBBRMCI secretariat since 2013 because their Mayors had a different view on BBBRMCI's management, which at the time of ex-post evaluation was influenced by a newly electedMayor of Banate municipality in 2013, and also there is a political conflict among the member municipalities. As a result, only two municipalities (i.e. Banate and Barotac Viejo municipalities) were substantial active members of BBBRMCI, and the collaborative coastal resource management activities under the initiative and management of BBBRMCI have been carried out continuously by participation of the above two municipalities at the time of ex-post evaluation[2]. For example, patrolling, appropriate fishing methods like Artificial Reefs, aqua farming of oyster and green mussel, mangrove reforestation in collaboration with villagers, underwater monitoring, etc. are still being conducted. In contrast, the income generation activities supported by BBBRMCI such as fish processing are not active due to price increase of raw materials and small sales volume of products. Therefore, the related facilities for fish processing provided by BBBRMCI were not utilized. Also the cooperatives are inactive because of lack of appropriate production and marketing plan. At the time of ex-post evaluation, BBBRMCI has not taken yet effective measures for the above problems because BBBRMCI member municipalities were still prioritizing disaster rehabilitation activities from typhoon Haiyan in 2013[3]. BBBRMCI Scretariat staffs were all mobilized for necessary coordination between BBBRMCI municipalities and provincial government, central government organizations and NGOs. Also, BBBRMCI has not formulated yet the Action Plan for 2013-2016, and has not updated yet its Master Plan for Integrated Coastal Resource Management partly because of the after effects of the typhoon and partly because it lacks human and financial resources to facilitate participatory assessment and planning processes.

Regarding the Barotac Nuevo and Anilao municipalities which have suspended their participation to BBBRMCI, they have conducted their coastal resource management activities individually.

The overall goal of this subproject has been achieved to some extent at the time of ex-post evaluation. Five conventions were conducted with the participation of other LGUs in Iloilo Province to disseminate the experience and good practice in coastal resource management system. At the time of ex-post evaluation, at least 12 municipalities replicated the good practice such as installation of box-type Artificial Reefs and sea ranching of swimming blue crabs in sea grass marine protected areas. However, the replicated good practices remain in introduction of particular skills, techniques and methods of selected costal resource management activities by individual municipalities, and the establishment of coastal resource management system in the framework of LGU cluster, which was the core element of the subproject, has not been fully practiced yet in other LGUs.

This subproject has some positive economic impacts such as increase in fish products and incomes of the beneficiaries who utilize the skills and methods introduced by the subproject. For example, in Anilao municipality, the fishermen increased their fish catch volume by utilizing gill net fishing method revised by the subproject, and fish processing group earned additional individual incomes for the sales of processed shrimp paste since 2011. Mangrove nursery group in Banate municipality earned additional individual incomes for the sales of mangrove seedlings or propagules until November 2013 when typhoon Haiyan struck Banate and Barotac bays. In addition, the interview results with fishing associations and fish processing groups in Anilao municipality indicated that the subproject increased self-confidence of barangay-based small fishing groups in implementing law enforcement (arresting illegal fishers, reporting of illegal activities, etc.) because other municipalities and government agencies are visibly involved in inter-LGU Marine Protected Area (MPA) activities. Although Barotac Nuevo and Anilao municipalities are not anymore organizationally active members of BBBRMCI, their fishermen and local groups have continued carrying out various kinds of income generation activities including fish processing and small-scale village-based enterprising activities through cooperatives, and they have continuously utilized the skills, knowledge, and know-how of these activities learned from BBBRMCI.

No negative impact on the natural environment was observed and both subprojects were not associated with the land acquisition and the resettlement of people.

In the light of the above, effectiveness/ impact of this subproject is fair.

3 Efficiency

Although the project period was within the plan (ratio against the plan: 100%), project cost significantly exceeded the plan (ratio against the plan: 155%) because alternative income-generating activities for fisherfolks and concerned agencies such as introduction of fish processing techniques and training were added to Bay Resource Management Subproject.

Therefore, efficiency of the project is fair.

4 Sustainability

In the policy aspect, the capacity development of LGU clusters remains a priority strategy in the existing government policy and legal framework. Also traffic management and coastal resource management remain as priority issues in sectoral development plans.

<Traffic Management Subproject>

Institutionally, MIGEDC's organizational structure remains the same with an additional member of Cabatuan municipality. The Iloilo province as well as Guimaras province participates in MIGEDC as the same position as other member LGUs[4]. The number of MIGEDC staff is insufficient although most of the MIGEDC secretariat staff who are government officials of member LGUs and received technical transfer from this subproject are still working for traffic management.

[2] At the time of ex-post evaluation, other municipalities like the Dumangas municipality expressed interest to join BBBRMCI.

[3] Such activities include repairing damaged administration buildings, farm to market roads, school buildings and primary health care facilities.

[4] Since Iloilo city is designated as an independent component city, Iloilo city and Iloilo province is a parallel relationship in the local government structure of the Philippines. On the other hand, in case of the bay resource management subproject, the member municipalities of BBBRMCI are under the control of Iloilo provincial government.

In the technical aspect, training opportunities to TWG members and Secretariat of MIGEDC are very limited on urban transport planning and traffic management, which resulted in miscommunication and misunderstanding in their works. Consequently, continuous updating of their skills and knowledge is necessary. On the other hand, the technical capacities of MIGEDC secretariat staff for executing day-to-day works are mostly sufficient.

As for the financial aspect, the budget contribution from the member LGUs and Iloilo province for maintaining activities is very limited. Some LGUs failed to make their annual contributions to MIGEDC because of their budget limitations. In other cases, some LGUs experienced change of the local chief executives after elections, which led to having traffic management accorded lesser priority and consequently a decrease in the financial contribution to MIGEDC. Alternatively, MIGEDC receives financial contribution from other sources like World Bank and USAID, but its amount is recognized as too small to cover necessary activities in the member LGUs.

<Bay Resource Management Subproject>

Institutionally, two member-municipalities of BBBRMCI, Anilao and Barotac Nuevo municipalities, have suspended their participation to BBBRMCI mainly due to political reason. Most of the counterpart staff of Banate and Barotac Viejo municipalities during the project period are still working for coastal resource management. However, the number of staff running the day-to-day affairs of BBBRMCI is insufficient. Member municipalities, on the other hand, also carry out individual bay resource management activities besides the activities through BBBRMCI, but BBBRMCI does not have mechanism to share their good practice. The Iloilo provincial government is in the position to support the idea of bay resource management by LGU cluster. It is confirmed at the ex-post evaluation that the provincial government organized the summits to disseminate the experience of this subproject to other LGUs in the province and other provinces in the Visayan Sea Region as well as is providing continuous financial assistance to BBBRMCI.

In the technical aspect, although no trainings are organized and funded by BBBRMCI because of limited budget, officers of member municipalities and BBBRMCI staff have opportunities to attend to workshops and receive trainings from time to time from the ongoing donor-funded projects including JICA. The handbook and operations manual are continuously utilized by BBBRMCI as reference for arresting illegal fishers in the bay waters of 2 member municipalities and for filing administrative and criminal cases against violators.

As for the financial aspect, the financial contributions from the member municipalities (Banate and Barotac Viejo) and Iloilo province are insufficient to maintain the full-scale implementation of BBBRMCI activities. On the other hand, these municipalities allocate sufficient budget to facilitate their individual coastal resource management activities within their municipalities.

From these findings, it is considered that there are some problems in institutional, technical and financial aspects to sustain the project effects. Therefore, sustainability of this subproject is fair.

5 Summary of the Evaluation

<Traffic Management Subproject> This subproject has achieved the project purpose and partially achieved the overall goal. At the time of ex-post evaluation, TMAA-based Traffic Management Plans have not been formulated yet due to limited human resources and budget, difference in priority among member LGUs, and political reasons. As for sustainability, this subproject has some problem in institutional, technical and financial aspects for maintaining activities of MIGEDC due to lack of MIGEDC secretariat staff, insufficient training opportunities and technical capacity, and limited financial resources for maintaining activities for urban transport planning and traffic management.

<Bay Resource Management Subproject> This subproject has achieved the project purpose and partially achieved the overall goal. At the time of ex-post evaluation, although BBBRMCI has implemented the Comprehensive Coastal Resource Management Plan, the member municipalities of BBBRMCI reduced from 4 to 2. As for sustainability, this subproject has some problem in institutional, and financial aspects for maintaining activities of BBBRMCI due to lack of BBBRMCI secretariat staff and limited financial resources for maintaining the activities for coastal resource management.

Therefore, effectiveness/impact of the project as well as sustainability of the project effect are fair. As for efficiency, the project cost significantly exceeded the plan. Therefore, efficiency of this subproject is fair.

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

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

<u>For MIGEDC:</u>

1) In order to promote updating TMAA, the current issues associated with the Perimeter Boundary Ordinance of Iloilo city should be settled. In this respect, MIGEDC secretariat must play a leading role to monitor the implementation of the ordinance and examine its challenges as well as mitigation measures so that the ordinance will be acceptable for member LGUs. For this end, the documentation and analysis ability of MIGEDC secretariat should be strengthened.
2) In order to increase the training opportunities for TWG members and secretariat staff of MIGEDC, it is recommended to promote the cooperative relationship with other LGU clusters such as Metro Manila, Metro Cebu, and Metro Davao who have the experiences of traffic management as well as to establish tie-ups with research and training institutions involved in traffic management. For example, since Makati city, a member of LGU cluster of Metro Manila, is a sister city of Iloilo city, it is recommended to examine a possibility of capacity development of MIGEDC staff in collaboration with Makati city through exchange of information, mutual leaning of a good practice of traffic management by LGU cluster, and organizing joint training program.

For BBBRMCI:

1) It is recommended to establish a feedback mechanism to share the good practice of bay resource management activities initiated by the individual LGU level. This will help not only to disseminate the experience and good practice of this subproject to other LGUs in the Iloilo province, but also to improve and expand the capacity and scope of BBBRMCI as a synergic effect.

For the Iloilo Provincial Government

1) The Provincial Government, as a member of MIGEDC, should undertake a more active role in improving MIGEDC's traffic management system and also should continuously contribute financially to MIGEDC.
2) In order to ensure the effectiveness of bay resource management by LGU cluster, the provincial government should strengthen its involvement in the management of BBBRMCI by periodical monitoring and coordination between member municipalities as well as increase its financial contribution to BBBRMCI.

Lessons learned for JICA

1) Principally, different types of subprojects must be separately formulated and implemented as an individual project. This project was made of two subprojects, but each subproject focused on the different development issues and sectors, and they are not functionally linked as one project. In concrete, it did not set its project purpose and overall goal as an individual project (common objectives for which the two subprojects worked) in the Project Design Matrix (PDM). As a result, the ex-post evaluation had a difficulty in summarizing comprehensive achievement obtained though this project.
2) In order to establish an effective and sustainable bay resource management system, all stakeholders (ruling and opposition parties, including private sector) must be involved in a planning stage of a project. After the completion of the BBBRMCI subproject, there have been problems in collaborative management among concerned municipalities partly because of conflicts of interest among them, while individual activities have been still carried out by each municipality and/or private groups. In such case, coordination mechanism that involves all stakeholders might have worked to detect such conflicts as early as possible through monitoring and then minimize them, in order to avoid the consequent difficulties in the collaboration among municipalities

([MIGEDC] Traffic officer and Traffic Signboard)


([BBBRMCI] Improved sea grass and fish habitat (under the sea) in Banate Bay)

Internal Ex-Post Evaluation for Technical Cooperation Project

conducted by Cambodia Office: December, 2014

Country Name	The Project for the Capacity Building for the Forestry Sector Phase II
Kingdom of Cambodia	

I. Project Outline

Background	Forests in Cambodia were one of the important resources for the country's economy and for the people. The proper forest resource management was one of the prime concerns in Cambodia's domestic policy in the 2000s. There was a pressing need to train the staff of the Forest Administration (FA), and the Cambodian government requested the Government of Japan to assist human resource development of FA (1999). In response to the request, the Capacity Building Project for the Forestry Sector in Kingdom of Cambodia (hereinafter referred to as the 'Phase I') was implemented (2001-2004). The Phase I's terminal evaluation suggested that the trainees' ability to apply the acquired skills and knowledge to the practice needed to be improved.
Objectives of the Project	1. Overall Goal: Sustainable community resources* utilization by local people is secured in the area conducted participatory community resources management. *Defined as natural resources, human resources, capital resources, social resources and so forth. Forestry resources, which is a part of natural resources are the core resource for the project activities. 2. Project Purpose: Through the capacity building of Forestry Administration (FA) officers, sustainable utilization of community resources is secured for stabilizing the living of local people in the Field Project (FP) sites.
Activities of the project	1. Project site: FA, Forestry and Wildlife Training Center (FWTC), and Forestry Administration Cantonment (FAC) and Forest Administration Division (FAD) where the Field Projects (FP) are located; (i) Two FP sites were selected in 2006 and 2007(Boeng Kok Community Forests (CF) of Kampong Tralach FP in Kampong Chhnang FAC and Phnom Preah Thet CF) and (ii) Four FP sites were selected by the end of 2008 (Kampong Chhnang FP, Romeas FP, Kg.Thmar FP and Sre Ambel FP) ,which include five CFs at An Duong Chros CF, Toul Sarong CF, Veal Okdei CF, Nakta Thmor Prung CF and Thor Roung CF. 2. Main activities: (1) Development of training plan/curriculum/materials, (2) Implementation of training to FA officers in the FP sites and other FA officers, (3) implementation of CF activities in FP sites 3. Inputs (to carry out above activities) Japanese Side / Cambodian Side 1) Experts: 11 persons / 1) Staff allocated: 46 persons 2) Trainees received: 29 persons / 2) Land and facilities: Project office and other facilities 3) Equipment: 125,774USD / 3) Local cost: 129,000 USD

Ex-Ante Evaluation	2006	Project Period	December 2005-December 2010	Project Cost	477 million yen
Implementing Agency	Ministry of Agriculture, Forestry and Fisheries (MAFF)				
Cooperation Agency in Japan	Ministry of Agriculture, Forestry and Fisheries				

II. Result of the Evaluation

1 Relevance

This project has been highly consistent with Cambodia's development policy such as National Strategic Development Plan (2014-2018), National Forest Programme (NFP) (2010-2029) and other documents which regard the sustainable utilization and management of natural resources are important, development needs for capacity development of local FA officers to support local people on CF legalization and sustainable community resource management at the time of both ex-ante and project completion. It was also consistent with Japan's ODA policy (Country Assistance Program to Cambodia) at the time of ex-ante evaluation as it sets the environmental protections as one of the priority areas. Therefore, relevance of the project is high.

2 Effectiveness/Impact

The project mainly implemented (1) Development of training plan/curriculum/materials, (2) Implementation of training to FA officers in the FP sites and other FA officers, (3) implementation of CF activities in the FP sites. CF activities include (i) support for CF legalization related activities such as CF Management Committee (CFMC) election, development of CFMC's By-law, CF legislation, and boundary demarcation, (ii) Livelihood related activities such as chicken farming, vegetable cultivation, compost production, fish farming, and fruit tree production, and (iii) Forestry related activities such as CF patrolling, fire break establishment, boundary post installation, plantation, extension of forestry law, extension of forest fire, signboard installation and map sign board installation. Through these capacity development of FA officers and implementation of CF activities in FP sites, the project aimed that CF members obtain method and know-how to secure sustainable utilization of community resources.

At the time of project completion[1], it was deemed difficult to prospect full achievement of the project purpose. It is confirmed

[1] Status at the time of terminal evaluation (June 2010) is quoted as the status of the project completion, as there is no data available at project completion.

that certain number of CF members were involved with CF activities, but those who actually applied the transferred techniques did not reach 70% of the CF members (see the details in the chart below)[2].

At the time of ex-post evaluation, 85% of the interviewed CF members are "involved" in their CF activities with strong motivation and commitment in sustainable utilization of their community natural resources, and 47% of interviewed CF members "applied" transferred techniques and information. For example, it is observed that skills introduced by the project such as "Compost Production" and fertilization of paddy fields are utilized by most of interviewed CF members. However, some of the techniques transferred were abandoned and not applied by the CF member as it is not practical. For instance, "Fish Farming" was abandoned by most of CF members at Boeng Kok CF due to dried up ponds during dry season. For the CF legalization process, among the 7 target CFs under the project, 3 CFs have been legalized by the ministry order (hereinafter referred to as 'Prakas'), while the remaining 4 CFs are still on the process of the legalization at the time of ex-post evaluation[3]. Interviews with CF members indicate that some of the CF activities such as election of CFMC, CF patrolling, firebreak establishment and others have been carried out to some extent. However, CF activities, especially livelihood activities have been very limitedly supported by FA, particularly for the target CF without Prakas, because the budget from MAFF was not allocated for implementing CF activities. Training courses for FA officers were provided in 2011 and 2012 with financial support from JICA and DANIDA.

As for overall goal, participatory community resource management activities have been initiated outside 7 CFs, where FAs support CFs with assistance from development partners and NGOs. Especially in Kampong Thom Province, 82 CFs are carrying out CF activities and 72 CFs are supported by development partners/NGOs whose support covers preparation of CF Management Plan (CFMP) and Livelihood Supporting Program. In the whole country, the number of CFs legalized and the land area under CF management have increased (see the indicator 6 of the chart below.). However, it is hard to confirm at the time of ex-post evaluation, how the project's achievement has contributed to this increase because the number of FA officers in other areas than the project target FP sites, who took part in the training by the project/ refer to the project and actually supported CF activities, were not available. In the target 7 CFs, interviews with CF members revealed that importance of CF activities has been widely recognized by CF Members. Most of the CF members interviewed responded that they obtain benefit from the CFs, and feel that CF activities have contributed to improve their daily livelihood, and they recognize that natural resources have been improved by CF activities. Meanwhile, some members of the CFs, which were not legalized by Prakas, are being frustrated with the long and unclear CF legalization process.

No negative impacts were observed[4].However the issue of duplication of land with Economic Land Concession (ELC) in CF has not been solved and the affected CF have strongly requested support from MAFF regarding its legalization[5]. Positive impacts were observed in active participation of CF female committee members in their CF Activities. Most of them play leading roles in protecting the CF land encroachment. In case of Veal Okdei CF, female members have even filed their official complaints many times up to Provincial Governor to request for a proper resolution on the encroachment issues.

In light of the above, effectiveness/impact is fair.

Achievement of project purpose and overall goal

Aim	Indicators	Results
(Project Purpose) Through the capacity building of Forestry Administration (FA) officers, sustainable utilization of community resources is secured for stabilizing the living of local people in the Field Project (FP) sites.	At each target CF, method and know-how to secure sustainable utilization of community resources are obtained by 70% of CF members by the end of the Project.	(Project Completion) 51% of interviewed CF members in 7 CFs "applied" transferred techniques and information, and 68% of interviewed CF members are "involved" in their planned activities as of June 2010. (Ex-post Evaluation) Out of 98 respondents in 7 CFs, 47% of interviewed CF members currently "applied" transferred techniques and information. 85% of the interviewees are "involved" in their CF activities.
(Overall goal) Sustainable community resources utilization by local people is secured in the area conducted participatory community resources management.	(Indicator 1)Practical examples of local people who started new activities and the kinds of resources management activities is increased.	(Ex-post Evaluation) Practical examples were not confirmed.
	(Indicator 2)Economic and social condition of local people in the area, particularly of poor people, is improved.	(Ex-post Evaluation) Most of the interviewees responded that they feel (think/ suppose) that CF activities introduced by the project have contributed to improve their daily livelihood.
	(Indicator 3)Natural resources including	(Ex-post Evaluation) Many of the interviewees have recognized

[2] CF members who were "involved with CF activities" refer to any members of the community who have been involved with the CF activities such as CF committee election, CF patrolling, etc. CF members "who actually applied the transferred technique" refer to any CF members who have applied the obtained technique provided by the project

[3] It is informed at the time of ex-post evaluation that Local FAs (FAC) have sent their proposals to national FA and National FA has submitted those proposals to MAFF for the approval by Prakas. But the proposals were not approved. Later on some local FAs were informed that the re-submission of proposal for legalization of CF was necessary since the proposals should be categorized into "CF without conflict" and "CFs with conflict". It was also informed that no clear indication was given by the national FA to local FAs on how local FA s should proceed and with whom local FA s should consult to solve the problem. From the interview with the related officials, the reasons why there is little progress and who should be responsible to deal with this problem could not be identified at the time of ex-post evaluation.

[4] No negative impact on natural environment was observed. There were no land acquisition and resettlement by the project. Although the possibility of the negative impact on the vulnerable people (*) was pointed out by the ex-ante evaluation, the survey to the vulnerable people was not able to be conducted at the time of ex-post evaluation due to the time constraint.

(*) Vulnerable people are people who rely on the forest resources but unable to participate in the CF at the time. (Ex-ante evaluation sheet),

[5] This issue has existed before the project. During the project period, MAFF informed the Japanese side that they would tackle the issue but it could not be solved.

	forestry resources are improved.	that natural resources (including forestry resources) have increased or been stable after the completion of the project.
	(Indicator 4)Number of CF members is increased.	(Ex-post Evaluation) Although precise data is not available, the number of CF members at 2 target CFs with Prakas have increased or have been maintained whereas the number has decreased at the rest of the target CFs.
	(Indicator 5)CF and community resource management activities are diversified	(Ex-post Evaluation) Practical examples were not confirmed.
	(Indicator 6)Number of newly legalized CF and approved CFMP is improved.	(Ex-post Evaluation) (as of July 2014) - Total number of CFs in Cambodia which had started their legalization process: approximately 479 CFs (409,239 ha) - The number of CFs with issued Prakas increased from 281 CFs (244,256 ha) in 2011 to 345 CFs (308,563 ha) - The number of CFs which signed agreement with FA increased from 214 CFs (170,489ha) to 304 CFs (272,282 ha).
	(Indicator 7)Land area under CF management is increased.	(Ex-post Evaluation) See indicator 6

Source : (Project completion)Terminal evaluation report (Ex-post evaluation) Interviews with counterparts and CF members

3 Efficiency

While the project period was within the plan (ratio against the plan: 100%), the project cost exceeded the plan (ratio against the plan: 129%) because of the increase of the targeted CFs (5 to 7) and the number of trainees (1,500 to 1,899). Therefore, efficiency of the project is fair.

4 Sustainability

In the policy aspect, community forest is still given importance in the current development policy as Community Forestry Program is one of the six programs of the National Forest Program (NFP 2010-2029) which regards the sustainable utilization and management of natural resources (the overall goal of the project) are important.

Institutionally, organizational set up is partially inadequate and the number of staff is not sufficient to cope with their scope of works. The number of staff at local FA is not sufficient to provide support to CFs and each local FA is requesting FA national level to increase staff allocation.

For the technical aspect, program 5 of NFP that includes “capacity building” has been promoted. In 2011, Capacity Building Needs Assessment (CBNA) was conducted and the additional capacity building effort at the institutional level has started in 2012 based on the CBNA’s recommendations. As the results, in 2014, new training programs have been launched with an integrity at all related departments of FA. Once these programs are getting on the right track, FA intends to consider further capacity building such as the program related to legal issues and the program for broader stakeholders. As to the support from FA to CFs, National and Provincial Community Forestry Program Coordinating Committees Processes (NCFPCCC and PCFPCCCs), as the main vehicle for moving program 4 of NFP, are arranging continuing technical and financial support in addition to the routine interventions (e.g.-monitoring, training, legalization) by FA (Community Forestry Office/FA Cantonments/Divisions/Triages). The status as of July 2014, 4 out of 7 CFs initiated by this project are intensively benefitting from this on-site support in addition to the policy and legal levels support.

CF activities both in the target FP sites and other areas have been also supported by development partners/NGOs, including dispatch of their advisors.

Financially, current guidance from the Royal Government of Cambodia is to allocate 50% of FA budget to expenditures related to NFP[6]. Most of the CF training and implementation are also supported by development partners’ financial assistance.

From these findings, it is considered that the project has some problems in institutional and financial aspects of the implementing agency; therefore, sustainability of effects of the project is fair.

5 Summary of the Evaluation

This project has achieved the project purpose and overall goal at a limited level. The number of CF members actually applied the techniques and information transferred by the project has not reached the target and the CF activities have not fully continued under the circumstance that CF legalization process is stagnant and support from FA is limited. As for sustainability, while the project is still given importance in the current development policy, there are problems in terms of institutional, technical and financial aspects. The number of FA officers is insufficient to cope with their scope of works, and the CFs are very much dependent on development partners/NGOs technically and financially. For efficiency, the project cost exceeded the plan.

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

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

1) The acceleration of the legalization process by MAFF for the existing targeted CFs is necessary and moreover, the Royal Government of Cambodia (RGC) should conduct inter-ministerial coordination and to some extent should implement the law enforcement which can be effectively used as the mechanism to solve the on-going problems of encroachment or misallocation of the land of CF. The completion of the legalization process is not only the mean to tackle with the existing

[6] It includes the program 4 (the support to CFs), the program 5 (capacity building related activities) and the REDD+ operational costs. Reducing Emissions from Deforestation and Forest Degradation (REDD) is an effort to create a financial value for the carbon stored in forests, offering incentives for developing countries to reduce emissions from forested lands and invest in low-carbon paths to sustainable development. "REDD+" goes beyond deforestation and forest degradation, and includes the role of conservation, sustainable management of forests and enhancement of forest carbon stocks. (Source: UN-REDD program, http://www.un-redd.org/aboutredd/tabid/102614/default.aspx)

disputes but also the effective motivation for ensuring the existing high commitment of the CF members in involving with the CF activities. It will also help reduce the individual encroachments of forest.

2) It is necessary for MAFF and other relevant ministries such as Ministry of Economy and Finance to pay attention to the allocation of the national budget for the activities of FA in CF training and implementation. The budget should be particularly needed on (i) increasing staff allocation to FAC, FAD and FAT to match the needed responsibilities, and (ii) support for increasing number of CFs.
3) It is necessary for MAFF to coordinate more with FA particularly in the matters of CFs and ELCs.
4)

Lessons learned for JICA1) Respect of local knowledge and field level adaptation should be more implemented at the stage of project planning or adjustment during the project implementation to avoid the case of designing or providing the inputs to the activities which is not feasible for the beneficiaries (e.g. fish farming in this case).

(Nursery plantation)

(A Community Forests board map)

conducted by Laos Office: December, 2014

Country Name	Development of the Faculty of Economics and Management of National University of Laos
The Lao People's Democratic Republic	

I. Project Outline

Background	Lao P.D.R. was in a transition to the market economy since 1986, when New Economic Mechanism (NEM) was introduced. For promoting human resource development for NEM, the Lao government established the National University of Laos (NUOL) in 1995, including the Faculty of Economics and Management (FEM). The building of FEM was constructed in 2000 with support from a Japanese grant aid project[1], and the Asian Development Bank (ADB) provided support in developing curricula, fostering teaching staff, etc. until September 2001. In addition, in response to the request from the Lao government, JICA dispatched a long-term expert in 1997 for providing advice on the management of FEM and development of lecturers and curricula. This project was started to extend such technical cooperation[2].				
Objectives of the Project	1. Overall Goal: The Faculty of Economics and Management (FEM) graduates contribute to development of a market economy of Lao P.D.R. 2. Project Purpose: Students graduate from the FEM with essential academic and professional knowledge and skills.				
Activities of the project	1. Project site: NUOL (Vientiane City) 2. Main activities: Training, academic research, development of curricula, syllabi and textbooks, development of facilities and equipment, development of faculty regulations, etc. 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 72 persons (9 long-term and 63 short-term) 2) Trainees received: 40 persons in Japan (23 long-term[3] and 17 short-term) and 29 persons in Third Countries (14 long-term and 15 short-term) 3) Equipment: Books, journals, software, computers, printers, projectors, photo copiers, air conditioners, furniture, motorcycles, etc. 4) Others: Distance education utilizing the JICA's teleconference system Laotian Side 1. Staff allocated: 68 persons 2. Land and facilities: Main buildings and equipment of FEBM[4] (developed by the grant aid project) and additional classrooms 3. Local cost: Cost for electricity, telephone and water supply				
Ex-Ante Evaluation	1999	Project Period	September 2000 to August 2007 (Original period: September 2000 to August 2005; Extension period: September 2005 to August 2007)	Project Cost	809 million yen[5]
Implementing Agency	Ministry of Education (MOE) National University of Laos (NUOL)				
Cooperation Agency in Japan	Ministry of Education, Culture, Sports, Science and Technology Kobe University (entrusted with implementation of part of the project).				

II. Result of the Evaluation[6]

1 Relevance

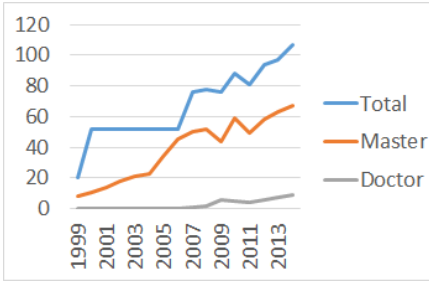
This project has been highly relevant with Lao PDR's development policy and development needs at the time of both ex-ante evaluation and project completion. For the development policy, it is consistent with "human resource development for the NEM" as one of the important assignment of the National Socio-Economic Development Plans (1996-2000 and 2006-2010). For the development needs, it is consistent with a high potential demand for human resources in economics and business management, and a need to equip FEBM with good quality teaching staff and education facilities. It is also consistent with Japan's ODA policy that was confirmed in the policy consultations between the Lao government and the Japanese government in 1999, at the time of ex-ante evaluation. Therefore, relevance of this project is high.

[1] The Project for Construction of Facilities and the Lao-Japan Human Resource Cooperation Center in the National University of Laos (2000).
[2] Initially, this project had a component for the Lao-Japan Human Resource Cooperation Center (LJC). In March 2004, the LJC component was separated from this project and implemented as the Lao-Japan Human Resource Cooperation Center (Phase 1 and Phase 2) (2001-2010) (hereinafter referred to as "the LJC project"). Some activities of these projects have been succeeded by the JICA's technical cooperation of the Capacity Development of Business Persons through Lao-Japan Human Resource Development Institute (2010-2014).
[3] Training with duration of more than 1 year for master's or doctoral degrees.
[4] FEM was renamed to be the Faculty of Economics and Business Management (FEBM) in February 2005. Hereunder, the abbreviation FEBM is always used except for quoting the officially-agreed Overall Goal, Project Purpose and Outputs and their indicators.
[5] This cost includes the cost for the LJC project component from 2000 to 2004.
[6] This ex-post evaluation had a constraint that the planned project cost was unknown since the available figure included the cost for both this project and the LJC project and the breakdown of the cost is not specified from the existing documents. Therefore, as an alternative evaluation framework, Efficiency was judged based on the appropriateness of (a) the project period and (b) the volume of dispatched experts, equipment and offered trainings by the project in order to produce the outputs.

2 Effectiveness/Impact

This project aimed to support overall capacity development of FEBM so that students could acquire good knowledge and skills in economics and business management (project purpose), and the graduates contribute to development of the market economy in their jobs (overall goal).

Under this project, a total of 36 FEBM teachers obtained master's or doctorate degrees. By the time of project completion, curricula, syllabi and textbooks were developed, while some of those initially planned were not completed as the project carried out course development in additional subjects demanded by FEBM. The facilities such as library were improved and began to be utilized by students. For the management system, administration staff were trained, and the student information system and the faculty management regulations were developed. As a result, most of the indicators for the project purpose, such as job finding, satisfaction of students and graduates and reputation of FEBM (i.e., as a top faculty of NUOL), were achieved. However, students' grade point average (GPA) did not reach the expected level as quite a high score was set as a target[7].



Number of teaching staff of FEBM (as of September each year)

After completion of the project, major project achievements have continued or further expanded. A total number of teachers as well as those with degrees have increased, and they are engaged in teaching, development of textbooks and more research work. Due to budget constraints and needs for course development for new departments and graduate programs[8], revision of curriculum became less frequent than shortly after project completion. Also, the number of administration staff has become fewer[9] since former administration staff members were promoted to teachers, and there have been no quota for administration staff from NUOL. Accordingly, teachers must shoulder more administrative tasks than before and thus cannot develop all textbooks for new subjects[10], which have affected students' satisfaction with courses. Nevertheless, the overall satisfaction of students and graduates is still high.

For the overall goal, all of the three indicators had been achieved at the time of project completion. At the time of ex-post evaluation, although quantitative data on career of graduates was not available, it is observed that FEBM graduates, approximately 1,000 persons every year, have contributed to promotion of market economy as key officers of related ministries and as entrepreneurs (see the details in the table below about the examples of six graduates who were quickly given by FEBM as only a part of contribution).

As other positive impacts, there are cases of contribution by teaching staff of FEBM: the Economy, Planning and Finance Committee asked FEBM for consultancy to Vice Prime Minister for policy making in economy; FEBM lecturers teach in other faculties of NUOL including the Lao-Japan Human Resource Development Institute. In particular, FEBM is an essential source of Laotian lecturers for the MBA course of the Institute besides lecturers from Japan.

In this way, the project purpose was mostly achieved at the time of project completion in terms of the degree of fulfillment of the targets of the designated indicators, and some achievement of the overall goal and other positive impacts were observed. Therefore, effectiveness/ impact of the project is high.

Achievement of project purpose and overall goal

<table>
<tr><th>Aim</th><th>Indicators</th><th>Results</th></tr>
<tr><td rowspan="3">(Project Purpose)
Students graduate from the FEM with essential academic and professional knowledge and skills.</td><td>70% of graduates find their jobs within one year.</td><td>(Project completion) In a survey in 2004, more than 80% of the 208 respondents (among graduates in 2001, 2002 and 2003) found jobs within 1 year.
(Ex-post evaluation) FEBM confirmed that at least 70% of graduates find jobs within 1 year.</td></tr>
<tr><td>Average GPA of graduates is 3.0 or higher.
(Note) GPA ranges between 0.0 and 4.0.</td><td>(Project completion) (Ex-post evaluation)
<table>
<tr><th></th><th>2003</th><th>2004</th><th>2005–2009</th><th>2010</th><th>2011</th><th>2012</th><th>2013</th><th>2014</th></tr>
<tr><td>Economics</td><td>2.592</td><td>2.629</td><td>N.A.</td><td>2.52</td><td>2.53</td><td>2.58</td><td>2.68</td><td>2.62</td></tr>
<tr><td>Business Management</td><td>2.374</td><td>2.642</td><td>N.A.</td><td>2.61</td><td>2.71</td><td>2.63</td><td>2.67</td><td>2.76</td></tr>
</table></td></tr>
<tr><td>Most graduates are satisfied with education from FEM.</td><td>(Project completion) In the survey in 2004, 88-94% (depending on year of graduation) of respondent graduates answered "Yes" or "Appropriate in general" about their satisfaction. Surveys during the extension period also showed respondent graduates' general satisfaction.
(Ex-post evaluation) FEBM commented that overall, graduates have good satisfaction with FEBM in terms of qualified teaching staff, facilities, and knowledge transfer.</td></tr>
</table>

[7] This indicator seemed added by the discussions with the Project consultation team (2004), but the reason of addition is not confirmed at the time of ex-post evaluation. At the Terminal Evaluation (2005), it is pointed out that "the target of 3.0 is too high to be achieved by the project completion" (Source: Terminal Evaluation Report, p. 58)

[8] FEBM originally had two departments, namely, Economics and Business Management (for which this project provided support). In 2010, it opened three new departments, namely, Finance and Banking, Accounting and Commerce, in response to an increasing demand for human resource development. In 2009, FEBM also started master's programs.

[9] According to the terminal evaluation report, the number of administration staff was increased to six, the targeted number. However, there were only two administration staff as of September 2014.

[10] The teachers cope with this problem by developing using textbooks from Thailand and developing supplementary presentation slides.

<table>
<tr><td></td><td>FEM is one of the most popular faculties among students.</td><td>(Project completion) Academic affairs office of NUOL commented that FEBM was the most popular faculty among the faculties in social sciences and humanities at the time of project completion (the larger number of applicants than other faculties).

(Ex-post evaluation)<table><tr><td>2nd Grade</td><td>2004</td><td>2005-2012</td><td>2013</td><td>2014</td></tr><tr><td>No. of applicants to FEBM</td><td>394</td><td>N.A.</td><td>4,030</td><td>4,600</td></tr><tr><td>No. of accepted applicants to FEBM</td><td>238</td><td>N.A.</td><td>562</td><td>550</td></tr></table></td></tr>
<tr><td></td><td>Majority of students are satisfied with lectures</td><td>(Project completion) In surveys in 2004 and 2005, the degree of satisfaction was 60-100% depending on subject. According to surveys in 2006, the level of understanding by the students was more than “average” in most of the lectures surveyed.
(Ex-post evaluation) Result of students’ surveys show that teaching of FEBM is satisfactory. But there are some complaints on insufficient textbooks developed for courses.</td></tr>
<tr><td>(Overall goal)
The FEM graduates contribute to development of a market economy of Lao P.D.R.</td><td>Increasing number of FEM graduates are in the middle- and upper-range management position / Many entrepreneurs are born among FEM graduates.</td><td>(Ex-post Evaluation) The number is not available, but FEBM gave examples of 6 graduates as only a part of many more cases: 2 lecturers of FEBM, Director of SME Promotion Department of Ministry of Industry and Commerce, Secretary to Vice Minister of Ministry of Finance, Director of Micro-Finance Company, and Director of Indie Records Company.</td></tr>
<tr><td></td><td>Majority of employers are satisfied with their employees who graduated from FEM.</td><td>(Ex-post Evaluation) There is no surveys to employers, but FEBM commented that as an employer, they are quite satisfied with the performance of graduates who work at FEBM as teaching staff. Also, a supervisor of one graduate at a United Nations organization said that the graduate is well-organized and well-communicated.</td></tr>
</table>

Sources: Terminal Evaluation Report; Project Completion Report; questionnaires and interviews with FEBM; interview with a FEBM graduate and her employer.

3 Efficiency

The quality and timing of inputs were appropriate. For example, training of teaching staff abroad helped to produce qualified teaching staff, efficient teaching materials and research works. Further, the library, computer labs and other facilities, which were upgraded by the project, served students well. But the number of Japanese experts and the length of the assignment during the original and extension period were not sufficient to produce the outputs, especially development of textbooks in initially-planned subjects as new subjects were added (see “2 Effectiveness/Impact). The project period was longer than plan (ratio against the plan: 140%) due to extension of the period to produce the outputs. Therefore, efficiency of the project is fair.

4 Sustainability

In the policy aspect, the human resource development in economics and business management is still given importance in the current development policy such as the National Socio-Economic Development Plan (2011-2015), the 5-Year National Education System Reform Strategy (2011-2015) and NUOL’s 6 Strategies and 31 Plans (2011-2015). In the institutional aspect, while FEBM has expanded its undergraduate and graduate programs and the number of teaching staff is sufficient, the number of administrative staff is insufficient to manage the faculty. Thus many teaching staff have to perform the role of administration staff at the same time.

In the technical aspect, skill level of teaching staff is generally considered sufficient based on high percentage of degree holders, and FEBM plans to further improve their teaching/research capacity through exchanges with universities in Japan, Thailand, etc. Many of counterparts at the project period are still working at FEBM as lecturers at the time of ex-post evaluation. Also, the facilities and equipment of FEBM are well maintained, and the skill level of teaching staff in operation and maintenance of facilities/equipment is reported to be sufficient. On the other hand, FEBM commented that administration staff lack management skills such as financial management and academic affairs management. As for the financial aspect, FEBM has managed the faculty with the available funds although budget allocation from the government through NUOL is generally insufficient. Besides this ordinary budget, FEBM has its own funds, the Revolving Fund (sales of textbooks are used for printing textbooks) and the Common Fund (donation and commission from lecturers engaged in research is used for emergency expenses such as in case of delay in payment to staff). The Revolving Fund was introduced by this project and have been well maintained up to the time of ex-post evaluation.

From these findings, it is considered that the project is influenced by institutional and technical aspects of the implementing agency; therefore, sustainability of the project effects is fair.

5 Summary of the Evaluation

For the project purpose of producing graduates from FEBM with good knowledge and skills, most of the indicators such as job finding, satisfaction of students/graduates and popularity of FEBM, were achieved, except for GPA whose target was quite high. For the overall goal, although quantitative data on career of graduates was not available, it is observed that graduates have contributed to promotion of market economy as key officers of related ministries and as entrepreneurs. Further, FEBM teachers have extended lecturing in other faculties of NUOL. As for sustainability, this project is still given importance in the current development policy, and FEBM has managed the faculty with available national budget and its own funds. However, the implementing agency has institutional and technical issues related to allocation and management skills of administration staff. For efficiency, the number of Japanese experts was quantitatively insufficient, and the project period exceeded the plan.

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

III. Recommendations & Lessons Learned

Recommendations for Implementing agency

It is recommended that the Ministry of Education and Sports provide quotas on administration staff to NUOL in the next Fiscal Year (2015-2016) and the capacity development of current administration staff could be considered in order to solve the workload of teaching staff at FEBM. So that, teaching staff could concentrate and dedicate more on their research and teaching activities.

Lessons learned for JICA

(1) The Revolving Fund suggested by the project has been well-functioning in a way that income from sales of textbooks is used for printing of next textbooks. A project to develop and distribute printed materials under severe financial conditions could consider introducing a fund such as this.

(2) The average GPA of 3.0 (in Laos, this means the average grade of students is "B" (Good) in 8-level scale, A, B+, B, C+, C, D+, D, F), which is one of the indicators to verify the achievement of a project purpose, has not been achieved even though FEBM is one of the top faculties of NUOL (i.e. at the faculty placement in the 2nd Grade, only top students in terms of GPA of the 1st Grade are admitted) and the performance of graduates are highly evaluated. In order to use GPA more properly as an indicator of faculty development, the project indicator should set the GPA range to be achieved[11] . So that, it becomes more realistic and appropriate indicator for the project to be achieved.

FEBM, NOUL

The library of FEBM, NUOL

Textbooks developed by this project is still in use (Assoc. Prof. Sengchanh Chanthasane, Vice Dean of FEBM, NUOL)

[11] In case of this project, based on NUOL's standard, students are obliged to get GPA of 2.50 in order to meet the criteria for conducting thesis or final project. As FEBM students are selected among top students in terms of GPA, the target GPA can be set higher, e.g. the GPA range between 2.80-3.00.

Internal Ex-Post Evaluation for Technical Cooperation Project

conducted by Laos Office: October, 2014

Country Name	Project for Human Resource Development of Nursing/Midwifery
The Lao People's Democratic Republic	

I. Project Outline

Background	In the Lao People's Democratic Republic, nurses/midwives played an important role in providing health care services. However, due to the limited knowledge and skills, the quality of their services was low. In order to develop appropriate knowledge and skills, it was necessary to improve the education of nurses/midwives including improvement of clinical training. Also, it was essential to strengthen nursing/midwifery administration which is critical to implementation of effective education.				
Objectives of the Project	1. Overall Goal: The holistic system for development of nursing/midwifery personnel is established. 2. Project Purpose: The basis for development of nursing/midwifery personnel is improved, and nursing/midwifery education system is strengthened.				
Activities of the project	1. Project site: Champasak province (model province); Vientiane Capital (where College of Health Technology (CHT) is located) and 6 provinces (Vientiane, Khammuane, Savannakhet, Champasak, Luangphrabang, Oudomxayi; where Public Health Schools (PHSs), including Champasak College of Health Sciences (CHS), are located) (target sites) 2. Main activities: (1) development of nursing and midwifery regulations and related guidelines, (2) selection and formation of technical team (TT), (3) training of trainers (TOT) by TT, and (4) development of training materials. 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 16 persons (5 long-term and 11 short-term) 2) Trainees received: 16 persons 3) Equipment: PCs, audiovisual equipment and training equipment 4) Others: 12 third-country experts (invited from Thailand), cost for training implementation, and construction cost of nursing/midwifery training center Laotian Side 1. Staff allocated: 13 persons 2. Land and facilities: Office for experts and land for construction of the project office (training center) 3. Local cost: Personnel cost for C/Ps, partial cost for equipment necessary for activity implementation and consumables				
Ex-Ante Evaluation	2005	Project Period	May 2005 to May 2010	Project Cost	344 million yen
Implementing Agency	Department of Organization and Personnel (DOP) and Department of Health Care (DHC, former Department of Curative Medicine, DCM), of Ministry of Health (MOH)				
Cooperation Agency in Japan	The Japanese Red Cross Kyushu International College of Nursing				

II. Result of the Evaluation

1 Relevance

This project has been highly relevant with Lao PDR's development policy and development needs at the time of both ex-ante evaluation and project completion. For the development policy, it is consistent with "strengthening the capacity of health staff in terms of attitudes, ethics, and technical skills" listed amongst the six key principles in the Health Strategy 2020, and "human resources development of healthcare providers" as one of the key issues of the Sixth Five-year Health Sector Plan (2006-2010). For the development needs, it is consistent with "developing nurses/midwives with appropriate knowledge and techniques", for which improvement of education of nurses/midwives and strengthening of nursing/midwifery administration were essential. It is also consistent with Japan's ODA policy, JICA's Country Assistance Program (2006), at the time of ex-ante evaluation. Therefore, relevance of this project is high.

2 Effectiveness/Impact

This project aims to produce the two major outputs (a) improvement of nursing/midwifery administration such as development of regulations and guidelines, and (b) improvement of nursing/midwifery education focusing on establishment of the fundamental nursing training (development of teaching materials, TOT[1] and piloting of PHS-PH collaboration for clinical practice in the model province). For the project purpose, such outputs were expected to be utilized in the model province and be ready for utilization in other target sites by the end of the project period. For the overall goal, the outputs were expected to be utilized in all seven target sites as part of the holistic nursing/midwifery education system.

As a result of the project implementation, all the outputs were produced as planned. However, the project purpose of improving the basis for nursing/midwifery personnel development was partially achieved by the time of project completion. In terms of the component (a), regulations and guidelines on clinical practice, etc. were developed and utilized in the model province. However, the Nursing Technical Supporting Committee (NTSC), which the project set up as a consultative body for TT, did not start discussions on revision of the guidelines such as Guidelines for Scope of the Nursing practice as envisaged. As for the component (b) on the fundamental nursing training, 13 TT members (registered as Central Trainers (CTs) at MOH as of

[1] Training was designed in a form of cascade as follows: (1) Japanese and third-country experts train TT members; (2) TT members train nursing teachers/clinical practice instructors of PHS/PH to become Regional Trainers (RTs); and (3) RTs train in-service nurses of PH who will be the clinical practice instructors for students. It was planned that during the project implementation period, the (1) and (2) would cover all target sites and (3) would be conducted in the model province.

September 2009) were trained, and they trained 200 Regional Trainers (hereinafter referred to as 'RTs'). Then those 200 RTs trained a total of 1,673 in-service nurses in the 7 target sites including the model province by the end of the project. The interviewed PHS/PH said the training enhanced the trainees' skills on correcting common wrong practice observed in the ward such as wound care, vital sign check, and others. However, there might be some room for improvement in training methodology/skills of trainers because only a small number of trainees reached the expected skill level in some subject.

After completion of the project, the major project achievements except NTSC[2] have been maintained. The overall goal of establishing the holistic system for development of nursing/midwifery personnel can be said to have been partially achieved. MOH and interviewed PHSs/PHs commented that the implementation of fundamental nursing training was integrated to a routine duty at PHSs/PHs of all target sites, some non-target provinces as well as central hospitals in Vientiane Municipality at the time of ex-post evaluation. This integration was attributed to TT and RT trained by the project and the training monitoring budget allocated by MOH. The training has contributed to provide better knowledge and higher confidence in teaching and giving clinical instructions to teachers/ clinical practice instructors and in-service nurses. The remaining tasks such as establishment of training courses other than fundamental nursing and certification of trainers are being dealt with in the JICA's technical cooperation project, "Project for Sustainable Development of Human Resource for Health to Improve Maternal, Neonatal and Child Health Services (HRH Project)" (2012-2016). On the other hand, the data/information was not available to fully verify the designated indicators of the overall goal, such as employment rate of PHS graduates and implementation record of training in all target sites.

Therefore, effectiveness/ impact of the project is fair.

Achievement of project purpose and overall goal

<table>
<tr><th>Aim</th><th>Indicators</th><th>Results</th></tr>
<tr><td rowspan="3">(Project Purpose)
The basis for development of nursing/midwifery personnel is improved, and nursing/midwifery education system is strengthened.</td><td>Keeping and installation condition of the Nursing and Midwifery Regulations, Guidelines for the Scope of the Nursing Practice, and School Management and Implementation Guideline at related facilities in model province.</td><td>(Project Completion) The Regulations and Guidelines were kept and installed at PHS and PH in Champasak.
(Ex-post Evaluation) The Regulations and Guidelines are found useful and utilized at PHS/PH in Champasak and other target sites as well as central hospitals. They were also incorporated into the curriculum of "Nursing Ethics".</td></tr>
<tr><td>NTSC will continue activities by following the term of reference (TOR) (ex. the draft revision of Guidelines for Scope of the Nursing practice is made).</td><td>(Project Completion) After established in Jan. 2008, NTSC gave comments and discussed topics following its TOR, but did not discuss revision of the Guidelines.
(Ex-post Evaluation) NTSC did not continue activities related to the revision of the Guidelines due to lack of capacity/experience.</td></tr>
<tr><td>The fundamental nursing training program is established (progress rate of knowledge and skills of TT members regarding fundamental nursing and teaching methods/the number of nursing teachers, clinical practice instructors and nurses who took the fundamental training course).</td><td>(Project Completion) 13 trainers were registered as CTs (TT members), who would be able to conduct training based on the gained knowledge/capacity. The number of trainees is shown in the table below. Average scores of the post- tests are higher than those of the pre-test for RTs and nurses, but in skill test of vital sign, only 20% of trainees achieved expected level.
<table>
<tr><th></th><th>Cham-pasak CHS/ PH</th><th>Other 6 PHS/ PH</th><th>Central hospitals in Vientiane Municipality*1</th><th>Training for newly hired PHS teachers*2</th><th>Training for 6 provinces in the Northern area*3</th><th>Total</th></tr>
<tr><td>No. of teachers and clinical practice instructors trained (to become RT) by CTs</td><td>24</td><td>83</td><td>18</td><td>18+15</td><td>42</td><td>200</td></tr>
<tr><td>No. of trainees trained by RTs</td><td>100</td><td>851</td><td>722</td><td>-</td><td>-</td><td>1,673</td></tr>
</table>
*1-3: Although these are not planned as a part of the project, these training courses were implemented to meet the needs. In particular, *3 was implemented upon request of MOH.
(Ex-post Evaluation) See Overall Goal. No information on the number of CTs and RTs.</td></tr>
<tr><td rowspan="3">(Overall goal)
The holistic system for development of nursing/midwifery personnel is established.</td><td>Employment rate of graduates from the PHS, CHT.</td><td>(Ex-post Evaluation) No information is available. PHS and CHT do not collect the date related to the employment status of the graduates. . In general, the number of new recruitment of health personnel increased for health sector (MOH's quota for new staff: 2010=600, 2013=1,000, 2014=4,000).</td></tr>
<tr><td>Training program for teachers and clinical practice instructors is established.</td><td>(Ex-post Evaluation) Department of Training and Research (DTR) of MOH conducted fundamental nursing training only once (2013) after the project (for 30 representatives from schools, central and provincial hospitals were attended) due to the budget constraints. Development of the holistic nurses/midwives development system is underway in the JICA's HRH project.</td></tr>
<tr><td>The number of provinces (PHS, PH) which use fundamental nursing training program and</td><td>(Ex-post Evaluation) According to MOH, fundamental training course is continuously provided as routine duty in 7 provinces, but data on frequency of training is available only from Champasak PH and two central hospitals.</td></tr>
</table>

[2] NTSC did not continue the activities related to the revision of the regulations after project completion. However, former NTSC members said that they still extend their regular cooperation in the way of their routine duties. Meantime, MOH submitted a new Health Care Law in early 2014, which might require alignment of the regulations to the provisions of the law. This draft bill of the Health care Law also stipulates that every related document (such as regulations on nursing) should be reviewed and improved once every two years basis.

	learning materials.	<table><tr><td></td><td>2010</td><td>2011</td><td>2012</td><td>2013</td><td>2014</td></tr><tr><td>Champasak PH and 2 central hospitals (Setthathirath and Mahosot)</td><td>1 seminar /week</td><td>1 seminar /week</td><td>1 seminar /week</td><td>1 seminar /week</td><td>1 seminar /week</td></tr><tr><td>Champasak College of Health Sciences (CHS)</td><td>data is not available</td><td>data is not available</td><td>3 courses for PH/ District Hospitals (DHs)</td><td>1 course for Champasak DH</td><td>data is not available</td></tr><tr><td>Oudomxay PHS</td><td>25 persons/course</td><td>25 persons/course</td><td>25 persons/course</td><td>25 persons/course</td><td>Planning</td></tr><tr><td>Xiengkhuang PHS (new) (non-target province)</td><td>data is not available</td><td>data is not available</td><td>data is not available</td><td>1 course for PH/DHs</td><td>1 course for PH/DHs</td></tr></table> No information is available on the use of learning materials.
	The number of provinces (PHS, PH) which use the guidance for clinical practice collaboration.	(Ex-post Evaluation) Champasak CHS/PH continuously uses the guidance. In other 6 provinces, no specific guidance is used but collaboration is regularly done in the same way as mentioned in the guidance.

Sources: Terminal Evaluation Report; Project Completion Report; questionnaires and interviews with PHSs and PHs.

3 Efficiency

Both the project cost and the project period were within the plan (ratio against the plan: 91% and 100% respectively). Therefore, efficiency of the project is high.

4 Sustainability

In the policy aspect, this project is still given importance in the current development policy as the Seventh Five-year Health Sector Plan (2011-2015), Health Strategy 2020, Health Personnel Development Strategy 2020 (under Health Strategy 2020), Health Sector Reform Strategy by 2020 (a policy to accelerate Health Strategy 2020), as well as the Health Care Law (under review at the time of ex-post evaluation) all support nursing/midwifery personnel development.

In the institutional aspect, the organizational structure of DOP and DHC was strengthened compared to the structure at the time of project completion, i.e., new divisions or departments related to health care personnel development, such as DTR has been established or separated from DOP. The demarcation is that DTR is for health personnel training, while DOP focuses on personnel management. At the same time, the Health Care Professional Regulatory Office of DHC also was created. Responsibility over the fundamental nursing training is assumed by DTR from the year 2012. Although the number of staff is generally insufficient, DTR and DHC have managed.

In the technical aspect, ex-counterpart personnel of DTR and DHC are still working in the same area, and CTs continue training as well. Although there is no regular support from CTs for RTs after the project because of CTs' workload, RTs can function by themselves. Most of schools continue training by their own efforts.

The financial aspect is different by type of organization. At hospitals such as PH, as the fundamental nursing training is a part of routine work and conducted by regular budget, only a small additional budget for necessary stationary for each training is accommodated by each institute. At education institutes, they need special budget for conducting the training. They rely on donors' cooperation programs or apply to MOH for support but it is not always responded due to budget constraints of MOH. At DTR, the special budget is necessary for participants from provinces; therefore they can conduct training only when budget from MOH is available[3].

From these findings, it is considered that the project has some problems in technical and financial aspects of the implementing agency; therefore, sustainability of the project is fair.

5 Summary of the Evaluation

This project has partially achieved the project purpose and the overall goal. For the project purpose, the regulations and guidelines for nursing/midwifery clinical practice were developed and began utilized by PHS/PH, and the fundamental training program was developed and began provided by the trained CTs and RTs, while NTSC did not function in an expected way. For the overall goal, egulations/guidelines and the fundamental nursing training were continuously used/conducted, which constituted part of the holistic system for developing nursing/midwifery personnel, but sufficient information was not collected to fully verify the achievement level. As for sustainability, this project is still given importance in the current development policy. However, there are problems in terms of technical and financial aspects such as no regular follow-ups of RTs by CTs, and conduct of training, which is dependent on the availability of budget, is not constant.

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

III. Recommendations & Lessons Learned

Recommendations for Implementing agency

(1) In order to ensure further achievement of the project purpose and overall goal, MOH, especially DTR/DHC should conduct regular monitoring and maintain use of the outputs of the project. Such activities should be integrated, monitored and well recorded. For example, utilization of developed regulations and guidelines and the fundamental nursing training system should be monitored as components of the holistic nursing/midwifery personnel development system.

(2) MOH is recommended to allocate budget to constantly hold nursing training so that every institute can carry on the nursing training with a standardized progress and quality, which will be essential in pursuit of the MOH's recent initiative for health

[3] In 2013, the center got budget of 50 million kip from MOH. Then they held a two-week training for about 30 persons. For 2014, the budget is under consideration by MOH (as of July 2014).

personnel development including qualified nurses/midwives.

Lessons learned for JICA
(1) The outputs that were well maintained and continued after the project were the ones that were particularly responding to the essential needs of the Lao PDR side to develop a basic framework and human resources of nursing/midwifery. Therefore, when designing a project in which continuous use of the outputs is essential, the outputs should be fully consistent with national development needs.
(2) It is observed at the time of ex-post evaluation that the project activities are continued and outputs as well as effects are sustained, but it was difficult to objectively and quantitatively verify those situations as the monitoring tool was not defined and the operation and related data was not recorded after the project completion. It would be better to support/advise the implementing agency to develop monitoring and evaluation tools during the project period. By utilizing the developed tools, the implementing agency can understand and analyze their own progress/status and utilize the data for future activities.

Nursing Regulation Poster-Setthathirath Hosp.


Regulations/Guidelines of Nursing/Midwifery

conducted by Laos Office: December, 2014

Country Name	Meteorological and Hydrological Services Improvement Project
The Lao People's Democratic Republic	

I. Project Outline

Background	In Lao People's Democratic Republic (PDR), floods and landslides caused by southwest monsoons, typhoons and tropical storms occur annually across the country. They are particularly affecting the development of agriculture and air transportation. Department of Meteorology and Hydrology (DMH) is a sole government organization to provide national meteorological and hydrological service. However, its capacity to collect and analyze meteorological and hydrological data was insufficient and the meteorological observation system (e.g. weather radar) procured by the Japanese Grant Aid project (note) was not fully utilized. Consequently, DMH had difficulties in providing accurate information, which was necessary for the Mekong River development, water resources utilization, agricultural development and improvement of transportation, to concerned ministries, international organizations, etc. (note) The "Project for Establishment of Disastrous Weather Monitoring System" (EN signed in August 2004)				
Objectives of the Project	1. Overall Goal: Accurate meteorological and hydrological information will contribute to natural disaster management, agricultural development and transportation. 2. Project Purpose: Meteorological and hydrological information is collected, analyzed and provided by DMH in proper and timely manner.				
Activities of the project	1. Project site: DMH headquarters (Vientiane City), Vientiane Province, Luang Prabang Province, Borikhamxay Province, Xayaboury Province, Khammouane Province. 2. Main activities: Development of manuals and guidelines of the operation and maintenance of the equipment and data collection and analysis; training for DMH and provincial staff; rehabilitation or construction of provincial hydrological observation stations; renewal of equipment for observation, data archiving, inspection of data collection and processing at provincial stations; development of a forecasting system, agro-meteorological analysis; seminars/workshops for DMH and provincial staff, related ministries and the mass media; development of a web page, etc. 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 15 persons 2) Trainees received: 4 person 3) Equipment: Books, meteorological observation equipment, data processing/analysis equipment, communications equipment, office equipment, vehicles, motorcycles, etc. Laotian Side 1) Staff allocated: 29 persons 2) Land and facilities: Project office 3) Local cost: Direct operational cost for project activities (total JPY 1 million yen).				
Ex-Ante Evaluation	2005	Project Period	July 2006 to January 2011 (Original period: July 2006 to January 2010; Extension period: January 2010 to January 2011)	Project Cost	381 million yen
Implementing Agency	Department of Meteorology and Hydrology (DMH) under Water Resources and Environment Administration (WREA) (Note) DMH was under Ministry of Agriculture and Forestry (MAF) till 2007. After that DMH was supervised by WREA in the Prime Minister Office (PMO) and WREA was merged to a newly-created Ministry of Natural Resources and Environment (MONRE) in 2011.				
Cooperation Agency in Japan	Ministry of Agriculture, Forestry and Fisheries (Implementation of the project was commissioned to Japan Weather Association and CTI Engineering Co., Ltd.)				

II. Result of the Evaluation

1 Relevance

This project was highly relevant with Lao PDR's development policy such as (i) "collection and dissemination of meteorological and hydrological data" as stated in the National Socio-Economic Development Plan (NSEDP) (2001-2005), (ii) "capacity development of DMH for agriculture development and mitigation of damages from natural disasters" as positioned in the Agricultural Master Plan and Five-year Action Plan for Agriculture and Forestry Sector Development (2001-2005), and (iii) "harnessing modern methods of science and technology to predict the weather and other natural phenomena; dissemination of the information widely to the public to reduce damages from natural disasters" as stated in the NSEDP (2006-2010), at the times of both ex-ante evaluation and project completion. Also, the project was highly relevant with Lao PDR's development needs for DMH to provide accurate information for water resources utilization, agricultural development and transportation, at the times of ex-ante evaluation and project completion. Further, it is consistent with Japan's ODA policy at the time of ex-ante evaluation in a sense that it aimed at human resource development to contribute to agriculture development and infrastructure development, which were among the priority areas of assistance. Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project aimed to improve the capacity of DMH to collect, process and analyze meteorological and hydrological data and to provide information such as weather forecast and early warning (project purpose) by training and rehabilitation of observation

facilities and equipment. Consequently, it was expected that such information be used in disaster management, agricultural development and aviation (overall goal).

The project purpose was achieved by the time of project completion. Although the procurement of equipment for observation stations were delayed, among the ten stations supported by this project, the six meteorological stations began recording data in digital format by October 2009, during original project period, and the four hydrological stations began recording data in digital format during the extension period of this project. Those data were collected on hourly basis, processed, analyzed, and provided to the public and concerned agencies as planned.

After project completion, data on all parameters have continued to be automatically recorded at the weather radar system and the six meteorological stations, and are sent to the Headquarters regularly and timely (i.e. in a way that was designed). However, analysis of radar data becomes impossible for some days when a problem of interference signals occurs[1]. Data from the four hydrological stations have been recorded and sent manually on daily basis due to a problem of data logger's battery since March 2011. Spare parts necessary to fix this problem are not available in the local market. Nevertheless, when necessary (e.g., in case of high water level), hydrological data can be manually recorded and sent to the Headquarters on hourly basis, which had been even impossible with the facilities before the rehabilitation by the project. The data input format and forecasting models/techniques (e.g. long range forecasting and satellite image analysis) introduced by this project are still used, while the methods of agro-meteorological and hydrological analyses (e.g. inundation analysis and water balance analysis) introduced by the project are no longer used as newer models are available and used. Provision of information on the web is continuing and regularly updated as well.

As for the overall goal, according to DMH, meteorological and hydrological information they provide is utilized for disaster management, agricultural development and aviation. For example, the National Agriculture and Forestry Research Institute (NAFRI) uses weekly and monthly data of rainfall and other parameters for crop calendars and advisory to farmers, and hourly meteorological data are used for flight services. Besides, the public, officials and business sectors are more aware of DMH's work. Media (TV, radio and newspapers) provides meteorological information more often than before. Telephone calls to DMH increased[2].

In this way, this project has achieved the project purpose and the overall goal. Therefore, effectiveness and impact are high.

Achievement of project purpose and overall goal

Aim	Indicators	Results
(Project Purpose) Meteorological and hydrological information is collected, analyzed and provided by Department of Meteorology and Hydrology (DMH) in proper and timely manner.	Meteorological and hydrological data (of weather radar and observation stations) in books or digital archive.	(Project Completion) (i) Weather radar data and (ii) meteorological data from all 6 observation stations and (iii) hydrological data from 4 hydrological stations (3 rehabilitated and 1 constructed by the project) were recorded in digital archive. (Ex-post Evaluation) (i) and (ii) above are recorded in the digital archive and sent to DMH Headquarters properly and timely. Regarding (i), data analysis is difficult for some days when there are interference signals because the signals can damage data. Regarding (iii), hydrological stations had a problem in battery for automatic data recording system and no proper spare parts were provided. Thus, daily water level is recorded, transmitted and input manually as mentioned above.
	Meteorological and hydrological information newly provided Weather radar data, probability long-range weather forecast, aviation weather information, flood forecast for the 5 tributaries in the Mekong River basin.	(Project Completion) (i) Rader products, (ii) 1-month and 3-month forcast of rainfall and temperature, (iii) Information on meteorological phenomenon which may cause aeronautic accidents such as serious thunder, heavy rain and microburst, and (iv) Flood forecast for the five tributaries in the Mekong River basin by automatic water-level measurement at 4 rehabilitated hydrological stations and by telemeter at an existing station. (Ex-post Evaluation) All of the (i)–(iv) above are still regularly provided to respective party (the public, ministries, airports and others on demand)
	Types of information, database, promotion materials to be open and provided on web technology: 4 (baseline) to 8.	(Project completion) (i) Weather report, (ii) Radar images, (iii) Satellite images, (iv) Weather chart, (v) Numerical Weather Prediction (NWP), (vi) Weather forecasts, (vii) Hydrology, and (viii) Climatology. (Ex-post Evaluation) All of the (i)-(viii) above are on the web. (i) and (viii) are updated monthly, and the rest are updated daily.
(Overall goal) Accurate meteorological and hydrological information will contribute to natural disaster management, agricultural development and transportation.	Situation on utilization of meteorological and hydrological information in the sectors of disaster management, agricultural development and transport (aviation).	(Ex-post Evaluation) (i) Disaster management: Forecast and early warning (daily) are provided to and used by provinces, districts and villages (ii) Agricultural development: Rainfall and other parameters (weekly and monthly) are provided to and used by National Agriculture and Forestry Research Institute (NAFRI) for crop calendar and advisory to farmers (iii) Aviation: Encoded format of World Meteorological Organization (WMO) and Meteorological Division of International Civil Aviation Organization (MET-ICAO) report (hourly) is provided to and used by service of flight and airports.

Sources：Project Completion Report; interviews with DMH.

[1] There were some problems of the weather radar system after project completion, but they were repaired with assistance from a JICA senior volunteer and by coordinating with the supplier. However, the interference problem could not be solved by the Lao side because the frequency of interference signals is outside of the designated range of the International Telecommunications Union (ITU) for this region.

[2] Before the project completion, it had been concerned that people's preference on listening to Thai radio than Lao radio (because the former had been more informative) would hinder effectiveness and impact of providing weather information to the public through Lao radio (source: Terminal Evaluation Report). At the time of ex-post evaluation, DMH commented that the Lao media became more popular.

3 Efficiency
Both the project cost and the project period exceeded the plan (ratio against the plan: 131% and 131% respectively) mainly because of the extension of the project period to fully attain the project purpose. Therefore, efficiency of the project is fair.
4 Sustainability
In the policy aspect, this project is still given importance in the current development policy as the NSEDP (2011-2015) holds a measure, "together with the relevant sectors, to undertake research and improve efficiency of early warning systems", and the MONRE Strategic Plan (2011-2015) aims at "collection, analysis and provision of meteorological and hydrological information". In the institutional aspect, the organizational arrangement above DMH became strengthened as WREA was upgraded to a ministry (MONRE) merging departments related to natural resources in 2011. DMH commented that all posts are filled and the existing staff have managed to carry out observation, data processing analysis and provision of information, although more staff with good quality of work would be needed (DMH plans to recruit new staff every year). Besides, data measurement and reporting at provincial hydrological stations are carried out by key responsible villagers selected and contracted by DMH. In the technical aspect, DMH considers the skills of its staff are generally insufficient. DMH has a training system in which it provides orientation to new employees and refresher training to provincial staff, and the manuals and guidelines developed by this project such as on meteorological/hydrological observation, data input and forecasting are still used. However, only a few staff who were well trained during the project period remain and continue the work, and according to DMH, other new staff are still in need to improve their capacity. DMH also commented that it needs further assistance to solve the above-mentioned problem of interference signal/echoes from outside to the radar system. Regarding hydrological stations, the key responsible villagers are trained and can manually measure and record water level, but there are the spare-parts problems mentioned in "2 Effectiveness/Impact" above. As for the financial aspect, since project completion, DMH has secured budget for operation and maintenance of the radar system at a close level to the budget that were provided during the project implementation period[3], and that budget as well as allocation from the national budget have increased every year. From these findings, it is considered that the project has some problems in technical aspect of the implementing agency; therefore, sustainability of effects of the project is fair.

5 Summary of the Evaluation
This project has achieved the project purpose and the overall goal. For the project purpose, DMH became able to collect, process, analyze and provide meteorological and hydrological data regularly. For the overall goal, it was found that such activities are mostly continuing at the time of ex-post evaluation, and weather forecasts, early warning and other meteorological and hydrological information provided by DMH are used by concerned users including the public, local authorities, agricultural institutions and aviation services. As for sustainability, this project is supported by development policy at the time of the ex-post evaluation, and the institutional arrangement was reinforced. Also, allocation of national budget to DMH as well as operation and maintenance budget for the weather radar system are increasing. However, there are problems in the technical aspect such as insufficient skills of staff and unavailability of some spare parts in Lao PDR. In the light of the above, this project is evaluated to be satisfactory.

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

It is advised that DMH repairs the automatic recording system of hydrological stations, if that is indispensable for sustainability of project effects, with consideration of taking necessary measures to purchase spare parts from abroad. Overall, DMH is advised to maintain its equipment with an established maintenance system and to provide regular capacity building for new staff in order to keep providing meteorological and hydrological information for target users in accurate and timely manners.

Lessons learned for JICA

It was also found that DMH, at the time of the ex-post evaluation, felt the skill level of its staff to carry out data collection, analysis and provision of meteorological and hydrological information in timely and accurate manner is still limited especially for new employees, even though it has a training system for working staff. Therefore, JICA should check the counterpart agency's staff training system at the planning stage and/or during the project period, and if it is found insufficient, it should be included in the project as a component to strengthen a mechanism of transferring knowledge and skills to new staff to ensure technical sustainability.

Radar tower at the Department of Meteorology and Hydrology, Vientiane

Automatic Hydrological Station at the Meuang Mai (River: Nam Ngiep), Bolikhamxay Province

[3] Data on operation and maintenance budget for observation stations were not available.

conducted by Vietnam Office: November, 2014

Country Name	Project for Improvement of Medical Service in the Central Region
Socialist Republic of Vietnam	

I. Project Outline

Background	The Government of Vietnam aimed at universal access to quality medical service under the National Strategy on People's Health Care and Protection (2001-2010). Although the efforts for reform greatly improved the medical service in Vietnam, the gaps in the medical service between rural and urban areas and between the wealthy and the poor had been expanded. During 1992-2005, the Government of Japan had supported the two core hospitals, Cho Ray Hospital in the South and Bach Mai Hospital in the North in order to improve the medical services at respective regions. However, there were difficulties for the two core hospitals to cover the whole population in the country, even in the population in the Central Region. Therefore, the Government of Vietnam requested a technical cooperation project to the Government of Japan, aiming to improve medical service in the Central Region through strengthening function of the Hue Central Hospital, which served as the top referral hospital and providing trainings to the provincial hospitals in the region. In addition to the technical cooperation, the Japanese Grant Aid was implemented in 2006 to construct the outpatient and examination facilities in Hue Central Hospital.
Objectives of the Project	1. Overall Goal: Medical Services provided by the provincial hospitals (PH) in the Central Region are improved. 2. Project Purpose: Training activities to improve PH's medical service by the Hue Central Hospital (HCH) are expanded and improved through Training Management System.
Activities of the project	1. Project site: 12 provinces and 1 city (Hue) in the Central Region (14 PHs including Ha Tinh, Quang Binh, Quang Tri, Da Nang, Da Nang C, Quang Nam, Quang Nam C, Quang Ngai, Binh Dinh, Phu Yen, Kon Tum, Gia Lai, Dak Lak, and Dak Nong) *Note: There are 16 PHs in the Central Region. While the Project mainly targeted 14 PHs for the technical transfer activities, the target of the Overall Goal covered all the 16 PHs.* 2. Main activities: Target Groups: Staff of HCH and PHs 1) In-service trainings for nurses at HCH, 2) Implementation of "Total Care[1]" activities at HCH, 3) Trainings on nosocomial infection control at HCH, 4) Trainings on medical equipment management at HCH, 5) Hospital management system and trainings at HCH, 6) Development of training manuals and materials and trainers' training at HCH based on the activities from 1) to 5)[2], 7) Training for staff of PHs, 8) Conduct monitoring and follow-ups of medical staff of PHs trained by HCH and strengthen the 2-way information communication between DOHA (Direction Office of Health Care Activities)[3] Center of HCH and PHs. 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 5 long term + 33 short term 2) Trainees received: 28 persons 3) Equipment: equipment for trainings, including projectors, PCs, software, and so on. Vietnamese Side 1) Staff allocated: 51 persons 2) Land and facilities: spaces for trainings and meetings 3) Travel expenses and per diem, cost for renovation of medical facilities

Ex-Ante Evaluation	2005	Project Period	July 2005 to June 2010	Project Cost	546 million yen
Implementing Agency	Ministry of Health, Hue Central Hospital				
Cooperation Agency in Japan	Ministry of Health, Labor and Welfare, National Center for Global Health and Medicine				

II. Result of the Evaluation

1 Relevance

This project has been highly relevant with Vietnam's development policy "universal access to quality medical service" under the National Strategy on People's Health Care and Protection (2001-2010), development needs of human resource development of the health and medical sector in the Central Region at the both times of ex-ante evaluation and project completion. It was also consistent with Japan's ODA policy supporting for improvement in livelihood and social aspects including the health and medical sector at the time of ex-ante evaluation. Therefore, relevance of this project is high.

[1] Total Care was clarified as follows; 1) Total care is valuable care model. 2) Total care is practiced by all kinds of staff in the hospital on the basis of concept of patient-center oriented. 3) Total care means not only physical care but also social and mental care. The service is provided for all the time of administration. 4) In order to practice total care, it is necessary to fully arrange human resource and medical equipment (quoted from page 9 of Joint Terminal Evaluation Report January 2010).

[2] Improved i) nursing management, ii) Total Care, iii) nosocomial infection control. iv) medical equipment management and v) hospital management system was defined as 'Model Medical Services'.

[3] Direction Office of Health Care Activities (DOHA) is one of regulated tasks of upper level hospitals to provide technical guidance and support to lower level hospitals through training and monitoring.

2 Effectiveness/Impact

The project developed manuals and materials for trainer's training, delivered in-services trainings for nurse and trainings of nosocomial infection control, established training monitoring and evaluation system and introduced "Total Care" activities and patient information system.

The Project Purpose was achieved at the time of project completion. During the project period from 2005 to 2010, 1,088 staffs were trained in total. The training opportunities for doctors, bachelor nurses, nurses, midwives, pharmacists, engineers, technicians and others were provided equally. 12 Provincial Hospitals (PHs) in the Central Region improved their nosocomial infection control by regular monitoring of each section, a check system using a checklist, and hand washing of the staff and so forth. The short-term evaluation[4] was applied to all the training courses and all the courses achieved more than 80% of the target.

Those project effects have been fairly sustained after the project completion. 751 staffs from PHs were trained for the ex-post project period from 2010 to 2014. Also, all the training courses were assessed by the short-term evaluation which was conducted just after trainings but data on results of the short-term evaluation was not available at the time of ex-post evaluation.

For the Overall Goal, medical services provided by PHs in the Central Region have been improved gradually. All the 16 PHs have been continuously practicing Nursing Management[5], Total Care, preventive maintenance for equipment and the improved nosocomial infection control, which were introduced by the project. Some of PHs decreased the number of cases of nosocomial infection after the project completion. 13 PHs have been practicing the Patient Information System. Out of 14 PHs surveyed by the ex-post evaluation, 5 PHs improved their hospital evaluation score in 2012 conducted by the Ministry of Health (refer the details in the table below).There was no negative impact.

Therefore, effectiveness/ impact of the project is fair.

Achievement of project purpose and overall goal

<table>
<tr><th>Aim</th><th>Indicators</th><th>Results</th></tr>
<tr><td rowspan="3">(Project Purpose)
Expansion and improvement of training activities to improve PH's medical service by HCH</td><td>Indicator 1: Number of training participants by job category</td><td>(Terminal Evaluation)
No. of total medical staff trained from 2005 to 2009 : 1,088
<table>
<tr><th></th><th>2005</th><th>2006</th><th>2007</th><th>2008</th><th>2009</th><th>Total</th></tr>
<tr><td>Doctor</td><td>-</td><td>58</td><td>93</td><td>75</td><td>74</td><td>300</td></tr>
<tr><td>Bachelor Nurse</td><td>20</td><td>33</td><td>2</td><td>8</td><td>30</td><td>93</td></tr>
<tr><td>Nurse</td><td>-</td><td>34</td><td>52</td><td>78</td><td>206</td><td>370</td></tr>
<tr><td>Midwife</td><td>-</td><td>4</td><td>2</td><td>29</td><td>47</td><td>82</td></tr>
<tr><td>Pharmacist</td><td>-</td><td>7</td><td>1</td><td>2</td><td>-</td><td>10</td></tr>
<tr><td>Engineer</td><td>-</td><td>15</td><td>1</td><td>4</td><td>13</td><td>33</td></tr>
<tr><td>Technician</td><td>-</td><td>61</td><td>24</td><td>8</td><td>61</td><td>154</td></tr>
<tr><td>Others</td><td>-</td><td>27</td><td>-</td><td>-</td><td>19</td><td>46</td></tr>
<tr><td>Total</td><td>20</td><td>239</td><td>175</td><td>204</td><td>450</td><td>1,088</td></tr>
</table>
<Information Source> Terminal Evaluation Report (EN), p.19.
(Ex-post Evaluation)
No. of participants of trainings at HCH from 2010 to 2014: 751.
No. of participants by job category is not available.
<table>
<tr><th>2010</th><th>2011</th><th>2012</th><th>2013</th><th>2014</th><th>Total</th></tr>
<tr><td>140</td><td>47</td><td>162</td><td>252</td><td>150</td><td>751</td></tr>
</table>
<Information Sources> HCH questionnaire</td></tr>
<tr><td>Indicator 2: Number of the PH reporting the results of nosocomial infection surveillance</td><td>(Project Completion) Achieved
- 12 PHs improved nosocomial infection control.
(Ex-post Evaluation)
- 16 PHs have been practicing nosocomial infection control. Decreasing trend of nosocomial infection was observed 4 out of 14 PHs.</td></tr>
<tr><td>Indicator 3: Results of Short-Term evaluation</td><td>(Project Completion) Achieved
- 100% of the training courses were applied short-term evaluation.
- All the training courses achieved more than 80% of the target.
(Ex-post Evaluation)
- 100% of the trainings courses have been assessed by short-term evaluation after the project completion (2010-2014). Data about the results of the evaluation at the time of ex-post evaluation was not available.</td></tr>
</table>

[4] Short-term evaluation is a kind of review meeting between lecturer and trainees after each course was completed. Long-term evaluation is conducted 6 months after the training course finished in order to identify how the action plan of a trainee is implemented and its impact to the whole improvement of his / her hospital.

[5] For the nursing management, the following activities were introduced by the project; 1) To clarify the TOR of nursing staff, 2) To specify activities of nursing management, 3) To organize in-service training committee of nursing, 4) To organize in-service training of nursing staff, 5) To evaluate in-service training of nursing staff and 6) To rotate nursing staff for the purpose of in-service training (quoted from page 8 of Joint Terminal Evaluation Report (January 2010).

<table>
<tr><td>(Overall goal)
Improvement of medical service provided by PH in the Central Region</td><td>Indicator1: Result of the Ministry of Health's annual hospital evaluation score of PH</td><td>(Ex-post Evaluation) [Annual Hospital Checkup Score of the target PHs]
<table>
<tr><td></td><td>2010</td><td>2012</td><td></td></tr>
<tr><td>Ha Tinh</td><td>88.16</td><td>86.25</td><td></td></tr>
<tr><td>Quang Binh</td><td>96.46</td><td>96.50</td><td>Improved</td></tr>
<tr><td>Quang Tri</td><td>95.90</td><td>96.50</td><td>Improved</td></tr>
<tr><td>Da Nang City</td><td>96.5</td><td>96.5</td><td></td></tr>
<tr><td>Da Nang Central</td><td>95.11</td><td>97.14</td><td>Improved</td></tr>
<tr><td>Quang Nam</td><td>>95</td><td>>95</td><td></td></tr>
<tr><td>Quang Nam C</td><td>90%</td><td>Not evaluated</td><td></td></tr>
<tr><td>Quang Ngai</td><td>82.6</td><td>84.7</td><td>Improved</td></tr>
<tr><td>Binh Dinh</td><td>90.18</td><td>87.75</td><td></td></tr>
<tr><td>Phu Yen</td><td>96</td><td>92</td><td></td></tr>
<tr><td>Kon Tum</td><td>89.5</td><td>93.5</td><td>Improved</td></tr>
<tr><td>Gia Lai</td><td>92.3</td><td>87.5</td><td></td></tr>
<tr><td>Dak Lak</td><td>95.4</td><td>88.7</td><td></td></tr>
<tr><td>Dak Nong</td><td>Good</td><td>Average</td><td></td></tr>
</table>
[Note] The data is available up to 2012 since the annual hospital evaluation was replaced by the trial application of "Indicator set to evaluate hospital quality" from 2013.
<Information Source> PH questionnaire</td></tr>
<tr><td></td><td>Indicator 2: Death rate in PH</td><td>(Ex-post Evaluation)
Not collected due to no reporting of death rate in PHs to CHC (Please see the Note below.)</td></tr>
</table>

Source : Terminal Evaluation Report, Interviews with counterparts

Note: At the time of ex-post evaluation, this data was not collected based on the same reason as applied by the terminal evaluation. At the time of the terminal evaluation, the death rate in PHs was mentioned as a reference since the death rate at the hospital has not necessarily indicated the quality of the medical service provided at PHs. It was because that majority of patients approaching to the end have preferred to return their home and avoid the death at hospital.(Source:P22 of the Joint Terminal Evaluation Report, January 2010)

3 Efficiency

The project cost and period were within the plan (ratio against the plan: 79% and 100%). Therefore, efficiency of the project is high

4 Sustainability

In the policy aspect, promotion of nursing management, Total Care and nosocomial infection control have been endorsed by the Ministerial Circulars since 2009. During the project implementation period (2005-2010) and thereafter, medical practices such as training of medical staff (especially through Continuing Medical Education – CME) in essential fields such as Nosocomial Infection control, Total Care and Patient Information System have been promoted countrywide by the Ministry of Health. Therefore, good medical practices introduced by the Project became more applicable and sustainable at regional and national level.

Institutionally, the number of trainers has been sufficient, but the training management system, including the training monitoring system had not been perfectly sustained at HCH. For example, long-term evaluation, which is following up the ex-trainees onsite and report from the ex-trainees to HCH had not been carried out between 2013 and 2014. However, with utilization of the 2 –way communication and working mechanism between HCH and PHs, evaluation results are quickly made and shared timely at the time of ex-post evaluation. 10 PHs out of 16 PHs in the Central Region have a necessary unit/system for the model medical services, including training for nurses, Total Care, nosocomial infection control and the Patient Information System but the number of staff of each unit is not sufficient for those activities. Although PHs plan to implement model medical services at more departments, there are difficulties such as lack of working staffs for a large number of patients (hospital overload), lack of trained staffs, lack of budget and required higher work intensity.

In the technical aspect, HCH trainers have sufficient training skills to deliver trainings for medical staff of PHs thanks to the regular updates of their knowledge and skills at the occasions organized by MOH, HCH and their respective National and Regional Professional Association. Also the trained medical staffs of PHs have sufficient skills to practice the model medical services. Training materials developed during the project period are used for training activities of the project site but not used in other settings because it is not modified for the use of other settings.

As for the financial aspect, 9 PHs do not have sufficient budget to cover the training fee for trainings at HCH because the training budget is not prioritized and the actual allocation is limited. However, this situation would be changed in the coming time since continuing medical education (CME) of all health staffs become mandatory according to the Circular issued in 2013 by MOH.

From these findings, it is considered that the project has some problems in institutional and financial aspects of the implementing agencies; therefore, sustainability of the project is fair.

5 Summary of the Evaluation

This project has achieved the project purpose through practices of the model medical services such as trainings for medical staff, Total Care, nosocomial infection control and the Patient Information System. The improvement of medical service at PHs has been gradually achieved. As for sustainability, the Ministry of Health endorsed promotion of the model medical services introduced by the project and the medical staffs at the PHs in the Central Region have sufficient skills to practice them. On the other hand, PHs do not have sufficient number of staff to practice the model medical services and sufficient budget to cover the training fee for HCH at the time of ex-post evaluation.

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

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

[HCH]

- HCH needs to secure other funding sources to maintain the training management cycle and to continue to provide more training courses to PH since PHs do not secure the training budget by themselves.
- Such training courses should not be limited to areas developed within the project but should go further into other new techniques that can be implemented at provincial level. Particularly, formal training such as specialty oriented training and specialist training to enhance practical capability for medical doctors of PHs, should be further strengthened.
- Training materials developed and used for training activities of the project should be updated, standardized and submitted to MOH for approval for the use in other settings and other projects in Vietnam.

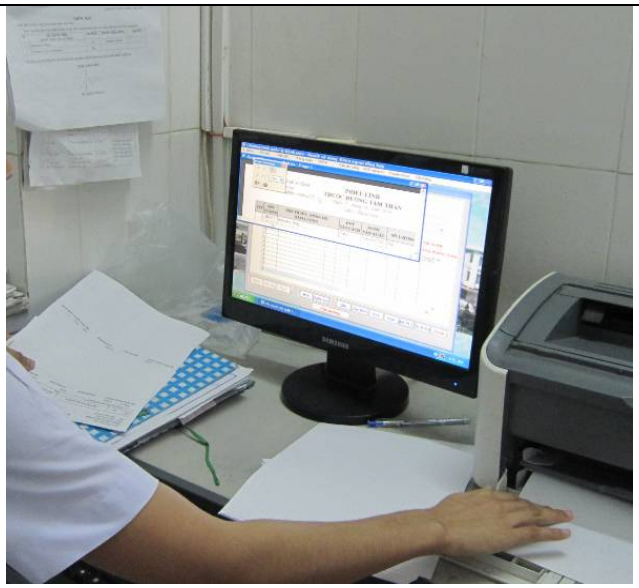
[PH]

- For maintaining and scaling up model medical services, PHs should be more pro-active in having the detailed action-plan and in securing human resource (doctors and nurses) and budget for training. In term of institutional aspect, training department should be established for better management and coordination of training.

Lessons learned for JICA

- Traditionally, doctors tend to be provided with more opportunities to attend training than other health workers (nurses, midwives, technicians) in Vietnam, but the equal opportunities were provided by the project. In order to provide model medical services[6] such as those introduced by this project, future projects in human resources development in health sector should create an equal opportunity for all medical staffs, especially for nurses, midwives, medical technicians.
- Activities promoting good model medical services complying with MOH policies (Circulars, Decisions and so on) can be more easily implemented and sustainable than the services which just copy from the Japanese settings.

Staff at Hue Central Hospital is washing hands to avoid nosocomial infection



Staff at Quang Tri Hospital is entering data to the patient information system.

[6] For the definition of the model medical services, refer the footnote number 2 on page 1.

Internal Ex-Post Evaluation for Technical Cooperation Project

conducted by Vietnam office:March,2014

Country Name	Project for Strengthening Capacity for Measles Vaccine Production
Socialist Republic of Vietnam	

I. Project Outline

Background	Prior to the Project, morbidity and mortality rate of measles was high in Vietnam, especially for children. The Vietnamese government started provision of two doses of measles vaccine per child following the strategy of WHO. Accordingly, the domestic demand for the vaccine was expected to increase. On the other hand, international vaccine manufacturers had tended to shift from low-profit measles vaccine production to more profitable vaccines production, so there was a concern about a stable supply of imported measles vaccines at a reasonable price in Vietnam. Under these circumstances, domestic production of measles vaccine to secure stable supply was an important issue for reducing prospective financial burden of the Ministry of Health. In order to cope with the above issues, "the Project for the Construction of the Facilities for Measles Vaccine Production (2003-2006)" was implemented under Japanese grant aid to construct measles vaccine production facility as a part of Center for Research and Production of Vaccines and Biologicals (POLYVAC). Since POLYVAC did not have experience in measles vaccines production, capacity development of POLYVAC was also necessary.		
Objectives of the Project	1. Overall Goal: Measles Infection Rate in the Socialist Republic of Vietnam will be decreased from the level of 2005. 2. Project Purpose: Center for Research and Production of Vaccines and Biologicals (POLYVAC) will be capable to produce necessary amount of measles vaccines for use of measles control activities in the Socialist Republic of Vietnam complying with Vietnam-GMP (Note 1) which complies with WHO-GMP standard. 3. Assumed steps for achieving the project goals: The project implements technical training and establishes quality management system for measles vaccines production complying with WHO standard. Through these activities, the project improves the capacity of POLYVAC to produce necessary amount of measles vaccine in Vietnam complying with WHO-GMP standard. As POLYVAC's measles vaccine becomes widely utilized for measles control activities in Vietnam, the domestic supply of measles vaccine will be increased. As a result, immunization rate of measles vaccine in Vietnam will be increased, and ultimately, measles infection rate in Vietnam will be decreased from the level of 2005. (Note 1) GMP: Good Manufacturing Practice: a system that those who are engaged in pharmaceutical and biotech production must follow to ensure that products are consistently produced and controlled according to quality standards appropriate to their intended use and as required by the product specification.		
Activities of the project	1. Project site: Hanoi 2. Main activities Technical transfer of mass production of the measles vaccine to POLYVAC staff, establishment of Performance Qualification (PQ) and Process Validation (PV) systems complying with Vietnam-GMP which has met WHO-GMP standard, and preparation of various GMP related documents. 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 38 persons for Short term 2) Trainees received: 12 persons 3) Equipment: Calibration and validation equipment Vietnamese Side 1) Staff allocated: 68 persons 2) Land and facilities: Measles vaccine production facility, project office 3) Others: Cost for low materials, salaries to counterpart personnel, energy bill, facility maintenance cost, etc.		
Project Period	March 24, 2006 – March 23, 2010	Project Cost	485 million yen
Implementing Agency	Center for Research and Production of Vaccines and Biologicals (POLYVAC)		
Cooperation Agency in Japan	The Kitasato Institute, Research Center for Biologicals		
Related Projects	Japanese cooperation: • Project for the Construction of the Facilities for Measles Vaccine Production (Grant aid, 2003-2006) • Follow-up cooperation on the Project for Construction of the Facilities for Measles Vaccine Production (Technical cooperation, January 2011-August 2011) • The Project for Strengthening Capacity for Measles – Rubella Combined Vaccine Production in the Socialist Republic of Vietnam (Phase II) (Technical Cooperation, 2013-2018) Other donors' cooperation: • Assistance for measles vaccine immunization (GAVI, UNICEF, WHO etc,)		

II. Result of the Evaluation[1]

1 Relevance

This project has been highly relevant with Vietnamese development policy ("decrease of infant mortality rate and control of infection diseases by vaccine immunization" in the Strategy for Public Health Care and Protection 2001-2010 and the Health Vietnamese Long-term Healthcare Policy 2010-2020), development needs ("establishment of domestic production system for measles vaccine complying with WHO-GMP standard"), as well as Japan's ODA policy for Vietnam with the priority area of improvement of lifestyle and social aspects including health and medical care, at the time of both ex-ante evaluation and project completion. Therefore, relevance of this project is high.

2 Effectiveness/Impact

This project focuses on establishment of domestic production system for measles vaccines complying with WHO-GMP standard at POLYVAC. POLYVAC was equipped to produce measles vaccines at a rate of 300,000 doses x 2.5 batch annually (i.e.7.5 million doses/year) by the Project. In 2009, POLYVAC achieved a production rate of 5 contiguous batches (1.5 million doses) in 2 months. It indicates that POLYVAC has acquired the production capability of more than 8 million doses annually. As requested by the Ministry of Health who purchases the POLYVAC vaccines, POLYVAC duly produced 2.4 million doses of measles vaccines in 2010.

Due to the recent increase of rubella infection in Vietnam, MOH decided to replace the second dose of measles vaccine by measles and rubella vaccines (MR vaccines) in and after 2018. Under this circumstance, MOH also decided to expand the POLYVAC's capacity to produce MR vaccine by utilizing technology transferred by the Project. In accordance with the request from MOH, JICA launched a new project for technology transfer of MR vaccines production in 2013. In addition, POLYVAC successfully obtained clearance on the production and quality management of measles vaccines complying with WHO-GMP standard from the National Regulatory Authority (NRA) and a license was granted in December 2009. As a result, two indicators were fulfilled and the project purpose is deemed to be achieved.

As for overall goal[2] which was redefined as "domestic supply of measles vaccine complying with WHO-GMP standard is improved in Vietnam", before the project implementation 100% of imported vaccines were utilized for EPI in Vietnam. However, MOH started to utilize domestic measles vaccines produced by POLYVAC for EPI in 2009 and the domestic supply ratio of measles vaccine has subsequently reached 100% in 2012. MOH estimates necessary measles vaccines as 3.2 million doses/year. The in-stock vaccine of 4.9 million of 2011 was used for 2012 and the vaccines purchases in 2012 have been used for 2013. According to the production plan of POLYVAC, they will maintain production of 2-2.5 million doses of measles vaccines per year until 2020 even after they start to produce MR vaccines in 2018 with the assistance of ongoing Phase II of this project (Note 1). Epidemiological information shows that surveillance was strengthened and more clinical measles cases were reported but virologically confirmed cases were decreased obviously so that the incidence of measles among children was lower in 2012 than 2005[3].Therefore, this project has achieved the project purpose and overall goal in terms of the indicators set in the project design matrix (PDMver2).

On the other hand, at the terminal evaluation, the evaluation team evaluated impact of the project based on "Probability of MV production covering domestic demand" and "Probability of MV export for neighboring countries via UN Agencies". (Joint Terminal Evaluation Report (13 Nov 2009) p19,) Then, this ex-post evaluation also examined those two indicators to measure achievement of the overall goal, and found that MV export for neighboring countries has not been realized because NRA's functions have not been accredited by WHO, which is a precondition to export measles vaccines produced by POLYVAC. Therefore, overall effectiveness/impact of the project is fair.

(Note 1) JICA's technical cooperation "the Project for Strengthening Capacity for Measles – Rubella Combined Vaccine Production in the Socialist Republic of Vietnam" (2013-2018).

Measles Vaccines Production in Vietnam (Unit: 1,000 doses)

	2009	2010	2011	2012
1) Measles vaccines production by POLYVAC	2,670	2,390	3,200	2,700
2) Purchased amount of POLYVAC measles vaccines by MOH	1,300	2,000	3,200	2,700
3) Imported vaccines supplied by GAVI (Note 2)	1,740	1,580	1,700	0
4) Imported vaccines supplied by UNICEF/ WHO (Note 3)	0	8,100	0	0
5) Total (=2+3+4)	3,040	11,680	4,900	2,700
6) Ratio of POLYVAC vaccines against the total supply in Vietnam (=2/6)	43%	17%	65%	100%

(Note 2): GAVI: Global Alliance for Vaccines and Immunization.

(Note 3):To respond to outbreak of measles in 2009, UNICEF/WHO had supplied measles vaccines in 2010.

Achievement of project purpose and overall goal

Aim	Indicators	Results
(Project Purpose) POLYVAC will be capable to	Measles vaccines are produced in POLYVAC at a rate of 0. 3 million	(Project Completion) POLYVAC is able to produce measles vaccines at a rate of 7.5 million doses/year, but only 2.39 million measles

[1] Constraint of Evaluation: Since there is a logical discrepancy between the project purpose and overall goal, the ex-post evaluation redefined the overall goal as "domestic supply of measles vaccine complying with WHO-GMP standard is improved in Vietnam" and its indicator was set as "domestic supply ratio of measles vaccine complying with WHO-GMP standard".

[3] Number of children reported as measles was 410 clinically but 175 was confirmed in laboratory among them in 2005. In 2012, children reported as measles clinically was 578 but only 6 cases among them were confirmed in laboratory. (Source: WHO/UNICEF Joint Report Form)

produce necessary amount of measles vaccines for use of measles control activities in Vietnam complying with Vietnam-GMP which has met WHO-GMP standard.	doses x 25 batch (i.e. 7,5 million doses)/year	vaccines were produced in 2010 according to the target set by MOH. (Ex-post Evaluation) POLVAC plans to produce 2.2 million measles vaccines in 2013 according to the target set by MOH.
	Clearance on the production and quality management by NRA which has met WHO-GMP	(Project completion) License was granted by NRA in December 2009. (Ex-post Evaluation) License is still effective until October 2014.
(Overall goal) Measles Infection Rate in Vietnam will be decreased from the level of 2005	Rate of children infected with measles in Vietnam	(2005) 0.48 (410/8,4948,000×100,000) (2012) 0.64 (578/90,796,000×100,000) * 410 and 578 are the numbers of children reported as measles clinically (Note 4)
	Number of children immunized with measles vaccine in Vietnam	Number of children immunized with measles vaccine in 2005 was 1,448,721 among target population (1,545,475), The immunization coverage was 95.2%. (Note 4) (Ex-post Evaluation) Number of children immunized with measles vaccine in 2012 was 1,711,096 among target population (1,775,756). The measles vaccine immunization coverage of children was 96.3% in 2012. (Note 4)

Source : Project Completion Report, Interviews with counterparts
(Note4): WHO/UNICEF Joint Report Form

3 Efficiency

Although the project was implemented within the planned period (ratio against the plan: 100%), the project cost exceeded the plan (ratio against the plan: 131%). This stems largely from a difficulty to estimate budget accurately at the stage of project design due to technical constraints. Through cooperative efforts between POLYVAC and the Project, the inputs were appropriate for producing the outputs of the project. Therefore, efficiency of this project is fair.

4 Sustainability

From the policy aspect, even after the Vietnamese Government introduces MR vaccine for EPI, both Measles and MR vaccine will be used for EPI. Therefore this project is still given importance in the current development policy of the Five-Year Plan for Health Sector (2011-2015), which prioritizes the promotion of the domestic production of EPI vaccines. Regarding the institutional aspect, POLYVAC has sufficient number of staff with 129 employees, of which one third of staff are categorized in level A4 who are able to work by themselves and can retrain others. Regarding the technical aspect, POLYVAC has been conducting training for staff to maintain and improve their knowledge and technical skills on routine measles vaccines production complying with GMP standards. Also GMP related documents including Standard Operating Procedure (SOP) have been properly utilized. POLYVAC currently has been receiving technical support to produce MR vaccines under Phase II of this project. Regarding the financial aspect, POLYVAC experienced a deficit in 2010 because sales of measles vaccines remained at 2 million doses, and the counterpart funds from the MOH were terminated along with the completion of this project. The actual production cost is estimated twice or more than the planned costs because the annual production quantity remains as little as two to three million doses per year. Importing many kinds of test reagents from Japan is another factor to push up the production costs. However, after 2011 POLYVAC recovered to produce a profit. In order to secure the stable profitability of POLYVAC, the annual production quantity must be increased. It is considered that POLYVAC can remain profitable as long as they maintain present production and their production is purchased by MOH as planned. Additionally, although POLYVAC is financially independent, POLYVAC is considered to be able to receive finance support from government in case of financial difficulty because POLYVAC is a MOH affiliated company. .

From these findings, sustainability of this project is high.

5 Summary of the Evaluation

The project has achieved the project purpose and overall goal. POLYVAC was able to produce measles vaccines at a rate of 7.5 million doses/year by the project. Although their actual production quantity remains less than half of its' target value after the project completion in 2010 because the annual production quantity depends on the demand of EPI. The project achieved a ratio of 100% of domestic supply of measles vaccine in 2012. POLYVAC successfully obtained clearance on the production and quality management of measles vaccines complying with WHO-GMP standard from NRA in 2009. Regarding sustainability, although profitability of POLYVAC is of a concern due to high production costs, it is considered that financial support from government is to be given when POLYVAC faces financial difficulty. Therefore, sustainability is high. As for efficiency, the project cost exceeded the plan due to increase in number of Japanese experts dispatched. In the light of above, this project is evaluated to be satisfactory.

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

- It is strongly suggested that POLYVAC continues staff training in order to strengthen and maintain the knowledge and skill regarding GMP standard.
- It is desirable if MOH could make more efforts to promote NRA to receive accreditation by WHO so that POLYVAC will be able to export its vaccines.

Lessons learned for JICA:

The production capacity was set at 7.5 million per year when designing the plant while the current domestic demand of measles vaccine is about 3-3.2 million x 1.5 times per year and the total quantity of domestic demands and export does not

reach 7.5 million. Thus, the manufacturing plant could not run as fully as designed, resulting in i) high unit cost and ii) high operation costs. Therefore, it is necessary to forecast the needs of vaccine carefully by taking into consideration of the changes of the demand and other factors before construction of a facility under Grant Aid. Additionally, the current technical cooperation project, which is planned to utilize the constructed facility, needs to review its production capacity to respond to changes periodically, so that project effectiveness and sustainability are ensured.

Staff members work in manufacturing process

Measles Vaccine produced by POLYVAC

conducted by China Office: Month, 201X

Country Name	The Project on Eco-environment Rehabilitation and Poverty Reduction in Yanmenguan Region, Shanxi Province
People's Republic of China	

I. Project Outline

Background	Yanmenguan Region, Shanxi Province, is located in the Loess Plateau in the Northern China. It is a region of arid sandy terrace where rain-fed farming is the major style of agriculture and poor population is concentrated. In lands where reclamation reached to mountain summits, soil eroded after every heavy rainfall in summer, and this reduced land productivity further accelerated poverty. In 2001, the Shanxi provincial government proposed the Yanmenguan Ecological Livestock Economic Zone Construction Plan with the goal of improving ecological environment and of farmers' livelihood. By mobilizing budget at the state, provincial and county levels, this plan intended to increase the share of livestock farming, protect soil surface through cultivation of perennial plants and promote grass-fed livestock farming. Nevertheless, this region lacked human resources capable of initiating and implementing the above-mentioned plan, as well as grass seeds, livestock, and initial investment cost for livestock-house construction, causing major delays on transition from agriculture to livestock farming.
Objectives of the Project	1. Overall Goal: To diffuse the model system created in the project, improve the ecological environment, and to improve livelihood of the farmers in the Yanmenguan Region. 2. Project Purpose: To construct a model system(Note) for improvement of both ecological environment and livelihood of farmers and to establish a system for diffusion in the Yanmenguan Region. (Note) The model system refers to a series of activities including participatory project planning, improvement of ecological environment and of livelihood mainly through transition of livestock farming from grazing to housing.
Activities of the project	1. Project site: Yanmenguan Region, Shanxi Province. The model counties and model villages: Youyu County, Shuozhou City (Xialiugou Village, Shuangkouzi Village, Dingjiayao Township) and Loufan County, Taiyuan City (Panjiazhuang Village, Yangquanzhuang Village, and Geduo Village) 2. Main activities: surveys, development of land utilization plans, selection of model villages, planning and implementation of pilot projects, technical instruction at county and village levels, development of diffusion plans (plans to diffuse the outcomes of pilot projects) in the model counties and villages, etc. 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 6 persons 2) Trainees received: 25 persons 3) Equipment: office equipment, training equipment, inputs for pilot projects such as sheep and agricultural machinery, audio visual equipment to diffuse the pilot project outcomes, etc. Chinese Side 1. Staff allocated: 52 persons 2. Land and facilities: project offices and cost for utilities (province, two model counties) 3. Local cost: 6,560,000 yuan (approx. 79 million yen) for project implementation, pilot project implementation, etc.

Ex-Ante Evaluation	2006	Project Period	March 2007 to March 2011	Project Cost	392 million yen
Implementing Agency	The Shanxi Science and Technology Department and the governments of Youyu County and Loufan County.				
Cooperation Agency in Japan	Ministry of Agriculture and Fisheries/ The Japan International Research Center for Agricultural Sciences				

II. Result of the Evaluation[1]

1 Relevance

This project has been highly consistent with China's development policy "optimization of the industrial structure of agriculture, in particular, increase of proportion of house farming of livestock, acceleration of development of livestock farming, measures against soil erosion in the Loess Plateau area, and promotion of protection of ecological environment through recovery of vegetation" as set in the 11th 5-year Plan for National Economic and Social Development (2006–2010) and "protection of ecological environment and sustainable economic development through promotion of livestock farming" as set in the Yanmenguan Ecological Livestock Economic Zone Construction Plan (2001-2010), and development needs "protection of ecological environment and poverty reduction in Yanmenguan Region by promoting the Construction Plan (mentioned above)", at the time of both ex-ante and project completion. It is also consistent with Japan's ODA policy as set in the Country Assistance Policy for China (2001) at the time of ex-ante evaluation. Therefore, relevance of this project is high.

2 Effectiveness/Impact

This project envisaged i) to develop a model by conducting pilot projects at model villages and by instructing related techniques and ii) to develop documents for diffusing the model to other villages. The project promoted transition to cultivation of perennial plants, improvement of stock farming techniques and transition from grazing to house farming, so that the mitigation of degradation of ecological environment (such as soil erosion) and improvement of livelihood would be attained simultaneously.

As a result, pilot projects including pasture development and construction of facilities for livestock farming, etc. as well as technical training by the Chinese counterpart personnel were planned and implemented, and the planted grassland area and

[1] In this ex-post evaluation, evaluation judgment was made based on analysis of information collected from written questionnaires and interviews with concerned organizations by telephone or email. Observation at the project sites was not conducted.

per capita income from livestock farming increased as planned (see the table below). These results were put together and documented in training materials and "the diffusion manual", and thus became ready for diffusion. Therefore, it can be said that the project purpose "to construct a model system for improvement of both ecological environment and livelihood of farmers and to establish a system for diffusion" was achieved by the time of project completion.

After project completion, the training and technical advice given under the project have continued in the model villages. The pace of diffusion of house livestock farming and pasture cultivation is slow in some model villages due to constraints in securing budget for diffusion; nevertheless, such methods have been utilized to a certain extent in the six model villages as a whole[2]. As for the overall goal (adoption of the model in other villages), the implementing agency has been engaged in diffusion of the model using the above-mentioned diffusion manual. By the time of ex-post evaluation, development plans similar to pilot projects have been implemented in 10 non-model villages. In three of them where data were available, planted grassland area and per capita income from livestock farming have increased.

Therefore, effectiveness/ impact of the project is high.

Achievement of project purpose and overall goal

<table>
<tr><th>Aim</th><th>Indicators</th><th>Results</th></tr>
<tr><td rowspan="4">(Project Purpose)
To construct a model system for improvement of both ecological environment and livelihood of farmers and to establish a system for diffusion in the Yanmenguan Region</td><td>1. Based on the village development plan, indicators of improvement of ecological environments and of residents' livelihood in the model villages are simultaneously achieved.
(1-1) Planted grassland areas increase by 50 % compared to the 2006 level.</td><td>(Project Completion) Increased by 53%.
(Ex-post Evaluation) Data that could be judged consistent with the data of project completion were not available.
Planted grassland area in 6 model villages (Unit: Mu=approx. 666.7m^2)
<table>
<tr><td></td><td>2006</td><td>2009</td></tr>
<tr><td>Total 6 villages</td><td>2,010</td><td>3,080</td></tr>
<tr><td>Increase rate from 2006</td><td>-</td><td>53%</td></tr>
</table></td></tr>
<tr><td>(1-2) Income from livestock farming per capita in model farmer increases by 50 %.</td><td>(Project Completion) Increased by 84% compared to the 2006 level..
(Ex-post Evaluation) Increasing after project completion as well.
Per capita income from livestock farming (Unit: yuan/farmer)
<table>
<tr><td></td><td>2006</td><td>2009</td><td>2010</td><td>2011</td><td>2012</td><td>2013</td></tr>
<tr><td>Average 6 villages</td><td>985</td><td>1,808</td><td>2,490</td><td>2,553</td><td>2,853</td><td>2,981</td></tr>
<tr><td>Increase rate from 2006</td><td>-</td><td>84%</td><td>153%</td><td>159%</td><td>190%</td><td>203%</td></tr>
</table></td></tr>
<tr><td>2. C/Ps acquire skills to diffuse the project outcome throughout the Yanmenguan Region through active implementation of project activities at the provincial, municipal, and county levels.
(2-1) At least one teaching material is produced for each project activity area.</td><td>(Project Completion) More than one teaching material in each subject, totaling 32 teaching materials were developed.
(Ex-post Evaluation) A CD-ROM of the teaching materials was produced.</td></tr>
<tr><td>(2-2) At least six training sessions targeting at the model villages and counties are held annually by the Chinese C/Ps.</td><td>(Project Completion) Total 47 training sessions were held in 4 years.
(Ex-post Evaluation) Technical training is continuing on a certain scale.
Number of participants in technical training started by this project (Unit: person)
<table>
<tr><td></td><td>2008</td><td>2009</td><td>2010</td><td>2011</td><td>2012</td><td>2013</td></tr>
<tr><td>Total participants from Loufan County and Youyu County</td><td>89</td><td>260</td><td>384</td><td>162</td><td>164</td><td>162</td></tr>
</table></td></tr>
<tr><td>3. To set up roles of each related agency for diffusion, which is done by the Diffusion Office composed mainly of Ministry of Science and Technology, Shanxi Province.</td><td>(Project Completion) "The diffusion manual" (diffusion plan) with description of roles in diffusion of project outcomes was developed.
(Ex-post Evaluation) "The diffusion manual" is used by the provincial Science and Technology Department and other concerned parties.</td></tr>
<tr><td rowspan="3">(Overall goal)
To diffuse the model system created in the project, improve the ecological environment, and to improve livelihood of the farmers in the Yanmenguan Region</td><td>1. To implement a case referring to this project in county(s) and/or village(s) of the Yanmenguan Region.</td><td>(Ex-post Evaluation) Diffusion is being carried out in the following 10 villages. Non-model villages in the model counties: Dashengtang Village (Loufan County), Jinniuzhuang Village, Qianyingwoshan Village and Baitangzi Village (Youyu County). Villages in other cities or counties: Yaozhuang Village (Nanjiang District, Datong City), Naomuyu Village (Lan County, Lüliang City), Xiasanjiao Village (Lishi District), Baijiashan Village (Fangshan County), Housuo Village (Shanyin County, Shuozhou City), Shuocheng District (Shuozhou City). An average of 15 households per village are participates in the diffused activities in such fields as pasture, house livestock farming, pastoral farming (new breed of livestock), and development of facilities/equipment and technical guidance related to those activities. The diffusion is carried out by the International Cooperation Office, Shanxi Science and Technology Department, The Shanxi Science and Technology International Project Office , Shanxi Academy of Forestry Sciences, Institute of Animal Science of Shanxi Academy of Agricultural Sciences, etc.</td></tr>
<tr><td>2. Income from livestock farming per capita increases by 50 % in three years in villages in Yanmenguan Region after incorporation of this project's model.</td><td>(Ex-post Evaluation) Increased by 101% in 3 years in the 3 villages in Youyu County (out of the above-mentioned 10 villages).
Per-capita income from livestock in 3 non-model villages (Unit: yuan/person)
<table>
<tr><td></td><td>2010</td><td>2011</td><td>2012</td><td>2013</td><td>Growth rate 2010-13</td></tr>
<tr><td>Average of Jinniuzhuang, Qianying-woshan and Baitangzi Villages</td><td>1,430</td><td>2,470</td><td>2,686</td><td>2,870</td><td>101%</td></tr>
</table></td></tr>
<tr><td>3. The area of planted grassland increases by 10 % in three years in</td><td>(Ex-post Evaluation) Increased by 30% in 2 years. If assuming the same growth rate in one more year, the 3-year growth rate is estimated to be 49%.</td></tr>
</table>

[2] During the period from project completion and ex-post evaluation, the number of households that practice house livestock farming increased in four out of the six model villages. Also, the farmland and facilities such as livestock houses, silos, water supply facilities, etc. have been maintained and used by the time of ex-post evaluation except part of grass farm, commercial forest and shrub land. For those activities that did not continue at the time of ex-post evaluation, it can be said that they played their roles during the development of the model by verifying its applicability under various conditions.

	villages in Yanmenguan Region that incorporated this project's model.	Planted grassland area in 3 non-model villages (Unit: Mu)

	2011	2012	2013	Growth rate 2011-13
Average of Jinniuzhuang, Qianyingwoshan and Baitangzi Villages	623	703	813	30%

Sources: JICA internal documents and interviews with the counterpart.
Note: Due to time constraints, data for the overall goal indicators 2 and 3 were available only from the mentioned three villages.

3 Efficiency

While the project period was as planned, the project cost was slightly higher than the plan (ratio against the plan: 103%). Therefore, efficiency of the project is fair.

4 Sustainability

In the policy aspect, this project is still given importance in the current development policy as the government of China holds a policy issue "the construction of ecological civilization" and gives ecological protection the highest policy priority, and the government of Shanxi Province promotes policies corresponding to those issues[3]. In the institutional aspect, the diffusion activity has been carried out by the Shanxi Science and Technology Department, the implementing agency, in collaboration with related departments. There are future prospects as well: after the model was developed, the institutional setting has been further improved in such a way to involve city-level officials who are closer to the field. In the technical aspect, the core members of ex-counterpart personnel are still working on the diffusion activity. In case of transfer of those members, the work is taken over by their replacement. Also, the teaching materials of the training that the project started were processed into a CD-ROM, and on-site instruction and technical guidance play a role to complement the training. In the financial aspect, enough amount was secured from the provincial-level budget, which promoted the diffusion activity in 2011-2013. As for the city and county level budget, while it is noteworthy that more than 1 million yuan was secured for the concerned activity, further diffusion of the project outcomes would require balanced securement of budget between the provincial level and city/county level[4].

From these findings, it is considered that the project has no problem in the policy background as well as the institutional, technical and financial aspects of the implementing agency; therefore, sustainability of effects of the project is high.

5 Summary of the Evaluation

For the project purpose of developing a model of improvement of ecological environment and farmers' livelihood as well as the system to diffuse that model, this project produced successful results in pilot projects to increase both planted grassland area and livestock income through pasture cultivation, development of livestock facilities, etc. in the model villages, and such results were compiled to "the diffusion manual". For the overall goal, use of the model was diffused to other villages in the Yanmenguan Region through diffusion activities and training/ technical guidance using the manual, and it contributed to increase in planted grassland area and livestock income. As for sustainability, no problem was observed in the policy background of this project as well as the institutional set-up and technical aspect for diffusion of the model. While there is a room for improvement in balancing financial burden between the province and cities/counties, the necessary budget for the diffusion work has been secured.

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

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

It is highly evaluated that the outputs of the project have been properly utilized and brought effect. While a good amount of budget is allocated at the provincial level, the county level budget is relatively in shortage. As the core responsibility in future diffusion work is likely to be shifted to the county level, a combined measure of human resource development and budget allocation for diffusion at the county level would further consolidate the diffusion system.

Lessons learned for JICA

This project addressed protection of ecological environment and livelihood improvement, the two issues administered by different departments, in a setting that the Shanxi Science and Technology Department took the overall responsibility, and the project office set up within the Department organized coordination meetings with departments involved in implementation of pilot projects as well as other occasional meetings on important issues. For diffusion of the model at the time of ex-post evaluation, the Shanxi Science and Technology Department has taken the central responsibility and carried out diffusion activity in collaboration with the agricultural and forestry departments. The project produced the good outcomes partly because the counterpart personnel well recognized the importance of collaboration and coordination at the working level, and incorporated this recognition in project implementation such as mobilizing the coordination unit. Therefore, in a project that needs to address issues under the jurisdiction of more than two organizations, it is effective to introduce, during project implementation, a coordination mechanism among the related organizations with clear description of division of roles each organization should take.

[3] In 2012, along with "the construction of ecological civilization", the government of Shanxi Province developed plans to restore vegetation in a vulnerable ecological areas of the Lüliang Mountains and to promote livestock farming in the whole Shanxi Province.

[4] In 2011-2013, the Shanxi Science and Technology Department secured a total of 5.4 million yuan (around 90 million Japanese yen by the exchange rate of August 2014) for diffusion of the project outcomes. Together with the county-level budget that amounted to more than 1 million yuan (around 17 million Japanese yen), a total of more than 6.4 million yuan (around 100 million Japanese yen) of budget was secured.

 Diffusion training (lecture)	 Diffusion training (field visit)

conducted by China Office: September, 2014

Country Name	Project on Scientific and Technological Capacity Building for Work Safety in China
People's Republic of China	

I. Project Outline

Background	In China, the progress of industrialization and urbanization due to economic development accompanied an increasing occurrence of accidents. In particular, the number of deaths resulting from accidents at mining and manufacturing companies was at a high level such as 16,000 in 2004. Regarding work-related illness, it was said that more than 25 million workers were working at places exposed to dust, hazardous substance, noise, etc., and the accumulated number of patients with pneumoconiosis amounted to nearly 600,000 persons by the end of 2002. The Chinese Government upheld objectives such as technological development, strengthening of corporate work safety and improvement of safe production level, and in 2001 it established the State Administration of Work Safety (SAWS). Also, the China Academy of Safety Science and Technology (CASST), which had belonged to the China International Economic and Trade Arbitration Commission, was incorporated under SAWS as a subordinate body in charge of research, and laws and regulations related to the Work Safety Law (in force since 2002) were developed. Nevertheless, occurrence of accidents continued at a high level and was not effectively controlled since (1) the system of control and supervision by the authorities was not sufficient, (2) the work safety administration itself was weak or insufficient as it was in transition and under development, and (3) companies were conscious of production but not so of engagement in work safety, and therefore personnel in charge of work safety were not secured or developed.
Objectives of the Project	1. Overall Goal: Through expansion of the results of the project, science and technology capacity on work safety is enhanced and work safety is further improved in China. 2. Project Purpose: 1) The followings are realized through reinforcement of CASST's science and technology capacity on work safety: ・Research results are effectively utilized in development of laws and regulations in the three priority areas (hazardous materials, mechanical danger and occupational health). ・Measurement of working environment and mask testing are conducted. ・Corporate in-house training is promoted and instructors of such training is developed. 2) Improvement of work safety is promoted in Benxi City and Ningbo City, the two model cities.
Activities of the project	1. Project site: Beijing Municipality and the two model cities (Benxi City of Liaoning Province and Ningbo City of Zhejiang Province). 2. Main activities: Study groups, development of reports including policy recommendations, seminars, Zero Disaster campaign at model companies, guidance on setting-up and operation of the mask testing laboratory, technical transfer on measurement of working environment, development of curriculum and instructors for corporate in-service training, etc. 3. Japanese Side 1) Experts: 33 persons 2) Trainees received: 68 persons 3) Equipment: Vehicles, equipment for working environment measurement and mask testing, etc. Chinese Side 1. Staff allocated: 74 persons 2. Land and facilities: Office for experts, mask testing laboratory. etc. 3. Local cost: 9 million yuan

Ex-Ante Evaluation	2006	Project Period	October 2006 to October 2010	Project Cost	529 million yen
Implementing Agency	State Administration of Work Safety (SAWS)				
Cooperation Agency in Japan	Ministry of Welfare and Labor Establishment and Japan Industrial Safety and Health Association				

II. Result of the Evaluation[1]

1 Relevance

This project has been highly consistent with China's (1) development policy "improvement of safe production level" as set in the 10th and 11th 5-year Plans for National Economic and Social Development (2001-2005 and 2006–2010, respectively) and the 11th 5-year Plan for Work Safety (2006-2010), and (2) development needs "improvement of science and technology capacity on work safety", "development of a model of work safety administration for companies", "development of human resources in charge of work safety in the administration and corporate sides", and in particular "early resolution of those issues in heavy industry bases in the northeastern region (e.g. Benxi City) and in advanced industry bases in the coastal urban region due to introduction of the market economy (e.g. Liaoning City), at the time of both ex-ante and project completion. It is also consistent with Japan's ODA policy as set in the Country Assistance Policy for China (2001) and the JICA Country Program (2002) at the time of ex-ante evaluation. Therefore, relevance of this project is high.

[1] In this ex-post evaluation, evaluation judgment was made based on analysis of information collected from written questionnaires and interviews with concerned organizations by telephone or email. Observation at the project sites was not conducted.

2 Effectiveness/Impact

Kick-off ceremony of Zero Disaster campaign at a petroleum company in Guangdong Province (2013)

This project aimed at, as Project Purpose 1, capacity enhancement of CASST as a central research institution (in research and recommendations, protective equipment testing and development of instructors of corporate in-service training), and as Project Purpose 2, development of a work safety model involved by local administrations of work safety (AWS) and companies (for prevention of occupational accidents through activities such as Zero Disaster campaign). As the overall goal, it was aimed to decrease occupational accidents across the country by continuation of activities of CASST and dissemination of the model.

A CASST staff member testing a mask using the provided mask testing equipment (2014)

It can be said that the both project purposes were achieved by the time of project completion. For Project Purpose 1, research reports developed under this project were referred to for revision or legislation of laws and regulations related to the three priority areas (hazardous materials, mechanical danger and occupational health). Also, recommendations made in the studies were adopted in such draft revisions or legislation. Testing of protective equipment focused on mask testing, which began at the laboratory set up in CASST. Measurement of working environment was also established as a duty of CASST. Further, curriculum of CASST's trainers' training for corporate in-service training on work safety was developed, and trainers were developed. As for Project Purpose 2, a Zero Disaster corporation association was established in each model city of Benxi and Ningbo with supervision and guidance of the city AWS. Member companies of the associations began work safety measures such as Zero Disaster campaign and joint patrols, which promoted prevention of accidents at workplaces.

After project completion, the above-mentioned effects have continued. Regarding Project Purpose 1, according to CASST, the research reports developed under the project are still utilized by relevant organizations as reference documents when they are engaged in revision of related laws and in addressing new challenges. Research on the three priority areas is continuing, too. Mask testing by CASST in terms of the number of times of the mask testing laboratory increased every year, and at the time of ex-post evaluation, the laboratory is used almost every day. The equipment for simple measurement of work environment is used as well in CASST's regular activities[2]. Besides, approx. 500 instructors for corporate in-service training were developed through trainers' training conducted four times after project completion. As for Project Purpose 2, the Zero Disaster corporation associations are continuing in both Benxi and Ningbo, and the one in Ningbo has around 10,000 members. AWS of both cities are committed to pursuing Zero Disaster by conducting work environment measurement and promoting the activities of the Zero Disaster corporation associations. It is reported that the number of accidents decreased after the launch of the Zero Disaster campaign in individual companies. At model companies in Benxi in particular, serious injury or heavier accidents have never occurred and minor injury accidents significantly decreased since they started the Zero Disaster campaign.

As to Overall Goal (improvement of work safety through dissemination of the project results), the laws and regulations addressing the three priority issues are enforced. Also, according to CASST, it is making use of its skills of mask testing to cooperate with SAWS and the LA Mark Center of Personal Protective Equipment[3] in supervision and regulation of production and use of masks, thereby contributing to improvement of the quality of masks and broadening of use of them in the entire country[4]. Further, CASST promoted Zero Disaster campaign in other cities of China: according to CASST, occupational accidents show a decreasing trend in those cities. In this way, it can be said that the project results were disseminated to areas other than the model cities. However, data on the number of occurrence of occupational accidents were not available except the ones in the two model cities, where a decreasing trend was observed.

Therefore, effectiveness/ impact of the project is fair.

Achievement of project purpose and overall goal

Aim	Indicators	Results
(Project Purpose 1) The followings are realized through reinforcement of CASST's science and technology capacity on work safety: ・Research results are	1. Number of cases where research results were used in development of laws and regulations related to the priority areas[5]	(Project Completion) Achieved. The contents of the research outputs (14 reports) developed under this project were utilized in policy planning and proposal of regulatory standards by SAWS, and recommendations were adopted in the Regulation on the Safety Management of Hazardous Chemicals among others. (Ex-post Evaluation) Continued. After project completion, CASST continued research on the three priority issues. Also, the research outputs continue to be referred in revision of the Work Safety Law and in other cases.

[2] Work environment measurement is an activity of specialized agencies called occupational health service agencies. Such agencies must be qualified by SAWS or local AWS, and CASST is one of them. Besides to CASST, this project provided handy measurement instruments and carried out technical transfer on use of such instruments to Benxi AWS and Ningbo AWS that were supervisory authorities so that they could accurately and rapidly grasp the situation of the sites under their patrol. At the time of ex-post evaluation, it was confirmed that both AWS were making use of the provided instruments for grasping the work environment.

[3] An agency under SAWS. It issues safety certificates (LA Mark) for production and sales of personal protective equipment such as protective masks and helmets that are used at work sites.

[4] A case was reported that mask testing detected problems of a product, and instructions were made for improvement of the manufacturing process of that product.

[5] Although the indicator set in the planning stage was "the number of cases", it was considered difficult to precisely count the number of cases where research results were not finally adopted in draft bills but were useful in the drafting process. Therefore, this ex-post evaluation followed the way the terminal evaluation took: this indicator could be judged as "achieved" if there are more than two cases of "use" of research results under this project.

<table>
<tr><td>effectively utilized in development of laws and regulations in the three priority areas (hazardous materials, mechanical danger and occupational health).
・Measurement of working environment and mask testing are conducted.
・Corporate in-house training is promoted and instructors of such training is developed.</td><td>2. Number of cases of work environment measurement and mask testing (more than twice)</td><td>(Project Completion) Achieved (see the table below).
(Ex-post Evaluation) Continued.
<table><tr><td></td><td>During project period (- Oct. 2010)</td><td>2011</td><td>2012</td><td>2013</td></tr><tr><td>No. of times of work environment measurement (CASST)</td><td>300 (cumulative)</td><td>Approx. 300</td><td>Approx. 300</td><td>Approx. 300</td></tr><tr><td>No. of times of mask testing (CASST)</td><td>160 (cumulative)</td><td>30</td><td>76</td><td>130</td></tr></table></td></tr>
<tr><td></td><td>3. Number of instructors developed</td><td>(Project Completion) Achieved. 160 instructors for corporate in-house training were developed.
(Ex-post Evaluation) Continued. Trainers' training for corporate in-house training was held four times after project completion. They were held in Hebei Province, Shanxi Province and Beijing Municipality. and a total of 523 persons attended.</td></tr>
<tr><td>(Project Purpose 2)
Improvement of work safety is promoted in Benxi City and Ningbo City, the two model areas.</td><td>4. Decrease in risk at workplaces of member companies of the Zero Disaster corporation associations in the model areas</td><td>(Project Completion) Achieved. Benxi: Zero Disaster campaign begun at 42 member companies of the Zero Disaster corporation association and in neighboring two areas, where not only personal accidents but also facility accidents by human error were prevented after that. Ningbo: the Zero Disaster campaign that had begun at some section of a large state-owned enterprise spread within the company. Since the campaign was started, serious injury was reduced to zero, and minor injury halved.
(Ex-post Evaluation) Continued. The work safety collaboration team (a corporate association aiming at work safety, to which the Zero Disaster corporation association was merged) in each model city has the following numbers of members: 35 persons from 28 companies in Benxi and approx. 10,000 persons in Ningbo. The model companies in Benxi maintained the zero accidents with serious injury or heavier damage and further reduced minor injury accidents.</td></tr>
<tr><td>(Overall goal)
Through expansion of the results of the project, science and technology capacity on work safety is enhanced and work safety is further improved in China.</td><td>1. Number of occurrence of and deaths from serious occupational accidents</td><td>(Ex-post Evaluation) The degree of achievement could not be verified. The nationwide data and data of the areas where the activities in the model cities spread were not available. The figures from Benxi and Ningbo show slightly-decreasing trends[6].

Number of occurrence of / number of deaths from serious occupational accidents in the industrial, mining and commercial sectors
<table><tr><td></td><td>2010</td><td>2011</td><td>2012</td><td>2013</td></tr><tr><td>Benxi</td><td>7 accidents/ 21 deaths</td><td>7 accidents/ 8 deaths</td><td>5 accidents/ 7 deaths</td><td>7 accidents/ 10 deaths</td></tr><tr><td>Ningbo</td><td>76 accidents/ 86 deaths</td><td>81 accidents/ 84 deaths</td><td>61 accidents/ 72 deaths</td><td>58 accidents/ 71 deaths</td></tr><tr><td>Total</td><td>83 accidents/ 107 deaths</td><td>88 accidents/ 92 deaths</td><td>66 accidents/ 79 deaths</td><td>65 accidents/ 81 deaths</td></tr></table></td></tr>
<tr><td></td><td>2. Companies' voluntary actions such as campaign and corporate association activities for Zero Disaster are spread.</td><td>(Ex-post Evaluation) Achieved. Zero Disaster campaign was carried out in Pingdingshan City (Henan Province), Guangzhou City (Guangdong Province), Tianjin Municipality and Liuzhou City (Guangxi Zhuang Autonomous Region).</td></tr>
</table>

Sources: Documents provided by JICA, CASST, Benxi AWS and Ningbo AWS.

3 Efficiency

While the project period was as planned, the project cost was higher than the plan (ratio against the plan: 136%) as the number of long-term and short-term experts were increased to cover necessary specialized areas. Therefore, efficiency of the project is fair.

4 Sustainability

In the policy aspect, this project is still given importance in the development policy as the bill to revise the Work Safety Law of the People's Republic of China (draft) being discussed at the National People's Congress at the time of ex-post evaluation stipulates that business operators must provide workers with work safety education and training. Also, the Guiding Principles on Strengthening Work Safety Training for Supervisors of Enterprises (Notice of the State Council, 2010) and the Notice of the State Council, No.40 (2011) call for implementation of work safety training for all supervisors and workers for the aim of enhancing safety consciousness and skills and promoting sustainable improvement of work safety conditions across the country. In the institutional aspect, the organizational framework of the implementing agency is established: since project completion, there have been no major changes in the framework for work safety, i.e., (i) SAWS assumes administrative control over work safety and occupational health as a central government agency directly subordinate to the State Council, (ii) CASST supports SAWS in research aspect, and (iii) each local AWS is responsible for supervision administration under the guidance of SAWS. Also, allocation of personnel to each organization is sufficient. At CASST, instructors for Zero Disaster campaign are secured, and trainers' training for instructors for corporate in-house training is being conducted with no major problem. In the technical aspect, counterpart personnel of SAWS, CASST and Benxi AWS at the time of project period are continuously in charge of work safety at the time of ex-post evaluation. Although counterpart personnel of Ningbo City at the time of project period were transferred, work-safety related tasks were handed over to the successors. According to CASST, it conducts research and in-house technical training. Operation manuals were developed for mask testing equipment and other laboratory

[6] The population is around 1,700,000 in Benxi City and around 7,600,000 in Ningbo City.

equipment. New employees are trained, too.

As for the financial aspect, while some budget data was not available since the amount was classified as internal information, CASST and Benxi AWS answered that sufficient budget for maintaining and disseminating the project results, which could be confirmed by the following points (no financial information was available from Ningbo AWS): first, SAWS conducted a national preliminary study for development of the above-mentioned Notice of the State Council (2010) and developed the guidelines using its own budget. Second, CASST conducts calibration and maintenance of the laboratory facilities and equipment as well as trainers' training for corporate in-house training (upon request from companies). Third, the budget of Benxi AWS for supervision administration on work safety increased from 3,480,000 yuan in 2011 to 7,990,000 yuan in 2013. Also, around 2-3 million yuan is expensed every year for testing and measurement and for joint patrols.

From these findings, it is considered that the project has no problem in the policy background as well as the institutional, technical and financial aspects of the implementing agency; therefore, sustainability of the project effects is high.

5 Summary of the Evaluation

For the project purposes of (1) capacity development of CASST and (2) development of a model of work safety involved by local AWS and companies, this project achieved (1) development of research reports and use of them for development of related laws and regulations, establishment of testing protective equipment (i.e. masks) and development of instructors for corporate in-house training, and (2) prevention of occupational accidents in the model cities of Benxi and Ningbo through actions by city AWS and companies such as Zero Disaster campaign. For the overall goal, it was confirmed that CASST continued such activities and the achievements in the model cities were spread to other cities. However, in terms of contribution to reduction of occupational accidents across the country, i.e., performance of the designated indicator, CASST suggested a decreasing trend in the above-mentioned cities, but that was not confirmed from statistical information. As for sustainability, no problem was observed in the policy background of this project as well as the institutional set-up and technical aspect for continuation of CASST's activities and dissemination of the project results. In the financial aspect as well, necessary budget is expensed according to the implementing agency.

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

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

While the relationship between SAWS and local AWS is established as mentioned above, it is desirable that SAWS continuously grasp situations of the model areas by means such as taking an opportunity of guidance to those areas, so that it could reflect the effects confirmed there in providing guidance to other areas.

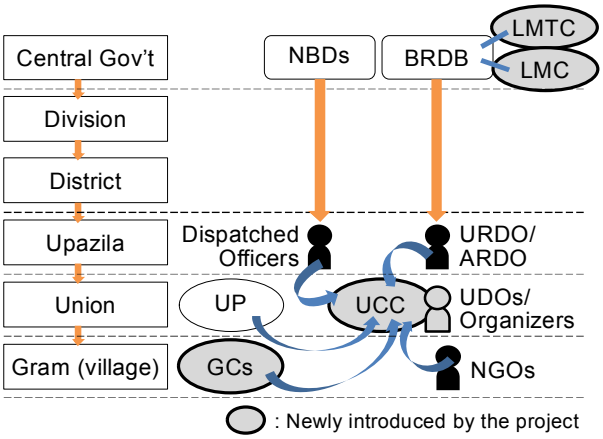
Internal Ex-Post Evaluation for Technical Cooperation Project

conducted by JICA Bangladesh Office: December, 2014

Country Name	Participatory Rural Development Project (Phase II)
People's Republic of Bangladesh	

I. Project Outline

Background	In the rural area of Bangladesh, where 80% of the poor live, vertically divided administrative services were not responding to the needs of the community people due to the lack of horizontal coordination among the related government agencies at the Upazila level and the lack of resources. To cope with these problems, activities to link the needs of people and the public services concerning rural development at the Union level were introduced in Participatory Rural Development Project (PRDP Phase I)[1]. These activities were functioned as expected in the pilot Unions and named as "Link Model". Then, the Phase II of the project was implemented to test the Link Model in more Unions in order to confirm the applicability of the Link Model to the whole country.
Objectives of the Project	1. Overall Goal: Link Model* is extended in Bangladesh in accordance with the regional characteristics. 2. Project Purpose: Link Model functions in the project area and the extending system of the Link Model is established. [* A framework to incorporate the needs of rural population in the process of rural development by linking villages and local government institutions concerning rural development.]
Activities of the project	1. Project site: 11 Unions of Kalihati Upazila in Tangail District, 2 Unions of Titash Upaliza in Comilla District, 2 Unions of Meherpur Sadar Upazila in Meherpur District 2. Main activities: (i) Training of Union Development Officers (UDOs) and Organizers, (ii) Establishment of the Union Coordination Committee (UCC) and training of stakeholders related to UCC, (iii) Organizing and training of Gram Committees (GCs) through planning and implementation of small-scale infrastructure projects, and (iv) Training of Link Model Cell (LMC) and stakeholders related to the Link Model. 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 16 persons 2) Trainees received: 112 persons 3) Equipment: Office equipment and others 4) Operational cost: 442 million yen Bangladeshi Side 1) Staff allocated: 26 persons 2) Land and facilities: Office space for the project headquarter, filed office and training center 3) Local cost: 51 million yen



Ex-Ante Evaluation	2004	Project Period	June 2005 to May 2010	Project Cost	522 million yen
Implementing Agency	Bangladesh Rural Development Board (BRDB)				
Cooperation Agency in Japan	Center for Southeast Asian Studies of Kyoto University, Institute of Developing Economies of Japan External Trade Organization, Shapla Neer.				

II. Result of the Evaluation

1 Relevance

This project has been highly relevant to Bangladesh's development policy of "rural development through linking villages and government institutions" at the time of both the ex-ante evaluation and project completion, as set in policy documents including the Interim Poverty Reduction Strategy Paper (2003-2006) and the National Strategy for Accelerated Poverty Reduction II (2009-2011). Also, it has been consistent with development needs for making administrative services reach to the villages by linking the district-administrative bodies and communities and conveying the villages' needs to the Union level. The project was relevant also to Japan's ODA policy at the time of ex-ante evaluation: Country Assistance Program (2000), in which "agricultural and rural development and improvement of agricultural productivity" is described as one of the four strategic priority areas.

Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project aimed to promote the function of the Link Model in the project area and strengthen the extending system of this model, through (i) capacity development of the stakeholders related to participatory rural development (GCs, Upazila Rural

[1] Administratively, Bangladesh has 7 Divisions, 64 districts, 489 Upazilas and 4,545 Unions. Local government institutions at the Upazila level are responsible for provision of public services to villages (grams) under Unions, but had the problems to deliver the services to villagers. In such circumstance, PRDP Phase I demonstrated that service coordination at the Union level enabled efficient service provisions for responding to the needs of villagers.

Development Officers (URDOs), Assistant Rural Development Officers (ARDOs), UCCs, chairperson of the Union Parishad (UP)[2], officers of the nation-building departments[3] (NBDs), and LMC), (ii) strengthening of the network of these stakeholders, and (iii) capacity development of LMC. As part of the capacity development, GCs planned and implemented community development projects (GC schemes) mainly with UCCs' coordination and UDOs' facilitation. The Overall Goal was set as extending the Link Model in the country by BRDB.

The Project Purpose was achieved by the time of project completion. More administrative bodies participated in UCC meetings than targeted, and villagers implemented a total of 687 GC schemes, such as construction of roads, boundary walls around the school, arsenic free tube wells, etc., under facilitation of UDOs[4]. And, the action plan for extension of the Link Model in the succeeding phase (2010-2014) was officially approved and conducted by the Bangladesh government right after the project completion (July 2010), which tried to extend the Link Model in 200 Unions nationwide.

Even since the project completion, UCC meetings have been conducted under UDO' facilitation, with frequent participation of UP chairpersons, NBD officers, GC members and NGOs, according to the field survey in all of the target 15 Unions of the three surveyed Upazilas. Also, GC meetings have been regularly held by 60-65% of GCs. As a result, more GC schemes has implemented than the project period in the three Upazilas (90 GC schemes in 2010, 118 in 2011, 151 in 2012 and 106 in 2013). Implemented GC schemes include construction of village roads, boundary walls around the school, sanitation facilities, village libraries, etc. Interviewed concerned officials responded that "villagers are feeling more secured than before in areas like health, education, environment, income generation and livelihood improvement."

Regarding the Overall Goal, LMC is still active in appointing UDOs, supporting UCCs' management, monitoring GC schemes through URDOs. And, the Link Model Training Center (LMTC) has been conducting various training courses for upgrading skills of UDOs, BRDB/LMC staffs, NBD officers, GC representatives, etc. These efforts have resulted in the expansion and continuity of the Link Model in more than 200 Unions by 2014 (in the succeeding phase), considering the regional characteristics or the development level of each region.

So as to other positive impacts, the following has been reported. First, the function and effectiveness of UCC, which was a component of the Link Model, were recognized by the government and was institutionalized as Union Development Coordination Committee (UDCC) under an initiative of the Local Government Division (LGD) of the Ministry of Local Government, Rural Development and Co-operatives (MOLGRD&C)[5]. UDCC meetings have been actively introduced into and utilized in the projects of other development partners such as the World Bank and Swiss Agency for Development and Corporation. Second, the project contributed to reinforcing transparency and accountability of public services as they are delivered efficiently and can be more need–based through the UCC meetings where the villagers, public representatives and public officials are sitting together.

There was no land acquisition and resettlement. No negative impact has been observed.

Therefore, effectiveness/ impact of the project is high.

Achievement of the Project Purpose and Overall Goal

<table>
<tr><th>Aim</th><th>Indicators</th><th>Results</th></tr>
<tr><td rowspan="3">(Project Purpose)
Link Model functions in the project area and the extending system of the Link Model is established.</td><td>1) Positive participation in Link Model activities by all parties (local government and people) concerned</td><td>(Project completion) Achieved.
- The "Link Model in the project area" was functioning. The linkage among the Union, NBDs, and GCs (villagers) was strengthened.

Average UCCM Attendance Rate (%)
<table>
<tr><th></th><th>Target</th><th>2005 - January 2010</th></tr>
<tr><td>UP</td><td>60</td><td>62</td></tr>
<tr><td>NBDs</td><td>60</td><td>55</td></tr>
<tr><td>GC</td><td>60</td><td>71</td></tr>
<tr><td>NGO</td><td>60</td><td>61</td></tr>
<tr><td>Total</td><td>60</td><td>n.a.</td></tr>
</table>
(Ex-post Evaluation) Continued.
- In Upazilas of Kalihati, Titash, and Meherpur Sadar, UP, NBDs, GSs and NGOs are participating in UCCM almost regularly.</td></tr>
<tr><td>2) Quality and number of the activities for village development implemented.</td><td>(Project Completion) Achieved in terms of quantity. The quality aspect was not verified.
- In Upazilas of Kalihati, Titash and Meherpur Sadar, a total of 687 GC schemes were completed by 2010.
(Ex-post evaluation) Effects continued.

Number of GC schemes implemented (including those implemented in the non-target Unions)
<table>
<tr><th>Upazila</th><th>2005-Dec. 2009</th><th>2010</th><th>2011</th><th>2012</th><th>2013</th></tr>
<tr><td>Kalihati</td><td>n.a.</td><td>63</td><td>85</td><td>94</td><td>59</td></tr>
<tr><td>Titash</td><td>n.a.</td><td>13</td><td>26</td><td>36</td><td>36</td></tr>
<tr><td>Meherpur Sadar</td><td>n.a.</td><td>14</td><td>7</td><td>21</td><td>11</td></tr>
<tr><td>Total</td><td>462</td><td>90</td><td>118</td><td>151</td><td>106</td></tr>
</table></td></tr>
<tr><td>3) Action plan for</td><td>(Project completion) Achieved.</td></tr>
</table>

[2] UP is a council at the Union level.
[3] NBDs are ministries which directly provide villagers with services such as agricultural extension, health, etc.
[4] The post of organizers was extinguished when the project was completed in 2010, so as to save the cost for the succeeding phase. The function has been performed by UDOs.
[5] At UDCC, UDOs have been co-opted as UDCC members to facilitate the Link Model implementation.

<table>
<tr><td></td><td>extension is formulated.</td><td>- The action plan for the succeeding phase (2010 -2014) involving expansion of the Link Model to 200 Unions nationwide was prepared by BRBD and approved officially by the Bangladesh government in July 2010.
(Ex-post evaluation) Effects continued.
- Based on the action plan, the Link Model has been applied in 200 Unions including the project target 15 Unions.</td></tr>
<tr><td rowspan="2">(Overall goal) Link Model is extended in Bangladesh in accordance with the regional characteristics.</td><td>1) Link Model Cell continues activities to promote Link Model.</td><td>(Ex-post evaluation) Achieved.
- The LMC appointed 84 UDOs in the succeeding phase (2010 -2014). LMC organized training, seminars and workshops involving UP chairman, UP and GC members to improve the management efficiency of UCCs.</td></tr>
<tr><td>2) The training center is actively utilized.</td><td>(Ex-post evaluation) Achieved.
- LMTC has provided various stakeholders with training courses and workshops.

Number of participants in the training courses
<table>
<tr><th>Participants</th><th>2011</th><th>2012</th><th>2013</th><th>2014</th></tr>
<tr><td>UDOs</td><td>106</td><td>197</td><td>71</td><td>26</td></tr>
<tr><td>BRDB staff (except LMC staff)</td><td>105</td><td>70</td><td>0</td><td>432</td></tr>
<tr><td>LMC staff</td><td>9</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>UP chairpersons</td><td>94</td><td>94</td><td>82</td><td>20</td></tr>
<tr><td>UP secretary</td><td>12</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>GC representatives</td><td>235</td><td>234</td><td>358</td><td>390</td></tr>
<tr><td>NBD officers</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>Others</td><td>47</td><td>20</td><td>31</td><td>0</td></tr>
</table></td></tr>
</table>

Source: Terminal Evaluation Report and Questionnaire survey with LMTC.

3 Efficiency

Both the project cost and the project period were within the plan (ratio against the plan: 92% and 100%, respectively).

Therefore, efficiency of the project is high.

4 Sustainability

In the policy aspect, the project is still given importance in the current development policy. The 6th Five-Year Plan (2011-2015) identified UP as the focal point of rural development, and focuses on community participation with involvement of the local government institutions and other stakeholders. After the project completion, BRDB implemented the Link Model in 200 Unions until July 2014. BRDB, in its board meeting in January 2012, decided to administer the Link Model as its regular program, which waits for the approval of MOLGRD&C. LMC submitted a proposal for the next phase (phase III) to cover the whole country (489 Upazilas under 64 districts), which, however, is still under consideration of MOLGRD&C at the time of the ex-post evaluation.

Institutionally, the organizational structure of BRDB, LMC/LMTC and field offices (at the Upazila and district levels) still remains the same as that of during the project period to sustain the project effects. BRDB is still mandated for accelerating rural development[6]. At Upazila levels, URDOs and ARDOs are monitoring the Link Model activities. However, LMC needs more personnel for monitoring activities to respond to the extended needs of the next phase.

Regarding the technical aspect, the existing staff has sufficient skills to manage and expand the Link Model, although the project counterpart personnel did not remain in LMC or LMTC anymore. As mentioned earlier, LMTC has given training courses related to the Link Model to UDOs, ARDOs, UPs, URODs, and GCs. They have been trained enough to be able to perform as trainers for the Link Model expansion. LMC uses its own training manuals which incorporated key elements of the Link Model, and LMTC uses the training guide developed by the project.

In the financial aspect, the budget has not been sufficient for sustaining the project effects in the 200 Unions. The budget and expenditure for 2014 is 1,300 million BDT, which much increased from 813 million BDT (expenditure) in 2010. For the phase III, a budget of 295,864 million BDT has been proposed, but its approval is not assured. With regard to the training, LMTC has increased its budget and expenditure (16 million BDT in 2011, 29 million in 2014), which has been sufficient.

From these findings, it is considered that the project has some problems in the policy, institutional and financial aspects of the implementing agency; therefore, sustainability of the project is fair.

5 Summary of the Evaluation

The project has achieved the Project Purpose and Overall Goal. As the Project Purpose, various government administrative bodies participated in UCC meetings, and villagers implemented a total of 687 GC schemes. And, the action plan for extending the Link Model was formulated by BRDB and implemented in 200 Unions. For the Overall Goal, LMC has performed its function for participatory rural development, by supporting UCCs' management and monitoring GC schemes through URDOs. Also, LMTC has been conducting various courses for upgrading skills of UDOs, BRDB/LMC staffs, NBD officers, GC representatives, etc. As for the project sustainability, there are some problems; the proposal for further extending the Link Model (phase III) is awaiting approval and needs a secured budget and personnel for monitoring..

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

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

For BRDB:

- To apply the Link Model nationwide, it is recommended to allocate necessary human resources with own financial resources,

[6] As well as BRDB, the Rural Development Cooperatives Division (RDCD) are mandated for accelerating rural development through cooperatives and various development projects. BRDB is an autonomous board under RDCD, MOLGRD&C. BRDB proposes activities and RDCD make a final decision on them.

especially UDOs. And, BRDB needs to collaborate with Upazila Parishad (a council at the Ulazila level) to make Link Model an institutionalized regular activity of Upazila Parishad.

Lessons learned for JICA:

- The linkage among the government administrative bodies, local government institutions and villagers can ensure efficient public service delivery by effectively utilizing existing resources in a transparent and accountable manner. In this project, the platform of UCC meetings has brought the public representatives, community and public officials together and enables efficient and effective coordination among them in order to improve delivery and quality of public services in rural areas, which contributed to the achievement of the project objectives. Other projects of a similar kind should carefully consider at the preparation stage that what kind of institutional arrangement would be the most effective to achieve rural development in accordance with the regional characteristics.

(Water irrigation constructed with GC scheme at Jiarkandi Union, Titash Upazila)

(NBD officer distributing an “agri-card” to villagers at Jiarkandi Union, Titash Upazila)

Internal Ex-Post Evaluation for Technical Cooperation Project

conducted by Sri Lanka Office: Month, 2014

Country Name	The Project on Rural Livelihood Improvement in Hambantota District (SouthCAP)
Democratic Socialist Republic of Sri Lanka	

I. Project Outline

Background	Hambantota District in the Southern Province with 430,000 populations was one of the poorest regions in Sri Lanka. Major source of income for the population was agriculture; however, agriculture was not satisfactorily contributing to local economy mainly due to small amount of rainfall. Also the issue of income generation in that region was thought to be attributed to lack of infrastructure; instability of market prices; unfair profit making activities of middlemen; and so forth. In order to promote livelihood improvement in such backward areas of the country, the Government of Sri Lanka developed and introduced a participatory rural development approach featuring Community Action Planning (CAP) (Note1) and Community Contract System (CCS) (Note2) since the 1980s. However, this approach had not been utilized in the Southern Province due to lack of Community Based Organizations (CBOs) and insufficient capacity of government officers. Note 1: Community Action Planning (CAP) is a locally initiated and directed planning process, through which community people are encouraged to identify problems, plan, and monitor and evaluate their own activities. CAP was firstly introduced by National Housing Development Authority (NHDA) in the 1980s. Note 2: Community Contract System (CCS) is a mechanism whereby grassroots communities undertake construction contracts from the government for the development of small-scale infrastructures of the communities. CCS was also initially introduced by Habitat Million Housing Project of UN as an effective alternative to non-efficient and unsatisfactory services of commercial contractors in small-scale infrastructure improvement projects in the 1980s. Note 3: Community Based Organization (CBO) means villagers organizations.
Objectives of the Project	1. Overall Goal: Income and livelihood of the people in areas within Hambantota and Southern Province will be improved by introducing the Community Approach Programme for participatory rural development, which is acknowledged by stakeholders through this Project. 2. Project Purpose: The existing system and structure for the participatory rural development will be functioning through effective use of institutions and practices (e.g. CAP and CCS), aiming at improving income and livelihood of the people in the Project area.
Activities of the project	1. Project site: 8 Grama Niladhari (GN) Divisions (villages), Hambantota District, Southern Province 2. Main activities: (i) Training to villagers and field level officials of related governmental organizations on how to prepare CAPs (ii) Establishment of the Divisional Coordination Committees (DCC), (iii) training to villagers and members of CBOs on construction and management of infrastructure works, and (iv) Provision of technical guidance to villagers on productive and reproductive activities. 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 10 persons in 7 fields 2) Trainees received: 16 persons 3) Equipment: Office equipment such as PC, printer, telephone and copy machine, generator, motor cycle, etc. Sri Lankan Side 1) Staff allocated: 7 persons plus 65 cooperating government staff members 2) Land and facilities: Land, building and facilities for project office, electricity, water, and telephone service

Ex-Ante Evaluation	2006	Project Period	March 2007 – March 2011	Project Cost	361 million yen
Implementing Agency	Ministry of Local Government and Provincial Councils (MoLGPC) Southern Provincial Council (SPC)				
Cooperation Agency in Japan	Nippon Koei Co., Ltd.				

II. Result of the Evaluation

1 Relevance

This project has been highly relevant with Sri Lankan development policy “rural development and poverty alleviation” as set in policy documents including, the Poverty Reduction Strategy Paper (PRSP) (2002), Economic Policy Framework established in 2004, and the 10 Years National Development Policy Framework “Mahinda Chintana” (2006-2016), and with development needs to promote livelihood improvement in the Southern Province through a participatory rural development approach at the time of both ex-ante and ex-post evaluation. It was also consistent with Japan’s Country Assistance Plan for Sri Lanka (2004) at the time of ex-ante evaluation. Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project’s overall goal was to improve income and livelihoods of the people in areas within Hambantota and Southern Province by introducing a participatory rural development approach, that is, CAP approach (Note 4). By enhancing capacity of villagers and members of CBOs as well as field level officials in the target 8 GN divisions (villages) in Hambantota District, the project aimed at development and implementation of the CAP approach in 8 GN divisions (Project purpose level). After the project completion, a dissemination of CAP approach to other GNs was expected as a result of continuation of rural

development activities in the project areas and the activities of DCC (Note 5) and the Project Implementation Committee (PIC) (Note 6) (or an organization that would succeed its function such as DCC) on disseminating the experience and know-how of the approach (Overall goal level).

The project purpose was achieved at the time of project completion. The coordination mechanisms were introduced by the project to promote CAP approach. At the village level, the village meetings were organized in most of the target villages in order to discuss any issues in the villages such as cultivation and water management. At the field level, the public extension officers were assigned to promote information sharing and coordination between the villages and local governments. At the local government level, DCC in the three target divisions was setup to promote CAP approach. Out of 387 activities suggested in the formulated CAPs in the target 8 GN divisions, 224 activities actually were implemented during the project. Although no quantitative data was available, the interview survey conducted by the ex-post evaluation indicates that majority of PIC and CBOs members recognized the usefulness of CAPs as comprehensive development plans. All target eight GN divisions received external supports from foreign donors and NGOs to implement individual projects.

Those project effects have been sustained after the project completion to some extent. The infrastructures constructed during the project period such as irrigation systems have been operated and maintained without major problems after the project completion and the villagers have experienced tangible benefits in terms of income, better cultivation methods, and water management. The activities for agricultural production and non-agricultural production such as marketing have been implemented in the target villages after the project completion though the volume of products and areas of marketing are still needed to be explored. The coordination mechanisms introduced by the project to promote CAP approach remain functional. The task of PIC has been transferred to DCC.

As for the overall goal, it was confirmed that at least 576 CAPs were formulated in Hambantota District with the CAP approach reinforced by the project which had shortened participatory planning process such as workshop, and at least 576 CCS projects were implemented. The reinforced CAP approach may have contributed to facilitating planning of CCS projects through encouraged villagers' participation. Regarding other indicators of the overall goal, (i) proportion of households whose income increased in GN divisions by formulating CAPs in Hambantota District and (ii) proportion of CCS projects formulated and implemented by utilizing formulated CAPs, they were not able to be confirmed due to lack of quantitative data caused by poor monitoring system of Hambantota District.

However, there was intensive and large scale of dissemination and promotion of CAP and CCS process in Hambantota District and the project contributed to expedite the above process to some extent. While no statistical data was available to confirm whether 25% of households ' income was increased in the target 8 GN divisions or not, based on the analysis of qualitative data, some of active and motivated households in the target villages increased their income through the production and sales of agricultural products such as mushroom and Palmyra basket products. According to the interview with the villagers of the target villages, the farmers are now able to save food for another season in case of drought because they could increase the agricultural production thanks to the improvement of small scale irrigation constructed by CCS projects. This helped the improvement of farmers' food security to some extent. Therefore, it can be assessed that a certain number of households either increased their income level or improved risk aversion capacity. There was no negative impact on natural environment. There was no land acquisition or involuntary resettlement

While a number of positive impacts by the project were confirmed by the qualitative information mentioned above through the ex-post evaluation survey, the quantitative data to verify the indicators defined in PDM were not available. It is suggested that the project design including setting of indicators to verify achievement of the Project Purpose and the Overall Goal was not appropriate. Thus, it was difficult to firmly confirm the contribution of the project to the Project Purpose and the Overall Goal at the time of the ex-post evaluation. Therefore, effectiveness/ impact of the project is fair.

(Note 4) "CAP Approach" is defined as the participatory process of planning and management of rural development, utilizing methods of CAP as planning and management tool and CCS as a means to implement small-scale infrastructure project. While CAP already existed in Sri Lanka (not newly introduced concept by the project), the project strengthened this approach especially from perspectives of; (i) Community empowerment; (ii) Capacity building of government institutions; and (iii) Comprehensive approach aiming for livelihood improvement through combination of various activities such as small-scale infrastructure improvement, strengthening O&M system of infrastructure, improvement of agricultural productivity, improvement of household financial management, and improvement of household activities (e.g. rehabilitation/renewal of house).

(Note 5) In the project, Divisional Coordination Committees (DCC) were established in each level for coordination and information sharing among stakeholders: (i) JCC (Joint Coordination Committee) in central level, (ii) RCC (Regional Coordination Committee) in provincial and district level, and (iii) PIC (Project Implementation Committee) in divisional and village level.

(Note 6) PIC was newly established by the project in order to promote the information sharing and coordination regarding introducing CAP approach in a cross-sectoral manner between district, division and GN divisions.

Achievement of project purpose and overall goal

Aim	Indicators	Results
(Project purpose) The existing system and structure for the participatory rural development will be functioning through effective use of institutions and practices, aiming at improving income and	(Indicator1) More than 50% of the suggested activities in the formulated CAPs are implemented by the project or other development agencies (GOs and NGOs).	(Project Completion) Achieved. ・More than 50% of the suggested activities were implemented (224 implemented activities against 387 suggested activities). Data was collected at the time of the terminal evaluation. (Ex-post Evaluation) N.A. ・The data was not obtainable at the time of ex-post evaluation.
	(Indicator2) More than 50% of Project Implementation Committee (PIC) and CBOs members	(Project Completion) Achieved. ・Based on the analysis of qualitative data, this target was achieved to a large extent. Data was collected at the time of

livelihood of the people in the Project area.	recognize the usefulness of CAPs as comprehensive development plans.	the terminal evaluation. (Ex-post Evaluation) N.A. ・The data was not obtainable at the time of ex-post evaluation.
	(Indicator3) More than 5 target GN Divisions receive external supports to implement identified individual projects.	(Project Completion) Achieved. ・All target eight GN Divisions received external support. Data was collected at the time of the terminal evaluation. (Ex-post Evaluation) N.A. ・The data was not obtainable at the time of ex-post evaluation.
	(Indicator4) 25% of households' income is increased in target 8 GN divisions.	(Project Completion) N.A. ・No statistical data was available. (Ex-post Evaluation) N.A. ・No statistical data was available.
(Overall goal) Income and livelihood of the people in areas within Hambantota and Southern Province will be improved by introducing the CAP Approach Programme for participatory rural development, which is acknowledged by stakeholders through this Project.	(Indicator1) Proportion of households whose income increased in GN divisions by formulating CAPs in Hambantota District.	(Ex-post Evaluation) N.A. ・No information
	(Indicator2) Number of GN Division who formulated CAPs in Hambantota District.	(Ex-post Evaluation) Achieved ・All 576 GN divisions in Hambantota District formulated at least 576 CAPs.
	(Indicator 3) Proportion of CCS projects formulated and implemented from formulated CAPs.	(Ex-post Evaluation) N.A. ・At least 576 CCS projects were formulated and implemented from 576 CAPs in Hambantota District. However, due to lack of quantitative data, it was difficult to confirm the proportion of CCS projects formulated and implemented from formulated CAPs in Hambantota District.

Source：Terminal Evaluation Report, Questionnaire and interviews with counterparts.

3 Efficiency

Although the project period was within the plan (ratio against the plan: 100%), project cost slightly exceeded the plan (ratio against the plan: 103%) due to (i) increase in number of Japanese experts from planned 8 to 10 experts and (ii) additional purchase of extra office equipment such as bikes for monitoring activities, internet LAN and scanner. Therefore, efficiency of this project is fair.

4 Sustainability

In the policy aspect, CAP approach has been promoted in Sri Lanka for many decades as a means of rural development and it is supported by the newly introduced Jana Sabha Act 2013. For example, programmes like "Divi Neguma" (Livelihood uplifting), and "Eka Gamakata Eka Wadak" (One project for one village), etc. use the approach.

Institutionally, Hambantota District Secretariat is responsible for monitoring and there are three divisional secretariats (Hambantota Division, Sooriyawewa Division, Lunugamwehera Division) allocated. The sufficient number of officers is assigned for promoting and facilitating of CAP approach in Hambantota District.

In the technical aspect, field level officials in divisional and district levels have appropriate skills and knowledge to continue CAP approach and they disseminate their experience and know-how of CAP approach to their colleagues and other officials. The training programs are conducted at divisional and district levels. The CAP Handbook and the O&M manuals developed by the project have been utilized in Hambantota District.

As for the financial aspect, regarding the financial capacity of Hambantota District, the District has allocated the budget for promotion of CAP approach through the local approach such as "Gama Naguma".(village development) and "Maga Neguma" (road development) (Note 7). Although its budget amount is not enough to meet all the development needs in the district, budget constraints are common issues often seen in Sri Lanka and at least the budget is sufficiently allocated for continuing the CAP approach. The ex-post evaluation could not collect the financial information from the Southern Provincial Council.

From these findings, it is considered that there is a minor problem in the financial aspect, but this issue is not critical to hinder the sustainability of the project effects. Therefore, the sustainability of the project is high.

(Note 7) Gama Naguma and Maga Neguma are the grassroots economic development initiative by the Sri Lankan government to support the rural households and villages through agricultural development, small-scale infrastructure development, improvement of livelihood and environment, and capacity development of the rural people, etc.

5 Summary of the Evaluation

This project has achieved the project purpose and the achievement of the overall goal cannot be verified. The project successfully developed the CAPs in the target 8 GN divisions (villages) in Hambantota District, and more than 50% of the suggested activities in the CAPs were implemented by the project or other development agencies. Majority of PIC and CBOs members recognized the usefulness of CAPs as comprehensive development plans, and their functions have been continued after the project completion. As it was confirmed that all 576 GN divisions in Hambantota District formulated at least 576 CAPs, and at least 576 CCS projects were formulated and implemented from the above CAPs, there were intensive and large

scale of dissemination and promotion of CAP and CCS process in Hambantota District and the project contributed to expedite the above process to some extent. However, the project effects on increase of households' income in target 8 GN divisions and in GN divisions by formulating CAPs in Hambantota District could not be verified due to lack of information.

As for sustainability, the Jana Sabha Act has endorsed promotion of CAP approach as a means of rural development in Sri Lanka. The skills and knowledge for promoting CAP approach have been sustained in the field level officials in divisional and district levels with the sufficient assignment of staff. Moreover, programmes in the nature of "Gama Naguma" (village development), "Maga Naguma" (road development) initiated by the central government embedded the CAP philosophy. So far, sufficient budget have been allocated to continue the CAP approach.

Regarding efficiency, project cost slightly exceeded the plan due to increase in number of Japanese experts and additional purchase of extra office equipment.In the light of above, this project is evaluated to be satisfactory.

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

1) In order to ensure more stable funds for implementing CAP approach in Hambantota District, it is recommended that each GN Division should formulate CAP and CCS aligned with Gama Naguma and Maga Neguma programs since there are available fund for Gama Naguma and Maga Neguma programs in the central government.
2) Also there is a possibility of financial assistance from NGOs for rural development projects based on the CAP approach. It is also recommended that each GN Division, Hambantota District and Southern Province should have collaborations with NGOs in formation and implementation of CAP and CCS and obtain financial support from them in order to extend the activities to cover more development needs including health sector and others.

Lessons learned for JICA

1) The original CAP approach is recognized by the villagers and local authorities as one of the effective methods for identifying development needs and for prioritizing the implementing activities through participatory planning process. Since long hour workshops often discourage villagers to participate in the participatory planning process, the project modified the CAP approach to encourage and facilitate participation of villages through shorter planning process. The well-designed participatory process is a key for effective planning and prioritization of community development projects through facilitation of villagers' participation.
2) Several important factors for enhancing sustainability of the project are as follows. 1) The CAP approach is embedded within the policy framework of the government of Sri Lanka. The support of the state has not only resulted in the sustenance of the project but also in the dissemination of the approach in the Hambantota district as well as other parts of the country. 2) The approach has been adopted in Sri Lanka since the 1980s. The indigenous CAP approach that people of Sri Lanka are used to apply, have succeeded well in this project too. 3) People realize the tangible benefits accruing from the CAP approach, which gives them the impetus to sustain it. Therefore, these factors are considered as positive contributions to the project's sustainability based on the ex-post evaluation survey and possibly can be applied to other similar projects.
3) For the income and livelihood improvement activities, it can be said that identifying the active and motivated persons to the project was the key for sustainability of the project effects after the completion of the project. Particularly for the income generation activities, such as Palmyra basket making and mushroom production, marketing opportunity is also essential for the continuity of the project effects.
4) One of the major issues encountered in this ex-post evaluation was the non-availability/non-maintenance of quantitative data. Therefore, it is suggested that quantitative yardsticks to measure the achievement of the project must be established during the project formulation and the mechanism to record them must be embedded in the project implementation stage. Necessary formats, the frequency of data recording, the frequency of data collection, the flow of data collection, duration for which such data should be maintained etc. must be developed and prescribed at the time of project planning.

Elephant fence providing necessary protection against elephants encroaching the lands of villagers in Hambantota Division

Mushroom cultivation at a commercial scale in Sooriyawewa Division

Internal Ex-Post Evaluation for Technical Cooperation Project

conducted by Guatemala Office:December, 2014

Country Name	The Project for Capacity Development of the Tourism Self-Management Committee
Republic of Guatemala	

I. Project Outline

Background	Guatemala has abundant touristic resources such as nature, heritages and indigenous cultures. On the other hand, potential touristic resources, which are scattered in the country, had not be well used since most foreign tourists mainly visited famous touristic areas, including Tikal and Antigua designated as UNESCO World Heritage and picturesque sites such as Lake Atitlán. In addition, natural environment conservation for touristic resources had been an urgent issue to be addressed since deforestation in rural mountainous and intermountain areas had been deteriorated. Under those circumstances, the Government of Guatemala introduced the Local Committee of Tourism in 2000 and promoted decentralization of tourism administration. The Local Committee of Tourism was reorganized as the Tourism Self-Management Committee (CATs: Comité de Autogestión Turística) in 2004. JICA supported formulation of the National Tourism Master Plan through conducting the Development Study in 2002. In that context, the Government of Guatemala requested the Government of Japan to provide technical cooperation for institutional enhancement of CATs, establishment of networks among relevant organizations as well as sustainable tourism promotion utilizing local potentials.				
Objectives of the Project	1. Overall Goal: Sustainable tourism and conservation of natural and cultural tourism resources in the region are promoted, that contribute to the economic development and poverty reduction. 2. Project Purpose: The management capacity of the Tourism Self-Management Committee is strengthened and tourism based on the use of local resources in the areas of las Verapaces and Petén is offered.				
Activities of the project	1. Project site: Petén, Alta Verapaz and Baja Verapaz 2. Main activities: Formulation of Tourism Strategic Plans for CATs, establishment of collaborative support mechanism for micro touristic firms, development of manuals and teaching materials and delivery of trainings for touristic resource management, marketing and promotion, implementation of tourism promotion and events. 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 6 persons 2) Trainees received: 6 persons 3) Equipment: PC, printer, video camera, GIS software, and so on. 4) Third country training in Mexico: 39 persons Guatemalan Side 1. Staff allocated: 6 persons 2. Land and facilities: spaces for project office, cost for electricity and water 3. Cost for tourism promotion, events and seminars, and so on				
Ex-Ante Evaluation	2007	Project Period	September 2007 to September 2010	Project Cost	253 million yen
Implementing Agency	Guatemala Tourist Institution (INGUAT), Secretary of Planing and Programming of the Presidency (SEGEPLAN), Technical Institution for Training and Productivity (INTECAP), CATs in the target regions				
Cooperation Agency in Japan	Oriental Consultants Co., Ltd.				

II. Result of the Evaluation[1]

1 Relevance

This project has been highly relevant with Guatelmala's development policy "tourism promotion by public and private collaboration" under the National Tourism Strategy (2000), the Agricultural Development Plan (2004) and the Guatemala National Policy for Sustainable Tourism Development 2004-2014, and development needs for tourism development utilizing local resources at the both times of ex-ante evaluation and project completion. It is also consistent with priority on sustainable economic development specified by the policy dialogue between the government of Guatemala and the government of Japan at the time of ex-ante evaluation. Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project supported institutional capacity building of CATs, identification and promotion of touristic products and improvement of touristic infrastructure and services in the target areas of Petén, Alta Verapace and Baja Verapace. Through those activities, the project aimed at promotion of sustainable tourism development and natural and cultural resource conservation, thereby contributing to economic development and poverty reduction in the target areas.

The Project Purpose was achieved at the time of project completion. In terms of identification and promotion of touristic products as a part of the outputs, the maximum 10,000 copies of leaflets for touristic products of each CAT were sufficient to deliver to the tourists visiting the target areas. In addition, the number of touristic products in each municipality in the target areas increased from 66 items in 2008 to 146 items in June, 2010. Also, during the period from 2008 to 2010, the number of

[1] In March 2008, the Project Design Matrix (PDM) was revised to PDM Ver.2 since the number of verifiable indicators set in the original PDM was too much and most of them had limited availability of data.

tourism companies and employees increased in each municipality of the target areas. During the project implementation period, 4 CATs carried out 120 times of promotion activities in total. The number of CAT members increased from 144 persons in 2008 to 300 persons in 2010 while the number of business types of CAT member also increased from 73 types to 94 types for the same period. Also, the number of visitors in each touristic site of the target areas expanded. The driving force of the increase in the number of visitors was ensured year-round accessibility to touristic sites in the mountainous areas due to maintenance of the paved roads such as "the Road of Quetzal" and "Mundo Maya Corridor" in addition to the increase in total number of tourists countrywide.

At Eco quetzal: Exhibition of the map developed by the project

After the project completion, 83 CAT members engaged in 78 businesses have been continuing the activities. The necessary number of CAT members retained in order to sustain the activities at the time of ex-post evaluation. The decrease in the number of CAT members can be attributed to a decrease in the CAT budget and in the number of promoters providing technical support for CAT due to the financial difficulty of CATs. Also, the less incentive for CAT members to continue the CAT activities may cause of the decrease in the number of members since the INGUAT Tourism Program to promote domestic tours targeting Guatemalan people were terminated in 2012. The number of touristic products in municipalities of the target areas decreased from 118 items to 61 items at the time of ex-post evaluation. However, the necessary number of touristic products has been sustained as well. At the time of project implementation, the CAT with the network among the public sector, community and micro tourism firms have been sustaining. 4 CATs have been maintaining the networks since the project completion. On the other hand, some CATs did not maintain the network because the members prioritize their individual activities rather than activities as CAT. Some parts of the guide panels and service facilities developed by the pilot activities of the project have not been maintained. Manuals for maintenance of the facilities were lost. The majority of CAT attributed the inappropriate maintenance to the lack of budget for maintenance. The website developed by the project is not operated as a portal site of each CAT for tourism promotion since the concept of the website was not taken over by the current CATs and no responsible person is deployed for the website. However, after the project completion, the number of tourists accommodated in the target areas increased by around 18% during the period from 2010 to 2012 (from 198,967 guests in 2010 to 234,032 guests in 2012). Although data of after the project completion have not been collected, it can be assumed that the number of visitors for the touristic sites in the target areas have been increased as well.

For the Overall Goal to aim at contribution to economic development and poverty reduction in the target areas through natural and cultural resource conservation, 3 rehabilitation projects using the community maps developed by the project and 3 resource conservation projects were implemented. Although no data for the number of employees in the tourism industry has been collected, it was confirmed that the number of hotels in the target provinces increased from 363 in 2010 to 403 in 2012. Also, it is assumed that the project contributed to the local economic promotion such as the increase in the number of touristic companies and the employees despite no quantitative data of sales and revenue of the touristic companies in the target areas which participated in the seminars and the trainings organized by the project. The Salamá CAT showed a good practice for tourism promotion. Using the third country training in Mexico and experiences in the project, the Salamá CAT constructed a museum exhibiting Marimba, a traditional xylophone, and quetzal (the national bird). It attracted 800-1,000 tourists a year and periodical visits by the youth studying at the faculty of tourism. Furthermore, as a part of CAT activities, trash boxes at the touristic sites in the target areas were installed by the project. Those activities may increase awareness of natural resource conservation.

In the light of the findings of this ex-post evaluation, effectiveness/impact of the project is fair due to the insufficient continuation of the outputs and the Project Purpose and the lack of a part of data as evidence to verify achievement of the Overall Goal despite the achievement of the Project Purpose and the planned outputs by the project completion and the good practices contributing to the touristic, natural and cultural conservation and local economic development for the Overall Goal.

Achievement of project purpose and overall goal

Aim	Indicator	Results
(Project Purpose) Tourism promotion using local resources in Alta Verapace, Baja Verapace and Petén	Indicator 1: Amount of annual budget of CATS	(Project Completion) The budget increased (Ex-post Evaluation) The exact amount of annual budget specific to CATS was difficult to calculate because it is allocated not only by the Directorate of CAT itself but also other departments such as the Unit of Product Development of the Planning/Administration Department to a great extent.
	Indicator 2: Items of the annual CAT budget	(Project Completion) No data available (Ex-post Evaluation) No data available
	Indicator 3: Number of tourism related establishments	(Project Completion) Increased from 2,208 companies in 2008 to 2,907 in 2010 (Ex-post evaluation)

		Verified for the Overall Goal
	Indicator 4: Number of tourism related employments	(Project Completion) Increased from 5,724 employees in 2008 to 9,353 in 2010 (Ex-post evaluation) Verified for the Overall Goal
	Indicator 5: Number of hotel rooms	(Project Completion) No data available (Ex-post Evaluation) No data available
	Supplemental Information: Number of promotion activities by CATs in the target provinces by the project completion	(Project Completion) 4 CATs implemented 120 times of activities in total by 2010. (Ex-post Evaluation) The number of CAT members who continue the activities was 83 persons. The number of new comers after the project completion was 16 persons. The number of types of business of CAT members was 78 in total.
	Supplemental Information: Number of visitors in the touristic sites of the target areas from the start to the completion of the project	(Project Completion) Increased from 0.8304 million in 2008 to 1.008 million as of June 2010. (Ex-post evaluation) The number of hotel guests in the target provinces ➢ Petén: increased from 61,000 in 2010 to 84,000 in 2012 ➢ Alta Verapace: 12,000 in 2010 to 14,000 in 2012 ➢ Baja Verapace: 12,500 in 2010 to 13,500 in 2012
(Overall Goal) Promotion of sustainable touristic and natural and cultural resource conservation and contribution to local economic development and poverty reduction by tourism promotion	Indicator 1: Number of tourist arrivals to the tourism sites	(Ex-post evaluation) Verified for the Project Purpose
	Indicator 2: Number of establishments that obtained environmental certification	(Ex-post evaluation) No data available
	[Promotion of sustainable touristic, natural and cultural resource conservation] Number of projects rehabilitation and conservation of natural and cultural resources using community maps developed by the project	(Ex-post evaluation) - Rehabilitation projects for natural and touristic resources: 3 projects - Conservation projects for natural and touristic resources: 3 projects
	[Contribution to local economic development and poverty reduction] Increase in the number of tourism related establishments in the target areas (Indicator 3 for the Project Purpose)	(Ex-post evaluation) The main tourism industry is hotels in the target provinces. The number of hotels increased from 363 in 2010 to 403 in 2013.
	Supplemental Information: Increase in the number of employees engaged in tourism related establishments after the project completion	(Ex-post evaluation) It can be assumed that the number of employees has increased since the number of hotels increased from 363 in 2010 to 403 in 2013.
	Increase in sales and revenue of tourism related establishments which participated in the seminar/training* implemented by the project (Indicator 4 for the Project Purpose)	(Ex-post evaluation) According to the interviews with the stakeholders, the sales and revenue of the tourism related establishments tend to increase despite no data of precise sales and revenue available.

Note: Tourism product development, marketing, ecotourism and so on.
Source: Terminal Evaluation Report, interviews with counterparts and stakeholders in the target areas.

3 Efficiency

Although the project period was as planned (ratio against the plan: 100%), the project cost exceeded the plan (ratio against the plan: 112%) because of necessity for additional activities such as activities for CAT at provincial level and monitoring after the Mid-Term Review. Therefore, efficiency of the project is fair.

4 Sustainability

In the policy aspect, although the long-term policies, such as the Guatemala National Policy for Sustainable Tourism Development (2012-2022) and the Sustainable Tourism Master Plan (2014-2024), prioritize tourism promotion, a specific road map and activities for implementation of the policies are not clearly set forth. Institutionally, the CAT coordinator who was the counterpart of the project continuously works at INAGUAT despite that the number of the Tourism Promoters decreased from 14 persons in 2010 to 7 persons in 2014 at the time of ex-post evaluation. On the other hand, INAGUAT plans to provide supports such as trainings, project formulation, tradition conservation, and tourism development promotion through wide range of touristic companies for tourism promotion. In the technical aspect, the knowledge, experience and knowhow acquired through the trainings by the project have been taken over by the CAT coordinator of INAGUA who has been continuously working despite no further technical transfer using the CAT manual developed by the project. In addition, the tourism trainings have been continued by INAGUAT. As for the financial aspect, the exact amount of annual budget specific to CATS was

difficult to calculate but it is confirmed that the cost for activities concerning CAT such as cost for the promotion trainings and events has been covered by the budget from the Unit of Product Development of the Planning Department. The amount of total budget of INAGUAT is not changed after the project completion but the allocated amount to each department was changed. For example, the budget for the Directorate of CAT was reduced by 75% and the budget for the promotion, trainings and events has been moved to the Unit of Product Development of the Planning Department. Further, Some CATs collect membership fees in order to ensure own revenue but they cannot cover all the necessary costs for trainings and so forth.

From these findings, it is considered that the project has some problems in policy, institutional and financial aspects of the implementing agencies; therefore, sustainability of the project is fair.

5 Summary of the Evaluation

By the project, tourism promotion using local resource in the target three provinces as the Project Purpose has been achieved since the number of visitors in the target provinces increased through implementation and continuation of the promotion activities by CAT. As for the Overall Goal, the project contributed to the promotion of the local economies, such as the increases in the number of the touristic companies and their employees by the efforts for natural and cultural resource conservation. As for sustainability, the policy implementation has not been clear despite the importance of the tourism promotion. As a result, the number of the Tourism Promoters of INAGUAT has been reduced and the budgets for the Directorate of CAT and CATs have not been sufficient besides the budgets for trainings and events. Hence, there have been some problems in the policy, institutional and financial aspects. In terms of the technical aspect, the knowledge, experience and knowhow acquired through the project have been taken over since the counterpart of the project has been continuing the activities as the CAT coordinator of INAGUAT. As for efficiency, the project cost exceeded the plan.

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

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

【INAGUAT】

- It is required to promptly implement specific actions to support CATs, including budget allocation for the Directorate of CAT and CATs and deployment of the Tourism Promoters, in order to materialize a long term tourism promotion policy.

Lessons learned for JICA

- At the time of the Mid-term Review and the Terminal Evaluation, it was difficult to collect data and to assess achievements since the verifiable indicators and the target values had not been appropriately determined and the data collection strategies for the verifiable indicators had not been clearly defined. Although the ex-post evaluation study tried to collect supplemental information, there was no choice to make evaluation analysis based on insufficient data. For example, in Guatemala, statistical data are not sufficiently available at national level since the National Census has not been conducted since 2002. Therefore, it is difficult to completely figure out the number of tourists, touristic companies, and their employees in the target areas of the project from the statistical data to be provided by the government. In addition, it was also hard to collect data by the same methodology and to make comparable analysis because it was unclear how to collect data at the time of the project formulation, the Mid-term Review and the Terminal Evaluation. Therefore, it is necessary to sufficiently consider adequate verifiable indicators and target values and clearly define them. Also, it is essential to collect baseline data, to conduct regular monitoring during the implementation period as well as to record how to collect data. Moreover, in the country like Guatemala where statistical data is not available, it is inevitable to examine feasibility to collect data for the indicators in long term at the time of project formulation. Also, technical transfer on measuring the indicators during the implementation period is needed to enable the counterparts to understand continuation of project effects and achievement of the Overall Goal even after the project completion.

Internal Ex-Post Evaluation for Technical Cooperation Project

conducted by JICA/JOCV Jamaica Office: March, 2015

Country Name	Capacity Building of Water Maintenance
Jamaica	

I. Project Outline

Background	In Jamaica, the National Water Commission (NWC) has been operating its water supply systems. In 2003, the volume of revenue water was limited to 35% of the planned volume of purified water of 291 million m^3. In addition, the technical capacity of their staff and the management capacity of middle managers still remained at low level. The limited capacity of NWC brought about inefficient and inadequate operation and maintenance of water treatment plants (WTPs), inappropriate process management of purification according to raw water quality, and insufficient well-planned non-revenue water control including leakage control. Therefore, enhancement of human resource development and management system for NWC was one of the key issues to improve operation of water treatment plants in order to supply quality water to the people in country. .				
Objectives of the Project	1. Overall Goal: Reliability of NWC's (National Water Commission) water supply is enhanced both in terms of quality and quantity. 2. Project Purpose: The capacity of the NWC to provide quality and quantity of water supply is enhanced through four piloting at four water treatment plants.				
Activities of the project	1. Project site: Four pilot WTPs (Hope WTP, Spanish Town WTP, Logwood WTP and Great River WTP) 2. Main activities: i) Development of manuals for operation and maintenance of water treatment facilities; ii) Trainings for maintenance of water treatment facilities, operation, and water quality testing and control; iii) Design of water supply management plans for the service areas covered by HOPE WTP and Logwood WTP, and other service areas. 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 7 persons 2) Trainees received: 18 persons 3) Equipment: Ion chromatography, portable flow meter, motor diagnostic kit, laser alignment equipment and vehicles, and so on. Jamaican Side 1. Staff allocated: 27 persons 2. Land and facilities: Office space for Japanese experts				
Ex-Ante Evaluation	2007	Project Period	March 2007 to November 2010	Project Cost	345 million yen
Implementing Agency	National Water Commission (NWC)				
Cooperation Agency in Japan	NJS Consultants, Co.				

II. Result of the Evaluation

1 Relevance

This project had been highly relevant with Jamaica's development policy of "promotion of water supply system and improvement of water supply facilities" as set in the Strategy and Action Plan (2004) and the Vision 2030 Jamaica National Development Plan, development needs of stable and safe water supply and improvement of management of water supply system as well as human resource development of NWC, at the time of both ex-ante and project completion. It was also consistent with Japan's ODA policy for Jamaica prioritizing human resource development at the time of ex-ante evaluation. Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project aims at water quality control and water supply management through improvement of operation and maintenance (O&M) at the four pilot WTPs in order to improve water supply by NWC in quality and quantity.

The Project Purpose was almost achieved at the time of project completion. Reduction of water loss was realized at two of the four pilot WTPs, Great River and Logwood. For water quality, Spanish Town and Logwood reached the target for the percentage of samples above the standards. In terms of energy efficiency, Hope and Logwood decreased electricity consumption for water treatment. For improvement of O&M of water supply facilities, a total of 17 training courses were conducted by the time of the terminal evaluation. And 23 master trainers were registered for 8 training courses.

Some of project effects have been sustained after the project completion and contributed to the achievement of the Overall Goal. Continuation of the improved O&M practices based on the manuals developed by the project, and the water quality control activities contributed to improvement of water quality supplied by the four pilot WTPs. Also, since the Water Supply Management Plans have been continuously prepared for the four pilot WTPs, efficiency of O&M at the pilot WTPs improved.

For the Overall Goal, it has been partially achieved as well. The quality of water supplied by NWC was improved and satisfied the Ministry of Health water quality standards at all four pilot WTPs. In addition, the water loss was reduced at Hope WTP. Energy efficiency also decreased at Hope and Spanish Town.

Also, other positive impacts have been observed at the time of ex-post evaluation. In order to improve O&M, NWC promoted information sharing and standardization of operational documents such as manuals in the organization. The improved operation contributed to the growth of sales and profitability. The sales growth rate (base year: 2004/05 at the time of ex-ante

evaluation) jumped from 214% in 2010/11 to 285% in 2012/13 whereas the operating cost/sales ratio improved from 97% to 85% for the same period.

There was no negative impact.

Therefore, effectiveness/ impact of the project is fair.

Achievement of project purpose and overall goal

<table>
<tr><th>Aim</th><th>Indicators</th><th>Results</th></tr>
<tr><td rowspan="4">(Project Purpose)
Enhancement of capacities of NWC to provide quality and quantity of water supply</td><td>Indicator1: Percentage of water loss in water production is reduced at pilot WTPs</td><td>(Project Completion) Partially achieved.[1]
Great River WTP and the Logwood WTP were reduced by 35% and 39%, respectively, in comparison between the data of 2007 and December 2009 by extending filtration time and filter washing.
(Ex-post evaluation)
Verified for the Overall Goal.</td></tr>
<tr><td>Indicator2: Frequency of water samples being tested below a desirable water quality (< NTU1 for turbidity and above 1.5 for residual chlorine) for treated water will be increased over 80 percent for turbidity and 100 for residual chlorine of all the test samples taken at pilot WTPs in one year.</td><td>(Project Completion) Partially achieved.
[Water test at the pilot WTPs: Turbidity in 2011]
<table>
<tr><th></th><th>Total No. of samples</th><th>1></th><th>%</th></tr>
<tr><td>Hope</td><td>227</td><td>150</td><td>66.8%</td></tr>
<tr><td>Spanish Town</td><td>229</td><td>228</td><td>99.6%</td></tr>
<tr><td>Great River</td><td>300</td><td>107</td><td>35.7%</td></tr>
<tr><td>Logwood</td><td>3240</td><td>3240</td><td>100%</td></tr>
</table>
[Water test at the pilot WTPs: Residual Chlorine in 2011]
<table>
<tr><th></th><th>Total No. of samples</th><th>≥ 1.5</th><th>%</th></tr>
<tr><td>Hope</td><td>229</td><td>180</td><td>78.6%</td></tr>
<tr><td>Spanish Town</td><td>226</td><td>221</td><td>97.8%</td></tr>
<tr><td>Great River</td><td>300</td><td>218</td><td>72.7%</td></tr>
<tr><td>Logwood</td><td>3159</td><td>3096</td><td>98.0%</td></tr>
</table>
(Ex-post Evaluation)
[Water test at the pilot WTPs: Turbidity in April 2013-March 2014]
<table>
<tr><th></th><th>Total No. of samples</th><th>1></th><th>%</th></tr>
<tr><td>Hope</td><td>250</td><td>248</td><td>99.2%</td></tr>
<tr><td>Spanish Town</td><td>228</td><td>226</td><td>99.1%</td></tr>
<tr><td>Great River</td><td>261</td><td>209</td><td>80.1%</td></tr>
<tr><td>Logwood</td><td>3109</td><td>2400</td><td>77.2%</td></tr>
</table>
[Water test at the pilot WTPs: Residual Chlorine in April 2013-March 2014]
<table>
<tr><th></th><th>Total No. of samples</th><th>≥ 1.5</th><th>%</th></tr>
<tr><td>Hope</td><td>244</td><td>231</td><td>94.7%</td></tr>
<tr><td>Spanish Town</td><td>225</td><td>215</td><td>95.6%</td></tr>
<tr><td>Great River</td><td>261</td><td>240</td><td>92.0%</td></tr>
<tr><td>Logwood</td><td>8450</td><td>6970</td><td>82.5%</td></tr>
</table></td></tr>
<tr><td>Indicator3: Energy consumption is reduced at pilot WTPs.</td><td>(Project Completion) Partially achieved[2]
Electricity consumption per water production (kWh/m^3) decreased by 6.4% at Hope WTP and 0.5% at Logwood WTP.
(Ex-post Evaluation)
Verified for the Overall Goal.</td></tr>
<tr><td>Indicator4: Training courses on operation and maintenance, water quality, and water supply management are planned and conducted with developed textbooks.</td><td>(Project Completion) Achieved
A total 17 training courses including 8 for O&M, 7 for water quality and 2 for water supply management were conducted by the time of terminal evaluation.</td></tr>
</table>

[1] According to the Terminal Evaluation Report agreed with the Ministry of Water and Housing of Jamaica, the target of the indicator was “achieved.” However, the data of percentage of water loss in water production was confirmed at only two WTPs out of the 4 pilot WTPs. At the ex-post evaluation, the case that the actual data of indicator with more than 80% of the target value can be considered as “achieved. Therefore, this evaluation study judged that the target of the indicator was “partially achieved” instead of “achieved.”

[2] According to the Terminal Evaluation Report agreed with Ministry of Water and Housing of Jamaica, the target of the indicator was “achieved.” However, the reduction of electricity consumption was confirmed at only two WTPs out of the 4 pilot WTPs. At the ex-post evaluation, the case that the actual data of indicator with more than 80% of the target value can be considered as “achieved. Therefore, this evaluation study judged that the target of the indicator was “partially achieved” instead of “achieved.”

<table>
<tr><td></td><td></td><td>(Ex-post Evaluation)
Verified for sustainability</td></tr>
<tr><td></td><td>Indicator 5: Numbers of registered master trainers on Operation and Maintenance, Quality and Water Supply Management.</td><td>(Project Completion) Achieved
For 8 training courses, 23 master trainers had been registered. Some of the master trainers were registered for more than one training course
(Ex-post Evaluation)
Verified for sustainability.</td></tr>
<tr><td>(Overall goal)
Enhancement of reliability of water supply by NWC in quality and quantity.</td><td>Indicator1: Performance indicators are improved.</td><td>(Ex-post Evaluation) Partially achieved.
[Water Quality]
Quality of water supplied by NWC at the four pilot WTPs have satisfied the MOH water quality standards.

[Water Loss]
<table>
<tr><th></th><th>2007</th><th>June 2014</th></tr>
<tr><td>Hope</td><td>54%</td><td>45%</td></tr>
<tr><td>Spanish Town</td><td>65%</td><td>69.66%</td></tr>
<tr><td>Great River</td><td>64%</td><td>-</td></tr>
<tr><td>Logwood</td><td>58%</td><td>-</td></tr>
<tr><td>Other WTPs</td><td>71%</td><td>68.64%</td></tr>
</table>
[Electricity Consumption: kWh/m^3]
Electricity consumption (kWh/m^3) decreased at two WTPs. However it increased in two WTPs because of longer operating hours due to the drought conditions and the high calcium built up.
<table>
<tr><th></th><th>2007</th><th>2011</th><th>2013</th></tr>
<tr><td>Hope</td><td>0.16</td><td>0.18</td><td>0.17</td></tr>
<tr><td>Spanish Town</td><td>0.36</td><td>0.20</td><td>0.23</td></tr>
<tr><td>Great River</td><td>0.38</td><td>0.44</td><td>0.51</td></tr>
<tr><td>Logwood</td><td>0.51</td><td>0.57</td><td>0.50</td></tr>
<tr><td>Other WTPs</td><td>-</td><td>-</td><td>-</td></tr>
</table>
</td></tr>
</table>

Source : Terminal Evaluation Report, Interviews with counterparts, questionnaire survey results at the time of ex-post evaluation, Data provided by NWC

3 Efficiency

Project expanded to add some more pilot plants and the project cost slightly exceeded the plan (ratio against the plan: 101%). Therefore, efficiency of the project is fair.

4 Sustainability

In the policy aspect, enhancement of water production facilities has been one of the main focus in the water sector in order to achieve the universal access to potable water by 2025 under the Water Sector Policy, which has been in the process of revision. Also, under the Vision 2030, a national development plan of Jamaica, NWC prepared a transformative programme with main focuses including refurbishing/upgrading water production source, network refurbishing to reduce technical losses and to improve service level, pumping equipment rehabilitation, well rehabilitation and supply extension, as an implementation plan over 5-10 years as a part of the Vision 2030 programme.

Institutionally, under the Water Sector Policy, NWC has been required to be more financially independent for institutional enhancement since NWC is directed by the Board of Commissioners as more accountable and autonomous entity. NWC has been in a process of re-organization/transformation since November 2010. This process has met with several challenges and delays, and as such has affected the NWC's ability to operationalize the recommendations and benefits of this project.

In the technical aspect, trainings on water quality for operators of WTPs have been continuously delivered by NWC despite of fluctuation in the number of courses and the participants. 28 master trainers, who had been trained by the project, have been continuously engaged in the internal trainings for technical staffs such as trainings of water quality. The technical staffs of the four pilot WTPs have been practicing knowledge and skills acquired through the internal trainings. The operational manuals will be expected to be adhered by the pilot WTPs staff. Also, a number of training programs, including "In-house Water Quality Control Training Program" have been taken in place in order to maintain and increase technical capacity of the employees. During the period April 1, 2011 and March 31, 2014, 503 courses were conducted and/or facilitated involving 6,042 man hours.

As for the financial aspect, the water rate has increased over the past few years: from J$ 61.31 in 2011 to J$85.75 in 2014. Also more customers are encouraged to become metered customers for payment of water supply charge. The increased revenue of NWC (J$ 21.55 million in 2013) was sufficient to cover the expenditure including O&M cost (J$ 18.37 million).

From these findings, some problems in institutional aspect has been observed, therefore, sustainability of the project is fair..

5 Summary of the Evaluation

The relevance of this project was high, but the effectiveness/impact of the project is fair because indicators have been or are partially achieved. In addition, the efficiency of the project is also fair due to slight excess of the project cost and the sustainability is fair because of some problems in institutional aspect.

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

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:
・Institutional strengthening is to be done in accordance with maintaining and developing the outcome of the project.
・To monitor the performance indicators to utilize for better O&M of water supply facilities and water quality.
・To improve financial position of NWC further by efforts of cost reduction and revenue increase.

Lessons learned for JICA
None


(Spanish Town Water Treatment Plant)


(Upgraded Equipment of Logwood Water Treatment Plant)

Internal Ex-Post Evaluation for Technical Cooperation Project

conducted by Mexico Office/ March, 2014

Country Name United Mexican States	Coastal Wetland Conservation in Yucatan Peninsula

I. Project Outline

Background	The soil of the land of Yucatan Peninsula is limestone origin and almost completely flat, and has valuable ecosystems. In order to conserve them, the Secretariat of Environment and Natural Resources (SEMARNAT) has been designated a series of natural protection areas for appropriate management. However, there are many problems which bear threat the environment such as artificial division of wetland ecosystem due to socio-economic development and increasing pressure for natural resource utilization caused by local people as well as tourists. It is, therefore, required urgently to strengthen the environmental conservation system including development of human resources. In this context, the Government of Mexico requested to the Government of Japan a technical cooperation project that aims the conservation and restoration of coastal wetland and its sustainable use. Then, this 5-year project started from the March 2003.
Objectives of the Project	1. Overall Goal: Conservation of wetland ecosystem of Ria Celestun Biosphere Reserve (RBRC) is improved. 2. Project Purpose: Environmental management activities are carried out properly in RBRC by the leadership of the RBRC office. 3. Logical flow of how the project responses to development issues: Task Forces for i) mangrove restoration, ii) ecotourism, iii) solid waste management, iv) research and monitoring and v) environmental education are established in cooperation with local environmental authorities, research organizations, educational organizations and NGOs. Environmental management activities including continuous efforts of Task Forces are enhanced under the leadership of the RBRC office by preparing and implementing environment management program. Wetland ecosystem of RBRC is conserved.
Activities of the project	1. Project site: Ria Celestun Biosphere Reserve (RBRC) 2. Main activities: - Conduct experimental restoration and revise manual of mangrove restoration based on the experimental results - Support and monitor ecotourism - Monitor solid waste management and clarify necessary measures based on the results of monitoring. - Prepare and disseminate information on wetland conservation - Plan and implement environmental education for the Cultural Conservation Center and schools. 3. Inputs (to carry out above activities) Japanese Side 1. Experts: 30 persons 2. Trainees received: 18 persons 3. Equipment: 22 million yen Mexican Side 1. Staff allocated: 14 persons 2. Land and facilities: project office 3. Local cost (items not specified): 30 million pesos

Project Period	Original period: March, 2003 to February, 2008 Extended period: March, 2008 to February, 2010	Project Cost	398 million yen
Implementing Agency	CONANP: National Commission of Natural Protected Areas-The RBRC Office		
Cooperation Agency in Japan	Ministry of Environment, Ministry of Agriculture, Forestry and Fisheries, Kushiro International Wetland Center		
Related Projects (if any)	Japan's cooperation: Third Country Training Program on Conectivity & Management of Protected areas in the Mesoamerica biological corridor from 2007 - 2012		

II. Result of the Evaluation

1 Relevance
This project has been highly relevant with Mexico's development policy (e.g. environmental sustainability as set in "National

Development Plan 2007-2012" and preservation of ecosystem as set in "National Program of Natural Protected Areas 2007-2012"), development needs "preservation and management of wetlands", as well as Japan's ODA policies and "JICA Country Assistance Strategy", which includes "environmental control and protection" at the time of both ex-ante and ex-post evaluation. Therefore, relevance of this project is high.

2 Effectiveness/Impact

This project has largely achieved the project purpose "Environmental management activities are carried out properly in RBRC under the leadership of the RBRC office" in the field of i) mangrove restoration, ii) ecotourism, iii) solid waste management, iv) research and monitoring and v) environmental education by i) Task Forces activities carried out in Celestun under the new official Advisory Board and interdisciplinary group of mangroves of the Peninsula of Yucatan（GYMPEI）, ii) the workshops on wetland conservation held under the Board and iii) effective conservation activities in the protection areas as well as other areas. More concretely, i) the reforestation activities for mangrove restoration were continuously conducted according to the newly prepared manual, ii) ecotourism activities were carried out by newly established groups, iii) separation and recycling of collected garbage were progressed, despite of the difficulties caused by the change of local governmental actors, iv) a management plan including research and monitoring activities was established and v) 76% of the residents of Celestun City enhanced their concern with environmental issues by participating in environmental education activities. These outputs were achieved by Task Forces under the leadership of the RBRC office. The Task Forces also provide the opportunities of understanding and discussing the progress of the project and contribute to obtain technical and financial support from relevant organizations by the cooperation among members, which used to carry out environmental management activities individually before the project.

As for overall goal "Conservation of wetland ecosystem of RBRC is improved", it has largely achieved since artificially and naturally restored areas have increased with the above-mentioned outputs/effects generated by Task Forces under the leadership of the RBRC office. In fact, in the southern sub-area of restoration, it was increased approximately by 50 hectare (ha), replicating the techniques used in the project. Other main impacts are i) the project drew greater attention, by the Government of the State of Yucatan, to the investment of the road infrastructure, improvements in services (e.g. drinking water, electricity, etc.) and renovation of the pier at least in the tourist area of the port of Celestun, ii) in the State of Campeche, the Government of the State of Yucatan recognized the importance of tourism and improved public services in the community of island Arena, such as urban improvement, centre of health, sidewalks and lighting. In addition, the government completed the construction of the museum as a tourist attraction on the site in Pedro Infante. Negative Impacts have not been observed.

Therefore, effectiveness/impact of this project is high.

Achievement of project purpose and overall goal

Aim	Indicators	Results
(Overall goal) improvement of conservation of wetland ecosystem in RBRC	Artificially and naturally restored areas are increased.	（Ex-post Evaluation）Restored areas have increased. In the southern sub-area of restoration, it was increased approximately by 50 ha.
	Environmental management activities are continuing after the project completion.	（Ex-post Evaluation）Task Forces are continuously held and another Task Force dealing with canine wildlife control was established. Environmental management activities are continuously conducted according to the management program. The level of activities initiated by the project is maintained at the time of ex-post evaluation.
(Project Purpose) capacity strengthening of the RBRC office in terms of proper conservation of wetland	Task Forces related to wetland conservation continuously are held and are conservation activities properly implemented.	（Project Completion）Four kinds of Task Forces are active under the framework of the project. （Ex-post Evaluation）The meetings of the five (5) Task Forces established in the framework of the project are held.
	Environmental management activities are carried out in RBRC by using the management program.	（Project completion）The environmental management activities, were carried out by using the revised management program, and in accordance with the creation instrument of natural protected area (Decree legal). （Ex-post Evaluation）The revised technical version of the management program is ready, however the process of publication has not been finished, because it needs to be approved by different entities. At the time of ex-post evaluation, the management program is under reviewing by the legal department.

3 Efficiency

While the inputs were appropriate for producing the outputs of the project, both the project period and the project cost were slightly exceeded the plan (ratio against the plan: The former 113%, The latter 140%) because of extension of the period of the project to enhance the sustainability of i) mangrove restoration, ii) solid waste management, iii) environmental education, and iv) monitoring system. Therefore, efficiency of this project is fair.

4 Sustainability

CONANP is the government institution charged to conserve the natural heritage of federal natural protected areas in Mexico. This function is realized by i) cooperating/coordinating with relevant actors, in particular with the communities in the natural protected areas (e.g. local environmental authorities, research organizations, educational organizations, NGOs, etc.), ii) implementing the environmental conservation strategy, iii) improving the quality of lives of local residents and mitigating negative impacts to the ecosystems and its biodiversity. It is well recognized that RBRC personnel continue to work as

permanent employees, including those who were capacitated by the project, while three new technical staff have joined the organization. Therefore, the project has no problem from the view point of the institutional aspect of the implementing agency. Regarding the policy aspect, "The National Development Plan 2013-2018" of the federal government that aims the sustainable use of natural resources is under preparation at the time of the ex-post evaluation. As for the technical aspect, the capacity of the counterparts of the project and the office of the RBRC has been considerably strengthened i) mangrove restoration, ii) ecotourism, iii) solid waste management, iv) research and monitoring and v) environmental education through the project. Regarding the financial aspect, it is possible to continue the activities of the project through the budgetary resources that the RBRC office receives and managed to get the fund from other financial resources of the national or international stakeholders or through different governmental programs, which are i) operational budget, ii) Program of Conservation for Sustainable Development (PROCODES) and iii) Temporary Employment Program (PET: Programa de Empleo Temporal), although in the future they may not considered to be sufficient to cover the enhanced size of the protected natural area. Therefore, at the time of ex-post evaluation, no major problem has been observed in policy background, technical and financial aspects of the implementing agencies, although it will be necessary to find other financial actors that would contribute the RB Celestun conservation. Therefore the sustainability of this project is high.

5 Summary of the Evaluation

The project has achieved the "capacity strengthening of the RBRC office in terms of proper conservation of wetland", the project purpose of proper implementation of environmental management activities mentioned in Effectiveness/Impact under the leadership of the RBRC office. With such activities, the overall goal "the improvement of conservation of wetland ecosystem in RBRC" has been largely achieved.

As for sustainability, there was no particular problem observed in the project because of i) the capable personnel at the RBRC office, ii) recognition of the importance of environmental sustainability to be set in "The National Development Plan 2013-2018", "The National Program of Environment and Natural Resources", as well as " The Program of Natural Protected Areas", iii) strengthened capacity of the RBRC office in terms of mangrove restoration, ecotourism, solid waste management, monitoring and environmental education through the project, and iv) stable finance.

For efficiency, the inputs were appropriate for producing the outputs of the project, although both the project period and the project cost were slightly exceeded the plan.

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

III. Recommendations & Lessons Learned

Recommendations to Implementing agency:

The CONANP has been managing the successful outcome of the project. The CONANP should keep these ideal conditions in cooperation with the counterparts (local environmental authorities, research organizations, educational organizations NGOs, and Task Forces) and also disseminate the successful experience of this project to other states of the Mexican Republic and to other countries in the Latin American region.

Lessons learned to JICA

As above mentioned, through the project, the RBRC office promoted to cooperate and coordinate with other relevant organizations and groups, including local environmental authorities, research organizations, educational organizations, NGOs, communities, etc. It should be noted that involvement of the relevant players is one of the keys in order to successfully conduct environmental conservation activities.

Campaign of collection and separation of waste in Celestun in coordination with primary school

Rehabilitation of mangroves through new canal of freshwater

Internal Ex-Post Evaluation for Technical Cooperation Project

conducted by Mexico Office/ April, 2014

Country Name	The Project on Technology Transfer for Supporting Industry (Stamping Technology)
United Mexican States	

I. Project Outline

Background	Mexico started to change its economic policy from the protective trade to the free trade in the 1980's. The Fox administration, which came into office in 2000, considered that the enhanced competitiveness of small and medium-sized enterprises as its administration's one of the most important political issues. In particular, the administration recognized that it was essential to improve the procurement rate of domestic parts of vehicles, electricity and electronic industries. However, most of these parts were imported because of insufficient level of stamping technologies in Mexico.		
Objectives of the Project	1. Overall Goal: Technical capability of the targeted Mexican small and medium-sized stamping industries in the state of Queretaro and surrounding area is upgraded. 2. Project Purpose: CIDESI is able to extend appropriate technical services to the targeted Mexican small and medium-sized stamping industries. 3. Assumed steps for achieving the project goals: The project implements training for Counterpart Personnel (C/Ps) of CIDESI in the field of stamping and production management. By using the enhanced capacity of C/Ps, the project provides technical advisory services for the model companies. Through these technical advisory services, the project aims to improve technical capability of the model companies. Staffs of CIDESI provide the services for other small and medium-sized stamping companies than model ones and thereby upgrade small and medium-sized stamping industries in the state of Queretaro as well as in surrounding area (note 1). (Note 1) surrounding area includes San Luis Potosi and Guadalajara.		
Activities of the project	1. Project site: Queretaro (base), San Luis Potosi, Aguascalientes, Guadalajara, Mexico and Jalisco 2. Main activities: Establish the project implementation system such as conducting baseline survey, allocation of personnel and budget Prepare and implement training programs for C/Ps and monitor the results Provide advisory services Provide training and seminars for the targeted industries 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 9 persons 2) Trainees received: 10 persons 3) Equipment: machineries and equipment for press automatic line, such as servo press machine, leveler feeder, CAD software for die design, QDC (quick die change) unit Mexican Side 1. Staff allocated: 13 persons 2. Land and facilities: machining center, wire for electric discharge, milling machine, etc. 3. Local cost; 3 million peso		
Project Period	October, 2006 to September, 2009 (Extended to October 2009)	Project Cost	345 million yen
Implementing Agency	Engineering and Industrial Development Center (CIDESI: Centro de Ingenieria y Desarrollo Industrial)		
Cooperation Agency in Japan	Unico International Corporation		
Related Projects	Japan's cooperation: - The Study on Technical Transfer of Essential Technology (Master Plan, 1997-1999) - Engineering and Industrial Development Center for Small and Medium Scale Industries at Queretaro State (TC, 1998-2002) - Human Development in the technology of Plastic Transformation (TC, 2010-2014) CNAD - The Study on Master Plan for the Promotion of the Supporting Industries (Development Study, 1996-1997)		

II. Result of the Evaluation[1]

1 Relevance
This project has been highly relevant with Mexico's development policy "strengthening of production sector by enhancing domestic market and international competitiveness" and "promotion of supporting industries" as set in Sector program of National Development Plan called "Enterprises Development Program (2001-2006)" and policy documents including economic sector program called "PSE2007-2012", development needs "strengthening of stamping industry of the central-shoal through local skilled labor and local production", as well as Japan's ODA policy; Japan-Mexico Economic Partnership Agreement (EPA) (2005) at the time of both ex-ante evaluation and project completion. Since CIDESI is located in Queretaro, which is one of

[1] Constraint of Evaluation: The evaluation of Effectiveness/Impact is based on the very limited information due to the insufficient number of responses from stamping companies.

the cities that accommodate the largest number of supporting industries, and providing a comparative advantage for Queretaro as a center for stamping industry, an approach for strengthening SMEs of the stamping industry in Queretaro is deemed appropriate. Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project focuses on capacity enhancement of CIDESI to provide technical services to small and medium-sized stamping industries. Indicators which measure the achievement of the project purpose are (i) Rejection rates, defective rates, and number of complaints from clients (e.g. Assembly industries) on the products of the model companies benefitted from CIDESI services decrease, (ii) Productivity (e.g. output/hour ratio, rate of return on investment, etc.) of the model companies benefitted from CIDESI services improves, (iii) The stamping industries show the high level of satisfaction on the technical services of CIDESI, and (iv) The number of clients of technical services by CIDESI increased. As to (i), The number of defective rates decreased by 80% regarding 9 out of 11 stamping technologies with data available at the time of terminal evaluation. As for (ii), it is generally inferred that productivity was improved as a result of (i), however, there is no concrete data. For (iii), according to the questionnaire conducted after seminars, more than 90% of participants responded “excellent” or “good”. Regarding (iv), the accumulated number of companies that received technical services from CIDESI by 2013 increased (2010:10 companies →2013: 22 companies), however, the number of clients per year has not increased (2010:7, 2011:8, 2012:7, 2013:5). Besides, CIDESI extended their services to big companies[2] and there is a case where providing fee-free seminars to SMEs many times so that SMEs improved their techniques and reduced rejection rates. In sum the target (i) was partially achieved, the level of achievement of (ii) was not confirmed as mentioned above, (iii) were largely achieved while (iv) was not attained.

As for the overall goal, the indicators to measure the achievement level are (i) Rejection rates, defective rates, and number of complaints from clients (e.g. Assembly industries) on the products of the stamping industries decrease, (ii) The above industries improve their productivity and efficiency, and (iii) The number of products of the above industries delivered to assembly industry increase. Although comprehensive statistics are not available for any of these indicators, these three indicators have been partly realized at the time of ex-post evaluation. As to (i), the rejection rate of cutting tools and cabinet doors reduced from 20% to 10% with the technical advisory service by CIDESI (SEMEX). Also, it is confirmed that the defective rate of bracket reduced to 1% (STEEL AND TRUCKS Company) and it reduced from 5% to 1% for cutlery (MetalFex). According to Procesos Controlados S.A. de C.V, in general, the rejection rate in products was decreased by 10% and the defect rate decreased by 5% for the products such as brackets for seating, exhaust systems and accessories manufactured by progressive processes. No complaints have been given to the company. For (ii), down-time of its presses was reduced from 100 hrs / month on average in 2009 to 40 hrs / month in 2013 and also the company’s production increased by 20% compared to that in 2009 (Procesos Controlados S.A. de C.V.). In addition, the company’s production was increased by 5% and the investment return rate was increased by 15% after the technical advisory service by CIDESI. The productivity of silverware increased by 25% (MetalFex Company). It can be said that some progresses for mentioned companies have been observed at the companies interviewed at the ex-post evaluation for the above three targets. However, considering lack of comprehensive information, it would be concluded that the overall goal has been partially achieved. Therefore, the effectiveness/ impact of the project is fair.

Achievement of project purpose and overall goal

Aim	Indicators	Results[3]
(Project Purpose) CIDESI is able to extend appropriate technical services to the targeted Mexican small and medium-sized stamping industries.	Rejection rates, defective rates, and number of complaints from clients (e.g. Assembly industries) on the products of the model companies[4] benefitted from CIDESI services decrease.	(At the time of Terminal Evaluation/Project Completion) The number of defective rates decreased by 80% regarding 9 out of 11 stamping technologies[5] with data available. (Ex-post Evaluation) There is one (1) model stamping company which received CIDESI services between 2010 and 2013 (ByPasa). According ByPasa its rejection rates and defective rates have been decreased.
	Productivity (e.g. output/hour ratio, rate of return on investment, etc.) of the model companies benefitted from CIDESI services improves.	(Project completion) When defective rate decreases, production rate is expected to increase, however, there is no concrete data mentioned. (Ex-post Evaluation) According to ByPasa, which received CIDESI services between 2010 and 2013, in general productivity has been increased.

[2] Big companies which received technical services from CIDESI are teaching stamping techniques and “kaizen” activities to their sub contractors (SMEs), then CIDESI service is spread to SMEs. At the time of ex-post evaluation, one company (HiLux) with the support of other Technical Cooperation Project (2012-2015) is working in this way.

[3] At the stage of evaluation, there was no comprehensive/complete data and the results were based on the interviews with stamping companies. Because of limited information, the general tendency is not clear.

[4] At the time of Terminal Evaluation, 40 companies which had received service by CIDESI were redefined as Model Companies although PDM was not revised. Terminal evaluation survey team conducted interviews with 3 companies among those 40. Based on this, 3 companies, (i) SELLOORET AUTOMOTRIZ, (ii) BYPASA and (iii) Stamping and Manufacturing Mexico are considered as the Model companies at the time of Ex-post evaluation.

[5] 11 stamping technologies are process calculation for punch, bending and drawing, automation of work press, mechanical press design and its measuring, process calculation for complex products, mono process and progressive tools, design of mono process tools, progressive tools for punching, progressive tools for bending, progressive tools for drawing, assemble and finish of tools, reinforcement of quality and administration of the production in working area.

	The stamping industries show the high level of satisfaction on the technical services of CIDESI Note: There are four (4) grades "excellent", "good" "average" and "bad".	(Project completion) According to the questionnaire conducted after seminars, more than 90% of participants responded "excellent" or "good". (Ex-post Evaluation) There are 20 stamping companies which received CIDESI services between 2010 and 2013. According to 1 company that provided the information, satisfaction rate is 90%.
	The number of clients of technical services by CIDESI increased.	(Project completion) Although seminars in the field of stamping and production management technology were held 14 times by C/Ps, number of clients is not mentioned (Ex-post Evaluation) The number of clients decreased from 15 in 2010-2011 to 12 in 2012-2013.
(Overall goal) Technical capability of the targeted Mexican small and medium-sized stamping industries in the state of Queretaro and surrounding area is upgraded.	Rejection rates, defective rates, and number of complaints from clients (e.g. Assembly industries) on the products of the stamping industries decrease.	(Ex-post Evaluation) There are 20 stamping companies which received CIDESI services between 2010 and 2013. According to the information provided, the rejection rates were reduced at 5 companies and the defective rates were reduced at 2 companies after the technical advisory service by CIDESI.
	The above industries improve their productivity and efficiency.	(Ex-post Evaluation) According to 2 companies that provided the information among above 20 stamping companies, productivities, such as down-time of presses were improved and also the production has been increased after the technical advisory service by CIDESI.
	The number of products of the above industries delivered to assembly industry increase.	(Ex-post Evaluation) There is no concrete information; however, 2 companies have responded that they deliver product to assembly industry (ByPasa and Procesos Controlados S.A. de C.V.)

Source : Questionnaire to Companies of the Stamping Industry

3 Efficiency

While the inputs were mostly appropriate for producing the outputs of the project, the project cost slightly exceeded the plan (ratio against the plan: 115%), and the project period was slightly longer than the plan (ratio against the plan: 102%) because the project period was extended to implement activities concerning production management techniques. Therefore, efficiency of the project is fair.

4 Sustainability

In the policy aspect, this project is still given importance in the current development policy as PSE2013-2018 aims at the strengthening of production sector by enhancing domestic market and international competitiveness. Institutionally, CIDESI has 411 staff and of which 362 are technical personnel, which is considered sufficient. All of 9 C/Ps who specialized in stamping technology still continue the activities to sustain effects of the project. As to the production management, 2 out of 6 C/Ps keep conducting the related activities and 2 more staff would be allocated in 2014, Further, 9 C/Ps had been working with Senior Volunteers to enhance their knowledge and skills in production management after the project. While CIDESI did not receive any requests for the services focused on the productivity management in 2010 and 2011, the CIDESI is capable of providing related advices and services upon request, and at the same time, staff members are working to integrate such advices and services into the routine services. As for the technical capacity of CIDESI, it has enough theoretical knowledge as well as practical skills of stamping to transfer to the private companies. Equipment provided by the project is generally utilized despite some problems concerning incompatibility with CIDESI system (die design software DI PRO), and manuals prepared by the project are still utilized with some additional information after the project. On the financial aspect, CIDESI has received the federal budget for regular activities and has obtained approximately 25 million pesos through the innovation stimulus program for training, equipment and strengthening of SMEs in the period 2010-2013 (specific financial data or statement of CIDESI is not available due to its inner policy). Besides, CIDESI conducts necessary activities using the service charges paid by the clients. SMEs which do not have sufficient budget to receive CIDESI's charged services attended fee-free seminars provided by CIDESI. From these findings, sustainability of the project is high.

5 Summary of the Evaluation

This project has somewhat achieved the project purpose and overall goal. Regarding capacity development of technical staff of CIDESI, they are capable of providing technical services to small and medium-sized stamping industries. In addition, some companies in Queretaro have received technical assistance from CIDESI, though the number has not increased. As for sustainability, this project is still given importance in the current development policy and there is no problem observed in terms of institutional, technical and financial aspects. For efficiency, the project cost slightly exceeded and the project period was longer than the plan. In the light of above, this project is evaluated to be satisfactory.

III. Recommendations & Lessons Learned

Recommendations for Implementing Agency:

- It is recommendable for CIDESI to utilize assessment and data collected through monitoring client companies to evaluate their activities. Based on those evaluation, CIDESI would specify what activities to be continued for client to produce better results and what activities to be revised. Hence, these activities lead CIDESI to strengthen their own capability.
- Due to the limited budget, it is difficult for SMEs to have technical advisory services of CIDESI. It is recommended that CIDESI enhance opportunities for SMEs to receive low-fee or free advisory services since the target of this project is to upgrade capability of small and medium-sized stamping industries.

Press Area of a Stamping Company supported by CIDESI

Dies Store Area of a Stamping Company supported by CIDESI

Internal Ex-Post Evaluation for Technical Cooperation Project

conducted by Nicaragua Office:February, 2015

Country Name	Improvement of Cattle Productivity for Small and Medium Scale Farmers Project in the Republic of Nicaragua
Republic of Nicaragua	

I. Project Outline

Background	In Nicaragua, the northern mountain area is the main area of cattle production. 80% of farmers in the area were deemed as small-scale farmers with less than 35 ha (2001 census). They cultivated corns and others for self-consumption and at the same time, they were engaged in cattle production and played a role of supplier of beef and dairy products. However, the area's productivity was very low as the area had problems of (1) shortage of feeding stuff in dry season, (2) deterioration of livestock due to inbreeding, and (3) worsened cattle reproductive ability. Moreover, the government's support to the farmers was not sufficient and the instruction capacity of technical experts in livestock associations varied. As a result, the productivity in the area had not been improved.
Objectives of the Project	1. Overall Goal: Cattle production technical capacity of small and medium scale farmers is enhanced and farm management improves in the target areas 2. Project Purpose: Cattle production technical capacity of small and medium scale farmers is enhanced and farm management improves in the model areas
Activities of the project	1. Project site: (1) Model areas: 6 municipalities selected from Boaco department and Chontales department (From Boaco department: Camoapa and Boaco municipalities. From Chontales department: San Francisco de Cuapa, San Pedro de Lóvago, Santo Tomás and Villa Sandino municipalities.) (2) Target areas: Boaco department and Chontales department 2. Main activities: (1) Training to extension officers (technical experts) and to farmers/farm workers on appropriate technologies (feeding system, livestock reproduction, livestock hygiene technology), (2) training on artificial insemination and transplantation of fertilized eggs at national institutions, (3) farming planning and awareness activities 3. Inputs (to carry out above activities) Japanese Side 1. Experts: 13 persons (Long-term:8 persons, Short-term:5 persons) 2. Trainees received :11 persons (training in Japan) 3. Equipment: Vehicles, PCs, Audio Visual equipment, Sonogram, Microscopes and others Nicaraguan Side 1. Staff allocated: 28 persons 2. Land and facilities: Project offices at MAGFOR regional office and UNA, venue and accommodation for training 3. Local cost: 1,040 thousand US dollars
Ex-Ante Evaluation	2005 / Project Period: May 2005 – May 2010 / Project Cost: 580 million yen
Implementing Agency	- Centro de Servicio Genético Pecuario (CSGP, Livestock Genetic Service Center) under Ministerio Agropecuario y Forestal (MAGFOR, Ministry of Agriculture and Forestry) - Universidad Nacional Agraria (UNA, National Agrarian University)
Cooperation Agency in Japan	Ministry of Agriculture, Forestry and Fisheries

II. Result of the Evaluation

1 Relevance

This project has been highly relevant with the prioritized policy of "strengthening of competence as a means of poverty reduction" which focused on promotion of cattle production in rural areas as set in National Development Plan (2002), National human development and food security plan (2008-2012) and other documents as well as development needs of importance of livestock farming in the target areas[1] at the time of both ex-ante evaluation and project completion. The project is also consistent with Japan's ODA policy (Country assistance program for Nicaragua 2002 and JICA's country implementation plan for prioritizing agriculture and rural development) at the time of ex-ante evaluation. Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project mainly implemented (1) training for extension officers (technical experts) so that they provide training to farmers on appropriate technologies (feeding system, livestock reproduction, livestock hygiene technology) introduced by the project, and (2) training on artificial insemination and transplantation of fertilized eggs at national institutions. By using these technologies, the project aimed to improve cattle productivity of farmers both in the model areas and the target areas.

The project achieved the project purpose at the limited level by the time of the project completion. The project trained 450 farmers on appropriate technologies and 29 monitor farmers were selected by the project completion[2]; however, cattle productivity did not reach the target level (see the table below). It is because there was not enough pasture production and water in dry season, and farmers did not completely apply appropriate technologies due to the following reasons; (i) most of the farmers did not implement periodic grass/pasture production, (ii) no institution followed up the farmers' activities after the

[1] Although the cattle herd has increased in Chontales and Boaco departments, the ratio against national cattle herd has decreased.

[2] Monitor farmers are the cooperation farmers from whom the data is collected to measure the effectiveness of the project and for whom the appropriate technologies are extended. .

training, (iii) at the beginning, the project aimed to appoint 60 monitor farmers, but only 29 were selected due to the difficulties in allocation of technical experts and road conditions and (iv) farmers were not well aware of marketing strategy including quality, prices, amount of sales all of which are critical to continue acquired skills. The implementation of artificial insemination by farmers at the time of project completion was low, and since there has not been a good management of the heard, this activity has not contributed to the improvement of the productivity[3] as expected.

After the project completion, however, quantity and quality of milk have been improved by the effort of implementing and cooperating organizations/agencies who have extended the appropriate technologies introduced by the project. As of 2014, 9 appointed monitor farmers in Camoapa (Boaco Department) have been actively implementing the technology at the local level by using PROGANICs' methodology through Masiguito Cooperative, and in the rest of 5 out of 6 model areas, approximately 5 monitor farmers in each area have continued the activities. A case featured-worthy is Masigito cooperative as well as Chontalac cooperative. Masiguito cooperative has kept implementing the project's methodology to a group of 9 farms called Pan-American in Boaco, They also established a system to improve the milk production process on both quality and quantity of milk, providing a free technical assistance to their members/partners. According to the Masigito, members feel benefited by implementing good milk techniques, producing grade A quality milk, and by obtaining good price as a result of reputation of the cooperative. Their member increased from 400 (2006) to 960(2014), and all of them have been trained on the effective milking practices and implementing its hygiene process. Regarding Chontalac Cooperative, it has maintained the same number (900 farmers) of its member in the target area. Therefore, in sum, 1860 farmers in the target area have been working by applying the technologies introduced by the project through training by cooperatives（Masiguito and Chontalac） and programs of MEFCCA[4] with cooperation of city hall. In case of city halls, while they have been facing difficulties to continue the activities because of change of administrative personnel after the elections in 2011, some city halls still provide technical guidance by using picture indicators for dissemination of the technologies. The above improvement at the local level has been positively influenced by national level counterparts who have also played an important role to develop and operate the project methodologies and its techniques. For example, MEFCCA re-established PROGANIC system and has allocated a certain amount of budget on the system. Alba Genetica, a joint venture that acquired the administration of Livestock Genetic Service Center, has managed artificial insemination governmental program. It has focused on the artificial insemination activity, providing the services for 6, 212 cattle in total in the model areas after the project completion. Moreover, UNA's strong decision in 2010 has led to further implementation of PROGANIC methodology at the national level. However, some issues still remain. Due to the fact that main offices of MEFCCA and UNA are located in Managua (the capital), the MEFCCA and UNA prioritized reinforcing capacities in South Pacific Region and Rio San Juan and thus it was difficult for them to keep supervising the activities of farmers groups. Therefore, there was no frequent follow up by these counterparts in the model and the target areas. Also, coordination among the stakeholders stated above is not sufficiently enough for the extension services in model and target areas at the time of ex-post evaluation.

As for the overall goal, the data of monitor farmers in target areas was difficult to obtain at the time of ex-post evaluation, dividing the data of the model areas and thus achievement level of 2-4 indicators could not be measured. As for indicator 1, according to the interviews with 4 technicians of Masigito and Chontalac cooperatives, 2 persons from city halls, and 5 persons from UNA, MAG, MEFCCA and CONAGAN, it is confirmed that the average increase of milk yield was 32% in the target area which includes the model areas.

Other several positive impacts are observed. Both of MEFCCA and UNA have extended the appropriate technologies to other areas in the country, such as Rio San Juan, Estelí, Nueva Guinea, Carazo and Rivas. MEFCCA trained 63 technicians (5 from the project target areas and 58 from the South Pacific region of Nicaragua) who in turn have introduced appropriate technologies for cattle productivity improvement to 1,500 small scale farmers called protagonistas after the name of this project (the project's acronym is PROGANIC) in mainly South Pacific Region. UNA transferred the project methods to other 4 universities in Nicaragua. UNA also has provided extension services to Rio San Juan farmers with a PROGANIC approach. UNA's students as well as professors have provided trainings in Rio San Juan Farms.

The project has achieved its project purpose by the time of the project completion at the limited level but some of the effects were continued in the model areas. However, several indicators of overall goal could not be measured by the time of the ex-post evaluation. Nevertheless, the project methodologies and technologies have remained and made good use at some of the model areas. Moreover there are positive impacts that the appropriate technologies introduced by the project have been disseminated in other regions of the country, therefore, the effectiveness/impact of the project is fair.

Achievement of project purpose and overall goal

Aim	Indicators	Results
(Project Purpose) Cattle production technical capacity of small and medium scale farmers is enhanced and farm management improves in the model areas	Indicator 1: Average milk yield per cattle in dry season increases by 30% at more than 50% of monitor farmers in the model areas	(Project Completion) The average increase (of 5 monitor farmers) of milk yield is 17% (4.1kg/cattle versus baseline of 3.5kg/cattle) (Ex-post Evaluation) The average increase of milk yield is 44.6% (5.06kg/cattle versus baseline of 3.5kg/cattle) in 50% of 10 samples of farmers in the model areas**.
	Indicator 2: Yearly calving rate reaches at least 60% at more than 50% of monitor farmers in the model areas	(Project completion) Yearly calving rate reached 60% at 47.36% of monitor farmers in the model areas. (Ex-post Evaluation) The average yearly calving rate is 52% in 50% of 10 samples of farmers in the model areas. .

[3] Technical transfer on artificial insemination and transplantation of fertilized eggs was completed by the end of the project. But before the transfer was completed, during the project implementation, the function of artificial insemination was contracted out to private companies. In the field level, farmers just started experiments at the time of project completion.

[4] MAGFOR's extension function was transferred to Ministerio de Economia Familiar comunitario Cooperativa y Asociativa (Ministry of Family Economy, Communitarian, Cooperative and Associative, MEFCCA) in 2011.

	Indicator 3: Average daily weight increase of 7 month cattle is more than 30% at more than 50% of monitor farmers in the model areas	(Project completion) The average daily weight of 7 month cattle (of 5 monitor farmers) was 0.25 kg (16% less than the baseline (0.3 kg at mid-term review). (Ex-post Evaluation) The average daily weight increase of 7 month cattle is 0.25 kg in 60% of 10 samples of farmers in the model areas. (16% less than the base line of 0.3kg and same average from the time of project completion).
	Indicator 4: Hygiene quality of milk becomes grade A at least 50% of monitor farmers and pilot farmers	(Project completion) 41% in the model area. However, 67% of the association groups achieved grade A. (Ex-post Evaluation) 100% of 10 samples of farmers in the model areas produced milk grade A. Moreover, 60% of 10 sample farmers in the model area produced grade A hygiene quality milk with over 30% of the production volume.
(Overall goal) Overall Goal: Cattle production technical capacity of small and medium scale farmers is enhanced and farm management improves in the target areas	Indicator 1: Average milk yield per cattle in dry season increases by 30% at more than 30% of monitor farms in the target areas	(Ex-post Evaluation) The average increase of milk yield was 32% in the target area which includes the model areas (while its milk yield was 4.62kg/cattle, base line was 3.5kg/cattle). ***
	Indicator 2: Yearly calving rate reaches at least 60% at more than 30% of monitor farmers in the target areas	(Ex-post Evaluation) The data of monitor farmers in the target area was not available.
	Indicator 3: Average daily increase of weight of 7 month cattle increases by more than 30% of more than 30% of monitor farmers in the target areas	(Ex-post Evaluation) The data of monitor farmers in the target area was not available.
	Indicator 4: The number of farmers who produce grade A hygiene quality of milk increases	(Ex-post Evaluation). The data of monitor farmers in the target area which excludes the data from model areas was not available.

Source：Terminal evaluation report, Project completion report, Interviews with counterparts and farmers and surveys in 2014.
* At the time of project completion, 5 samples of monitor farmers in the model area were used for indicator 1 and 3. However, the number of sample for indicator 2 and 4 is unknown.
**At the time of ex-post evaluation, the data on the productivity of 10 samples of farmers in the model area (8 monitor farmers and 2 pilot farmers) was collected for continuity of the project purpose by the time of the ex-post evaluation.
*** The information was collected through cooperatives. the data could not be distinguished as the data from model areas or that from target areas, thus this information is the data from the target areas which includes the model areas.

3 Efficiency

While the project period was within the plan (ratio against the plan: 100%). The project cost slightly exceeded the plan (ratio against the plan: 105%) because the provision of the materials were added based on the agreement of the Joint Coordination Committee. (E.g., infrastructure materials to the monitors and pilot farms (such as building materials for floors and sleeves, traps vampires, platform balance, , etc) and materials for implementation and proper maintenance of artificial insemination to UNA Therefore, efficiency is fair.

4 Sustainability

In the policy aspect, the project is still given importance in the current development policy, as National Human Development and Food Security Plan (2012-2016) set the target of strengthening competence of and value addition to the products. Initiatives for improving livestock productivity have been promoted by the government. One of the initiatives is “Conversion of livestock cattle and sheep of Nicaragua subprogram” (2008-2012/2012-2016), which aims to improve productivity of small and medium producers and achieve greater competitiveness.

Institutional setup has been changed after the project completion. MAGFOR no longer carries out extension activities, however, MEFCCA is responsible for MAGFOR’s role and operational function; extension of appropriate technologies at the national level. The personnel trained by the project have transferred to MEFCCA extension department; therefore the trained personnel still work at MEFCCA. Also, the responsibility for management of the Livestock Genetic Service Center transferred from MAGFOR to Alba Genetica and Alba Genetica has made good use of techniques, methodology, capacities built by the PROGANIC project. MEFCCA has prioritized South Pacific Region and Rio San Juan in order to reinforce these areas’ capacities after MAGFOR’s programs of extension were transferred to MEFCCA (since 2011). Some of city halls in the model area face difficulties to continue the extension activities, however there is an extension area attended by 1-3 technicians to cover all the communities. Masiguito Cooperative hired 6 technical officers who have been applying the PROGANIC system at the local level, using the materials provided by PROGANIC (manuals, posters, etc.) to train farmers. CONAGAN has 9 experts on extension activities covering national range. Each of MEFCCA, UNA, City Halls and cooperatives has appropriate institutional setup to sustain effects of the project. .

Technical level of MEFCCA and UNA is sufficient as they are continuously involved with extension of the technology introduced by the project. MEFCCA has been using the manuals elaborated during/after the project implementation. Two manuals were reedited with a Japanese expert (short term) in 2012 and three new small illustrated manualson cattle were published[5].UNA has extended the project results to Rivas, Estelí and the Atlantic Region by training 4 universities[6]. These

[5] The manuals are namely (1) let’s know about mastitits, (2) Milk production by introducing cutting pasture, (3) Herd improvem ent
[6] 4 universities include: EIAG: Escuela Internacional de Agricultora y Ganadería UCATSE: Universidad Católica del Trópico Seco BICU: Bluefields Indian and

universities are also implementing PROGANIC's technologies in a new farm school in Rio San Juan. This school was established with a project founded by NCU (National Council of Universities) to develop the PROGANIC system and train faculties and students. Furthermore, City halls and cooperatives have carried out different training programs in the target areas, combining the contents/topics of PROGANIC methodology, such as traceability (with MAG[7]), entrepreneurship (with MEFCCA), and also donation projects (in collaboration with Luxembourg and San Pedro de Lóvago).Cooperatives such as Masiquito have technical capacity as they continue implementing the technology introduced by the project.

Financially, at the level of the local counterpart, Masiguito Coop. requires an investment average of US$ 3,100 to US$ 3,300 (monthly) for extension activities in Camoapa, one of the model areas. To fulfill activities, they are managing a "Food Cattle Processor" project[8] during 2014 to 2015. This project includes extension and training programs for not only technicians but also farmers, following PROGANIC's methods. However, at the level of national counterpart, it is uncertain whether MEFCCA's yearly budget would be assigned to secure financial source for the PROGANIC project in the target areas or not. Moreover, UNA has to secure financial source on a project basis from MEFCCA or partners if they intend to further extend the technologies introduced by the project.

As there are some uncertain facts in financial aspects, sustainability of the project is fair.

5 Summary of the Evaluation

This project has achieved its project purpose by the time of the project completion at the limited level as the productivity of cattle is low. However, till the time of ex-post evaluation, some of the effects have continued and also implementing agencies and cooperating agencies have extended the appropriate technologies introduced by the project at the national level including the model areas and target areas. As for the overall goal, the data to confirm the achievement level was not available at the time of ex-post evaluation. The project cost exceeded the plan during the implementation. Nevertheless, the continuous extension activities by the counterparts are worthy of mention in terms of project sustainability, since this project is still given importance in the current development policy and other sustainability aspects are stable except for financial issue. In the light of above, this project is evaluated to be partially satisfactory.

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

1. To MEFCCA. Participation of MEFCCA in the model and target areas is necessary to sustain the project effect further. MEFCCA's cooperation with the Operational Committee[9] is recommended, because they are responsible for extension matters in the government.
2. To city halls and cooperatives in the model and target area. City halls and cooperatives are encouraged to participate as part of the Operational Committee. Also, periodic (e.g. monthly) meetings should be held to establish network for collaboration with other institutions and enhance the actions taken at the field level.

Lessons learned for JICA

1. At the time of project completion, the implementing agencies at national level changed functions: MAGFOR no longer managed extension programs, and instead MEFCCA started performing such function. So it would have been effective for JICA to have continuous dialogue with a new agency and make sure that the new agency implements future activities to sustain the project effects even after the project completion.
2. In this project, Masigito cooperative appreciated the good quality milk and set better prices, which made farmers continue hygiene milking techniques. On the other hand, many farmers claimed that they have not continued the hygiene technology because their cooperatives do not pay enough reward for better quality products. Thus, to ensure project sustainability, it would be effective to design a project in a way incentives are given to farmers including cooperatives along with operative marketing strategies.
3. In this project, the main counterparts were local institutions instead of those at the national level. The lesson is that the project could encourage more efforts to sufficiently involve not only cooperatives and city halls, but also the national counterparts, so that some issues like budget constraints of cooperatives could be addressed. Moreover, promotion of coordination among them during the project period would be effective for enhancing project's sustainability.

El Lovago City Halls,
showing some techniques Taught By PROGANIC

PROGANICs indications about bats capture

Carribean University URACAN: Universidad de las Regiones de la Costa Atlántica de Nicaragua

[7] MAG (Ministerio de Agricultura y Ganaderia) is the former MAGFOR.

[8] The project is construction of the food processor plant with a budget of US$ 600,000 (50%: non-refundable by MEFCCA, 25%: Institutional loan - CARUNA, 25%: own founds) .

[9] The operational committee consists of MAG, UNA, MEFCCA and CONAGAN. Its purpose is to discuss relevant project's operations, strategies budget, etc.

Internal Ex-Post Evaluation for Technical Cooperation Project

conducted by Iran Office:February, 2015

Country Name	The Project for Strengthening Technical and Vocational Training Management Skills in Technical and Vocational Training Organization
Islamic Republic of Iran	

I. Project Outline

Background	In Iran, youth unemployment rate with the level of around 10% was a social problem (2005). The vocational training in Iran was implemented mainly by the Technical and Vocational Training Organization (TVTO) under the Ministry of Labor and Social Affairs (MOLSA), which had 588 Technical and Vocational Training Centers (TVTC) throughout the country and provided vocational training to about 1.8 million people a year (2007). TVTO's training contents, however, did not meet the needs of labor market. Also, TVTO did not have an efficient instrument to review, evaluate, and improve the training courses.				
Objectives of the Project	1. Overall Goal: The CBT(Note1) approach becomes a basis of the training structure of Technical and Vocational Training Organization (TVTO). 2. Project Purpose: TVTO's training management cycle is improved. (Note 1) CBT stands for competency-based training, and is the training based on the needs in the industry. The CBT method is merely an instrument, and its purpose is to establish a training management cycle for implementing training that reflects the needs in the industry (gathering information on the needs in the labor market, development of curriculum and training materials based on labor needs, implementation of training, monitoring/evaluation after the training and reflecting the results in the training).				
Activities of the project	1. Project site: Tehran and Karaj 2. Main activities: 1) Training of TVTO staff, 2) development of standard and training curriculum for pilot training course, 3) develop guideline and training materials, 4) implement pilot training course, 5) develop training and monitoring system, and 6) develop training management improvement plan. 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 8 persons 2) Trainees received: 8 persons 3) Equipment: Office equipment (PC and printers, etc.) Iranian Side 1) Staff allocated: 29 persons 2) Land and facilities: Project office and equipment for pilot training course				
Ex-Ante Evaluation	2007	Project Period	July 2007 – December 2010	Project Cost	287 million yen
Implementing Agency	Technical and Vocational Training Organization (TVTO)				
Cooperation Agency in Japan	• Ministry of Health, Labor and Welfare (MHLW), Employment and Human Resources Development Organization of Japan • PADECO				

II. Result of the Evaluation[1]

1 Relevance

This project has been highly relevant with Iranian development policy "improvement of vocational training system" as set in the policy documents including, the Fourth Five-Year National Development Plan (2005-2009) and Fifth Five-Year National Development Plan (2010-2014), and development needs of resolving the mismatch between training standards and courses and the needs of the labor market and employment, and strengthening the improvement process of training evaluation and courses at TVTO at the time of both ex-ante evaluation and project completion. It is also consistent with Japan's Country Assistance Plan for Iran (2007) as well as JICA's Country Assistant Program for Iran (2004) at the time of ex-ante evaluation. Therefore, relevance of this project is high.

On the other hand, some problems were identified in the project design during the project period. Firstly, although the CBT approach has been recognized as an effective approach in the vocational training in Iran at the time of ex-post evaluation[2], the approach based on CBT was not necessarily appropriate as an area to be supported by Japan since CBT had not been commonly practiced in Japan and the Japanese resource was limited.[3] Secondly, in this project, the overall goal was revised two times during the project period in order to specify the expected project impact, which is very rare, as it might change the project itself.[4] Thirdly, the selection of the counterpart department/section and personnel which was influenced by political factors made it difficult to implement the technical transfer project. The frequent changes in the counterpart unit/department of the project and a decrease in the number of trainers who were the key agent to disseminate the CBT approach hampered the project from producing outputs as planned.

[1] There was a revision of overall goal as follows: (i) in PDM0 at ex-ante evaluation in 2007, the overall goal was set as "unemployment, especially of youth and women is improved"; (ii) in PDM1 at mid-term review in 2009, it was revised to "the National Vocational Qualification in labor force is improved; and (iii) in PDM2 at terminal evaluation in 2010, it was further revised to "the CBT approach becomes a basis of the training structure of TVTO".

[2] For example, it is confirmed that the 1,500 standards were developed and the CBT approach was mentioned in the "Guideline for Development of Curriculum and Executive Plans of TVTO".

[3] In order to efficiently introduce the CBT approach, the project mobilized an Australian expert in CBT. ("The Terminal Evaluation Study Report (Japanese Version), pp.32-33)

[4] Mentioned in the Mid-term Review Study Report (p.6) and the Terminal Evaluation Study Report (p.3)

2 Effectiveness/Impact

The project aims to improve TVTO's training management cycle through introducing CBT approach.

The project purpose was achieved at the time of project completion although there were changes in Iranian counterpart section/department as well as Project Design Matrix (PDM).[5] The indicator 1 "Pilot training course is planned and implemented twice until the end of the project" was achieved. The project developed and implemented two pilot training courses with participation of seven instructors and 24 trainees, which covered 10 out of 21 Units of Competence (UOC) (Note 2) in the Automotive Certificate II level. The indicator 2 "Experiences and lessons from the implementation of pilot training course are analyzed and reported" was achieved. The project produced (i) the CBT manual containing manual on competency standard development, manual on CBT delivery and manual on monitoring and evaluation, (ii) the workbooks for the first pilot training course and second pilot training course, (iii) the introduction program for developing and delivering a competency based curriculum, and (iv) the report on needs assessment survey results for the pilot training courses. As for indicator 4 "Based on the experience and lessons from pilot training course, a plan for training management improvement is completed at the end of the project", it was achieved. The project produced the second edition of TVTO training management improvement plan (English version) by the project completion for institutionalizing training management cycle through introducing CBT approach to TVTO. However, the ex-post evaluation as well as the terminal evaluation did not verify the achievement of indicator 3 "The trainees' satisfaction rate of pilot training is better than that of other courses" because it was difficult to compare trainees' satisfaction between pilot trainings and other ordinary courses of TVTO since there were differences in training contents and training environment.

After project completion, TVTO has continued to conduct two pilot training courses developed by the project, and developed more than 1500 CBT standard and curricula[6]. According to TVTO, the experience and know-how of training management cycle based on CBT approach including steps of needs assessment, establishment of training course standard and curriculum planning, and course monitoring and evaluation, been shared with the staff of respective responsible section/department such as Training Section, Research and Planning Section including the Curriculum Development Center (CDC).

For the overall goal, "the CBT approach becomes a basis of the training structure of TVTO" has partially achieved. As for indicator 1 "CBT manual (final version) in Persian is produced", it was achieved. Regarding indicator 2 "Representatives (core instructors) of each TVTC take CBT training courses conducted by TVTO", it was achieved to some extent. Actually TVTO conducted CBT training courses for two times for 30 instructors/course, total 60 instructors. The documents shows that more than 16000 trainers from private and public- sector TVTCs were trained on CBT approach by 60 instructors those who took the training on CBT approach from 3 of core Instructors by CBT approach between 2011 and 2014[7]. However, due to lack of affiliation information about those trainers, status of achievement for indicator 2 was not able to be verified.[8]

As for impact, several positive impacts were observed. After project completion, TVTO developed the curriculum of remaining 11 UOC to complete the Automotive Certificate II level which was not covered by the two pilot training courses. In addition, TVTO newly developed three pilot training courses in industry, service and agricultural sector. Furthermore, 30 vocational training courses on the field of auto mechanics and related subjects have been designed by the Curriculum Development Center (CDC) of TVTO based on CBT approach.

There was no negative impact and the project did not associate with land acquisition and resettlement of the people.

Therefore, effectiveness/ impact of the project is fair.

(Note 2) Units of Competency (UOC) are the nationally agreed statements of the skills and knowledge required for effective performance in a particular job or job function—they describe work outcomes as agreed by industry (Source: National Skills Standard Council, Australia).

Achievement of project purpose and overall goal

Aim	Indicators	Results
(Project purpose) TVTO's training management cycle is improved.	(Indicator 1) Pilot training course is planned and implemented twice until the end of the project.	(Terminal Evaluation) Achieved • Two pilot training courses on the fields of "repair of electric system in auto mechanics" and the "inspection and maintenance of automobiles" were implemented with participation of seven instructors and 24 trainees. • The pilot training courses covered 10 out of 21 Unit of Competence (UOC) in the Automotive Certificate II level. (Ex-post evaluation) • After the project completion, TVTO conducted two pilot training courses developed by the project with total 60 participants including instructors of Technical and Vocational Training Centers (TVTCs) and technicians of automobile industries and companies.

5 Although there were changes of counterpart department, local consultant could cover partly what was supposed to be done by the counterpart. (Mid-term Review Study Report (Japanese), p17)

6 Confirmed by the URL: http://research.irantvto.ir/index.aspx?siteid=83&fkeyid=&siteid=83&pageid=3536

7 Confirmed by the Participant List (16,000 names are written down), made by Karaj ICT

8 Regarding the route of dissemination of CBT approach, the ex-post evaluation could not verify if the process of implementation was carried out as proposed way in the Project Completion Report (Japanese version p65). (Process to implement the course was proposed as follows; at development phase, course to be implemented at ITC, at pilot phase, course to be implemented at model TVTCs, and full scale implementation phase, course to be implemented at all TVTCs.)

	(Indicator 2) Experiences and lessons from the implementation of pilot training course are analyzed and reported.	(Terminal Evaluation) Achieved • The following technical outputs were produced by the project based on the experiences and lessons from the implementation of pilot training course. ➢ Introduction Program for Developing and Delivering a Competency Based Curriculum: Overview ➢ Report on Interview Survey to Define Competency Standard for the First Cycle Pilot Training Course ➢ Report on Interview Survey to Define Competency Standard for the Second Cycle Pilot Training Course ➢ CBT Manual (incl. Manual on Competency Standard Development, Manual on CBT Delivery and Manual on Monitoring and Evaluation) ➢ Workbooks for the first pilot training course and second pilot training course (Ex-post evaluation) • The technical outputs produced by the project have been utilized continuously by TVTO after the project completion.
	(Indicator 3) The trainees' satisfaction rate of pilot training is better than that of other courses.	(Terminal Evaluation) N.A. • It was difficult to compare trainees' satisfaction between pilot trainings and other ordinary courses of TVTO because there are differences in training contents and training environment. Therefore the terminal evaluation did not consider this indicator in making evaluation judgment. (Ex-post evaluation) N.A. • Addition to the reason pointed out at the terminal evaluation, Indicator 3 is for confirming the satisfaction level of pilot training courses but not for measuring whether the TVTO's training management cycle was improved or not, so this indicator cannot verify the achievement of the project purpose. Therefore, the ex-post evaluation does not consider this indicator in making evaluation judgment.
	(Indicator 4) Based on the experience and lessons from pilot training course, a plan for training management improvement is completed at the end of the project.	(Project completion) Achieved • The second edition of TVTO training management improvement plan (English version) was completed based on the result of discussions between the Japanese and Iranian sides at terminal evaluation. (Ex-post evaluation) • N/A
(Overall goal) The CBT approach becomes a basis of the training structure of TVTO.	(Indicator 1) CBT manual (final version) in Persian is produced.	(Ex-post evaluation) Achieved • CBT manual (final version) in Persian was produced.
	(Indicator 2) Representatives (core instructors) of each TVTC take CBT training courses conducted by TVTO.	(Ex-post evaluation) • After the project completion, TVTO conducted CBT training courses for two times for 30 instructors/course(total 60 instructors). • Around 93 TVTCs accounted for about 14% of 673 TVTCs in the country in total, delivered trainings on CBT approach. *note : At the ex-post evaluation, total number of TVTC is 673.

Source : Terminal Evaluation Report, Interviews with counterparts

3 Efficiency

Although the project period was within the plan (ratio against the plan: 100%), the project cost slightly exceeded the plan (ratio against the plan: 108%). In addition, although the outputs were produced as planned, additional inputs such as local consultants were required in order to undertake implementation of the planned activities which should had been implemented by the counterpart staff of the Iranian side. The frequent changes of the counterpart section/department as well as personnel and the decreased number of the trainers to be trained reduced efficiency of the project activities to produce the planned outputs[9]. Therefore, efficiency of the project is fair.

[9] It is informed that personnel matters of TVTO was often intervened by political intervention (source: internal documents). Regarding the frequent changes of Counterpart department/section and person in charge was written in the mid-term review report (p.25), terminal evaluation report (p.23, p.32) and internal documents. Regarding the CBT approach was mentioned on terminal evaluation report (p.32.)

4 Sustainability

In the policy aspect, the CBT approach was approved by the Iranian government as a national approach in the field of TVTO Standards. However, the reform of the technical vocational training sector of the country by the Iranian government is still on going and it is expected to be completed by 2019.

Institutionally, TVTO continues to promote to institutionalize the training management cycle based on the CBT approach. The three counterpart instructors mainly received the technical transfer from the project have been working as important resource persons for promotion of CBT based training/CBT approach training as well as sharing their experience of the project to other staff. TVTO has been coordinating with Industry Reference Group (IRG) (Note 4).

On the other hand, the ex-post evaluation could not analyze the technical and financial aspects because it was not able to collect the relevant information from TVTO.

From these findings, it is considered that the policy aspect should be continuously followed, and technical and financial aspects were not verified due to unavailability of information; therefore, sustainability of the project is fair.

(Note 4) Industry Reference Group (IRG) is an advisory body of TVTO established by the project to discuss designs of training courses matched with industry needs. IRG consists of representatives from various types of automotive service and repair industry. IRG is an important mechanism for TVTO to introduce and expand the CBT system.

5 Summary of the Evaluation

This project has achieved the project purpose and partially achieved the overall goal through improvement of TVTO's training management cycle including steps of needs assessment, establishment of training course standard and curriculum planning, and course monitoring and evaluation by introducing the CBT approach. As for impact, several positive impacts were observed such as (i) development of the curriculum of remaining 11 UOC to complete the Automotive Certificate II level which were not covered by the two pilot training courses, (ii) development of additional three pilot training courses in industry, service and agricultural sector, and (iii) designing of 30 vocational training courses on the field of auto mechanics and related subjects. As for sustainability, although the CBT approach was approved by the Iranian government as a national approach in the field of TVTO Standards, the reform of the technical vocational training sector of the country is till on going. Also it was difficult to evaluate the technical and financial sustainability due to lack of relevant information. The project cost slightly exceeded the plan.

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

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

- Since the number of the trained instructors is limited to 60, it is essential to increase the number of trainer's training and to increase the well-trained instructors in order to extend quality vocational trainings based on the CBT approach which has been introduced by the project.

Lessons learned for JICA

- In technical cooperation projects supported by JICA, technical transfer from Japanese experts to counterparts is the key process of capacity development in order to achieve the project purpose and the overall goal. Also, assignment of counterpart by the recipient country is the key inputs for technical cooperation. In the case of this project, the frequent changes in the counterpart unit/department hampered efficient implementation of the planned project activities to produce the outputs and to achieve the project purpose. Therefore, it is essential to carefully select the counterpart unit/department and to carefully target the counterpart staff to be transferred skills and knowledge from Japanese experts at the planning stage.
- The means such as documentation of the process and methods that the Project finalized as an output products can be the assets for the counterpart organizations which have the frequent human transfer within the relevant organizations.

(Conducting CBT Course for Trainers (1))

(Conducting CBT Course for Trainers (2))

(Conducting Automotive Course based on CBT)

conducted by Malawi Office: January 2015

Country Name	The Project for Supporting District Education Plan Institutionalisation Programme
Republic of Malawi	

I. Project Outline

Background	After introduction of the National Decentralization Policy (NDP) in 1998 and the Education Sector Decentralization Guideline in 2001, the responsibility of primary education and Open and Distance Learning (ODL) was transferred from the central government to district government level. In the new policy, the district assemblies were mandated to prepare and implement the District Development Plans (DDPs) which was composed of development plans of all sectors including the District Educational Plans (DEPs). However, the quality of DEPs varied depending on the districts and no guideline was established. In such circumstance, the Ministry of Education, Science and Technology (MoEST) started the study for the National School Mapping and Micro-planning Project (2000-2002) and the National Implementation Programme for District Education Plans (2003-2005) with the support of JICA, aiming to enhance the capacity of local government officials at district level. As a result, DEPs were developed in all the 34 districts of the country and implementation of the DEPs was piloted in 6 districts. However, there was still a certain necessity to support especially in the capacity development for both MoEST to institutionalize the DEP process and the district officials to plan/update quality DEP.
Objectives of the Project	1. Overall Goal: District Education Plans (DEPs) are utilised as a basis for budgeting and implementation in all Districts. 2. Project Purpose: Quality DEPs are developed and regularly reviewed in all Districts.
Activities of the project	1. Project site: Nationwide (all the 34 Education Districts) 2. Main activities: 1) Baseline survey, 2) development of DEP guidelines and manuals, 3) training and workshops on developing and reviewing DEP for targeting officials from the MoEST including Divisional Education Planner, District Education Manger (DEM) and officials from the local governments, 4) trainings on marketing skills for core trainers and district officers 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 3 persons 2) Trainees received: 15 persons 3) Equipment: Vehicle, office equipment (PC, printer, software, projector, etc.) for provincial and district education offices. Malawian Side 1) Staff allocated: 32 persons 2) Land and facilities: Project office 3) Cost for Salaries of counterpart staff, workshop for DEP updating

Ex-Ante Evaluation	2006	Project Period	December 2006 – December 2010	Project Cost	208 million yen
Implementing Agency	Ministry of Education, Science and Technology (MoEST)				
Cooperation Agency in Japan	None				

II. Result of the Evaluation

1 Relevance

This project has been highly relevant to Malawi's development policy of "promotion of decentralization of educational service in Malawi" as set in policy documents including the Malawi Growth and Development Strategy I (MGDS I) (2006-2011), MGDS II (2011-2016), and the National Education Sector Plan (NESP) (2008-2017), as well as to development needs of strengthening the capacity of both MoEST to institutionalize DEP process and district officials to plan/update high quality DEPs at the time of both ex-ante and ex-post evaluation. It is also consistent with Japan's Country Assistance Plan for Malawi (2006) at the time of ex-ante evaluation. Therefore, relevance of this project is high.

2 Effectiveness/Impact

Based on the results of precedent JICA's studies, the project developed DEP guidelines and manuals, conducted training and workshops at central and district government offices for developing and reviewing DEPs, and trainings on marketing skills for core trainers and district officers. Through these activities, the project aimed at capacity development of the counterparts for developing and regularly reviewing quality DEPs in all districts in Malawi. Furthermore, the implementation of DEP components with sufficient budget support in all the 34 districts in Malawi was expected.

The project purpose was achieved by the time of project completion. During the project period, DEPs were regularly developed. The project successfully developed DEP 2008-2010 and DEP 2010-2012 in all the 34 districts. The annual plan of these DEPs were reviewed and developed every year. According to the survey results conducted by the project, it was confirmed that DEP 2010-2012 of all the 34 districts met the criteria of quality DEP[1] (see the indicator 3 of Project Purpose in the chart below).

After the project completion, the DEP 2013-2017 was developed for all the 34 districts in line with the second Education Sector Implementation Plan (ESIP II) (2013-2017) which was an implementation plan of the National Education Sector Plan

[1] The criteria of quality DEP are (i) critical analysis of issues, (ii) linkage with MGDS and NESP , (iii) priorities (clarity, degree of reflecting respective district needs), and (iv) realistic costing.

(NESP). Also it is observed that DEP 2013-2017 of all the 34 districts still satisfy the criteria of quality DEP because they were prepared according to the quality checklist as well as in line with DEP guidelines, manuals and the format developed by the project. The manuals, guidelines and simplified formats[2] have been utilized continuously to develop, review and update DEPs together with the use of data from the Education Management and Information System (EMIS) database. DEP marketing activities were implemented in all the 34 districts after the project completion. However, the training system for core trainers developed by the project has not been continued at the time of the ex-post evaluation. According to DEMs interviewed, instead, core trainers, DEMs and local government officers, who acquired the technical skills from the project, have been transferring the skill and knowledge to new officers through their interactions.

The overall goal was partially achieved. Only 393 out of 1,052 projects proposed in DEP 2010-2012 of the 34 districts were actually implemented, which count for 37% of total proposed projects. Only 8 out of the 34 districts successfully implemented more than 50% of the projects proposed in DEP 2010-2012. The common reason for this low achievement is a limited budget for implementation. The ex-post evaluation could not verify whether at least 2 prioritised activities in DEP are integrated into the DDP or not, because of the weak monitoring capacity of District Education Managers (DEMs) and insufficient communication between the local government office and the DEMs. This is compounded by the fact that the DDP and the DEP are formulated at different timing and using different process and/or sources of information for their formulation. It was confirmed that all the 34 districts allocated the necessary budget for supporting DEP cycle (planning, marketing and monitoring), although the implementation budget is limited.

Some negative impact on the natural environment was observed in many districts such as cutting down of trees to burn bricks for school construction and rehabilitation projects. Regarding this issue, the government has encouraged the stakeholders including local communities to use the stabilized breeze blocks made of sand and cement instead of the fire burnt bricks.

Therefore, effectiveness/ impact of the project is fair.

Achievement of project purpose and overall goal

Aim	Indicators	Results
(Project purpose) Quality DEPs are developed and regularly reviewed in all Districts	(Indicator1) DEP is regularly developed (at least twice within the project period)	(Project Completion) Achieved • DEP 2008-2010 and DEP 2010-2012 of all the 34 districts were developed. (Ex-post evaluation) • DEP 2013-2017 was developed for all the 34 districts. The new DEP is a five year plan. It was changed from a three-year plan in 2013 to match with the Education Sector Implementation Plan II (ESIP II) period (2013-2017).
	(Indicator2) Annual plan is regularly reviewed and developed (at least twice within the project period)	(Project Completion) Achieved • DEP Annual Plans for FY2009 and FY2010 for all the 34 districts were developed. (Ex-post Evaluation) • DEP Annual Plans are reviewed and developed every year in all the 34 districts, and are used as a monitoring tool to assess progress of the DEP implementation and to address emerging issues.
	(Indicator3) 70 % of DEPs meet the following criteria of "quality" DEP: - Critical analysis of issues - Linkage with MGDS and NESP - Priorities (clarity, degree of reflecting respective district needs) - Realistic costing	(Project Completion) Achieved • DEP 2010-2012 of all the 34 districts obtained more than 70% of quality score. (Ex-post Evaluation) • It is considered that DEP 2013-2017 of all the 34 districts satisfy the criteria of quality DEP as they were prepared in line with DEP guidelines, manuals and the format developed by the project.
(Overall goal) DEPs are utilised as basis for budgeting and implementation in all Districts	(Indicator 1) 50 % of DEP projects are implemented	(Ex-post Evaluation) Not achieved • Only 8 out of the 34 districts implemented more than 50% of the projects proposed in DEP 2010-2012. • In DEP 2010-2012, total 1,052 projects were proposed in all the 34 districts, and 393 projects, which count for 37% of total proposed projects, were actually implemented. The common reason for this low implementation rate was poor funding for implementation of DEP projects. In addition, the Development budget is still under the central office.
	(Indicator 2) At least 2 prioritised activities in DEP are integrated into the DDP	(Project Completion) • Based on the questionnaire survey, half of the districts answered that they integrated more than 2 activities of DEP into DDP in FY2009. At the same time, most of the districts indicated that DEP is utilized for DDP and Socio-Economic Profile (SEP) preparation (Ex-post Evaluation) N.A • It was difficult to verity the achievement of this indicator because most of the District Education Managers (DEMs) did not have the information about how many of their planned priorities in DEP were actually integrated into the

[2] Based on the project's recommendation at the time of Terminal Evaluation, the DEP format was reviewed and simplified to reduce redundant items in the format.

		DDP.
	(Indicator 3) Resources earmarked for supporting DEP cycle (planning, marketing and monitoring) been secured in local assembly and MoEST budget	(Ex-post Evaluation) Achieved • All the 34 district allocated a budget for the activities of DEP review, marketing and monitoring.

Source : Terminal Evaluation Report, Project Completion Report, Interviews with counterparts

3 Efficiency

Although the project period was within the plan (ratio against the plan: 100%), project cost exceeded the plan (ratio against the plan: 108%). Therefore, efficiency of this project is fair.

4 Sustainability

With regard to policy, there is no significant change in the education sector policy and the MoEST continues to promote the decentralization of educational services in Malawi by strengthening the function of district level. The 2001 Education Sector Decentralization Guideline mentioned that the DEP is a subordinate plan of the NESP and should have a direct link with the NESP.

Institutionally, there is no significant change in the structure of educational administration. The MoEST head office is mainly responsible for development of national educational policies and monitoring their implementation. The Policy and Planning Section in the Directorate of Education Planning of the MoEST has been functioning as a focal point in reviewing and updating of all DEPs. The Education Divisional Office (EDO) and the District Education Office (DEO) supervise the implementation of the education policy in their respective areas. The local government of each district is in charge of planning and implementation of pre-school education, primary education and distance education including development and implementation of DEPs with supports from EDO and DEO. Though core trainers trained by the project have continued to work at EDOs, the training system for the district government offices by the core trainers has not been functional at the ex-post evaluation due to budgetary constraints. There is a total of 18 officers in the Directorate of Education Planning of the MoEST and a total of 847 staff members in the DEO of all the 34 districts. This number of staff is adequate to conduct the required activities related to the development and implementation of DEPs.

Technically, the planning staff of the MoEST head office as well as Education Divisional Officers and District Education Officers have appropriate knowledge and skills to develop, review and update DEPs. Manuals and guidelines developed by the project have been utilized.

On the financial aspect, the MoEST's budget provided by the Ministry of Finance (MOF) is still limited to sustain the training system for core trainers. Also, the budget for implementation of proposed DEP projects is not sufficient mainly because of poor funding resource and/or a delay in transferring the development budget from the central government to district governments.

From these findings, it is observed that the implementing agencies have some financial problems. Sustainability of the project is, therefore, fair.

5 Summary of the Evaluation

The project purpose of "developing and regularly reviewing quality DEPs in all districts in Malawi" was achieved by the time of project completion. The project successfully developed DEPs in all the 34 districts, and the annual plan of the DEPs were regularly reviewed and developed every year. The developed DEPs of all the 34 districts obtained more than 70% on the quality score. At the time of ex-post evaluation, the DEP 2013-2017 which satisfies the required criteria of quality DEP was developed for all the 34 districts in line with the Education Sector Implementation Plan II (2013-2017).

The overall goal was partially achieved. Majority of the 34 districts did not implement 50 % of their DEP projects proposed in DEP 2010-2012 due to a limited budget. It was difficult to verify whether at least 2 prioritized activities in DEP are integrated into the DDP or not, because of the weak monitoring capacity of District Education Managers (DEMs) and insufficient communication between the local government and the DEMs. On the other hand, it was confirmed that all the 34 districts secured the budget for supporting the DEP cycle (planning, marketing and monitoring), though the budget is not sufficient to implement the proposed DEP projects. Therefore, effectiveness/ impact of the project is fair.

Regarding sustainability, the implementing agencies had some financial problems to implement some activities. As a result, the training system for the district government officers by the core trainers has not been functional. Besides, financial sources to fund the activities of the DEPs are still limited at district level. Therefore, sustainability of the project effects is fair.

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

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

According to the Education Sector Decentralization Guideline of 2001, it was mentioned that the DEP is a subordinate plan of the NESP and expected that the DEP should be integrated into the framework of the NESP. However, the linkage between the DEP and the NESP is not clear and therefore the MoEST needs to develop a mechanism which should ensure that the DEP feeds into the NESP. This should be done for the next sector plan (2018-2028) to ensure that it becomes possible to use the DEP for monitoring the NESP.

Lessons learned for JICA:

- Sometimes it is desirable to integrate a project's developed education plan with the existing plans/policies at the upper administrative levels in order to secure the necessary budget for its implementation. In such a case, the project should formulate formats of the education plan that can be easily integrated into the format of the upper administrative plans/policies. In Malawi, the future of the DEP depends on ability of the local government to embrace the DEP process

and apply it in DDP process. The project should have taken into consideration the existing planning process that the DDP follows to address the challenges of integration.

- When a project is implemented amid decentralization efforts, it should monitor the decentralization process in key ministries, particularly when and how relevant budgets are decentralized to the local government. The project was implemented before the MoEST was ready to decentralize the development budget. This means that the project needed to consider how the MoEST could decentralize its development budget as a key factor for the DEM planning and implementation of the DEP projects.

(A school block of two classrooms at Kalambwe primary school constructed as one of the DEP projects in Nkhata Bay District)

(Desks were procured and provided to Ndinde Primary school in Nsanje District as one of the DEP projects)

conducted by Tanzania Office: January, 2015

Country Name	Project for Capacity Strengthening on Labour-Based Technology Training at ATTI
United Republic of Tanzania	

I. Project Outline

Background	In Tanzania, only 10% in the total length of the roads under local governments were in good conditions due to insufficient maintenance caused by lack of financial resources. Under this situation, the Ministry of Infrastructure Development (MoID) announced a policy to utilize Labour Based Technology (LBT) for road construction and maintenance works in 1996. In addition, in December, 2003, MoID developed a program including preparation of basic policy of LBT, establishment of information center of LBT and establishment of core center of LBT training organization, in order to build a national framework to apply LBT in the country. In this context, the Government of Tanzania requested the Government of Japan technical cooperation to enhance training capacity of ATTI (Appropriate Technology Training Institute) under MoID. (note) MoID: MoID was divided in December 2010, into Ministry of Works (MOW) and Ministry of Transport (MOT). MOW is in charge of this project.
Objectives of the Project	1. Overall Goal: LBT* trainees (e.g. Local Government Authority (LGA), Contractors, Consultants, Tanzania National Road Agency (TANROADS), Community Groups, etc.) are able to plan, design and implement infrastructure works using LBT. 2. Project Purpose: ATTI has an appropriate capacity for training provision and overall coordination as a national training institute for LBT in Tanzania. (note) LBT: Labour-Based Technology is technology for construction and maintenance of public facilities in flexible and optimum manner based on quality control and economic efficiency by applying locally available resource and labour force.
Activities of the project	1. Project site: ATTI in Rungwe District, Mbeya Region 2. Main activities: Development of training curriculum, syllabus, training programs and training materials for LBT trainings, trainings for the trainers (ATTI officials), implementation of LBT training programs at ATTI, development of monitoring and evaluation system of LBT training programs, setting up of a unit for LBT promotion at ATTI, and Implementation of awareness campaign on LBT to decision makers, public and private sector partners. 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 6 persons 2) Trainees received: 6 persons 3) Equipment: Training equipment and machinery (tractor, trailer, towed grader, etc.), audio visual equipment, paving materials, and so on. Tanzanian Side 1. Staff allocated: 12 persons 2. Land and facilities: land, buildings and facilities for the project, office spaces for the Japanese experts 3. Training cost

Ex-Ante Evaluation	2006	Project Period	May 2006 to February 2011 (Original period: May 2006 - Mar 2010, Extension period April 2010- Feb 2011)	Project Cost	404 million yen
Implementing Agency	Appropriate Technology Training Institute (ATTI)				
Cooperation Agency in Japan	Eight- Japan Engineering Consultants Inc.				

II. Result of the Evaluation[1]

1 Relevance
This project has been highly relevant with Tanzania's development policy "construction and rehabilitation of rural road" as set in policy documents including, National Strategy for Growth and Reduction of Poverty (NSGRP) (2005), the Tanzania

[1] In the project, no target value was set for each indicator to verify degree of achievement of each output, the Project Purpose and the Overall Goal. Therefore, achievements for some indicators are assessed by analyzing the trends of those indicators from the beginning of the project to the end of the project or to the time of the ex-post evaluation. This is the same methodology of verification applied by the terminal evaluation, which was conducted in 2009. Further, supplemental information was collected to verify some indicators at the time of ex-post evaluation. .

Development Vision 2025, and National Rural Transport Program (NRTP). It has also been relevant with the development needs of improvement of capacity to implement infrastructure works using LBT at the time of both ex-ante and project completion. It was also consistent with Japan's Country Assistance Plan for Tanzania (2000) supporting for basic infrastructure including technical and administrative capacity development at the time of ex-ante evaluation. Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project developed training materials about LBT, conducted trainers' trainings and provided trainings of LBT, implemented M&E of training course and set up a unit for LBT promotion. Through these activities, the project aimed to improve capacity of ATTI to deliver LBT related trainings for officers of local governments and Tanzania National Road Agency (TANROADS). The trained officers would utilize the knowledge about LBT for planning, designing and implementation of road construction and rehabilitation works.

The Project Purpose was partially achieved. During the project period, 13 training courses were delivered in total and 459 participants from TANROADS, LGA and contractors were trained. The number of visitors to the Principal's Office of ATTI increased after the project started (see the details in the table below). The training curriculum and module developed by the project were expected to be "standard" in Tanzania since the training certification of ATTI was supposed to be a requirement for contractor to register with the Contractor Registration Board as LBT contractor. M&E manual was prepared in the first year but it had not been utilized because it was too complicating and difficult for users to fill in. The importance of M&E was highlighted and project period was extended for one more year in order to enhance M&E capacity. In terms of the Indicator 3 and 5, no data was available at the time of terminal evaluation because of no official evaluation were conducted by stakeholders and "Taking use of LBT to scale"[2] report was not issued.

After the project completion, the number of training courses and the participants at the time of ex-post evaluation, it has decreased since the participants from LGAs have also decreased despite the large training demand for regular LBT training courses of LGA officers. This is because the LGAs have not been able to allocate budget to shoulder training fees. In terms of quality of the LBT trainings at ATTI, no monitoring and evaluation (M&E) has been implemented due to lack of budget of ATTI at the time of the ex-post evaluation. The training curriculum and module developed by the project have been practically used as the standard in training at ATTI which is sole training institute for Tanzania. ATTI has been acknowledged as the national training institute for LBT in Tanzania by the International Labour Organization (ILO) and other training institutions including Kenya and Uganda. At the time of ex-post evaluation, official evaluations were still not conducted by stakeholders and in "Taking use of LBT to scale". .

For the Overall Goal, there is no quantitative data to verify the achievement. This is because TULS report which was expected to report progress of utilization of LBT by conducting surveys was not actualized. It is observed that some of tenders introduced pre-requisites that technical staff should have training record in ATTI. TANROADS Regional offices in Mbeya, Tanga, Dodoma, Coast, and Kilimanjaro utilized their knowledge acquired by the training in the field of practical project management. In addition, ATTI recognizes that LBT work has been increasing.

As for other impacts, Somali officers were trained at ATTI under the JICA's third country training scheme and have been continuously applied the skills learnt after the project period. There was no negative impact observed at the time of ex-post evaluation.

Therefore, effectiveness/ impact of the project is fair.

Achievement of project purpose and overall goal

<table>
<tr><th>Aim</th><th>Indicators</th><th>Results</th></tr>
<tr><td>(Project Purpose)
Improvement of capacity of ATTI for provision of trainings and coordination for LBT as a national training institute</td><td>Indicator 1: Number of courses and participants trained by ATTI increased compared with the one before the project (including large scale PMO-RALG (Prime Minister's Office, Regional Administration and Local Government) training)</td><td>- (Project Completion)In total, 13 training courses from 2005/06 to 2009/10
- In total, 459 participants attended those training courses from 2005/06-2009/10
<table>
<tr><th></th><th>2005/06</th><th>2006/07</th><th>2007/08</th><th>2008/09</th><th>2009/10</th><th>Total</th></tr>
<tr><td>No. of training courses</td><td>2</td><td>3</td><td>1</td><td>4</td><td>3</td><td>13</td></tr>
<tr><td>No. of participants</td><td>24</td><td>53</td><td>45</td><td>194</td><td>143</td><td>459</td></tr>
</table>
source: Terminal Evaluation Report (2010 Oct)

(Ex-post Evaluation)
<table>
<tr><th></th><th>2011/12</th><th>2012/13</th><th>2013/14</th><th>2014/15 plan</th></tr>
<tr><td>Regular Course</td><td>0</td><td>0</td><td>1
(14)</td><td>2</td></tr>
<tr><td>Mobile Course</td><td colspan="3">5 (Note)
(108)</td><td>3</td></tr>
<tr><td>Other Course</td><td colspan="3">3
(32)</td><td>2</td></tr>
</table>
</td></tr>
</table>

[2] A national framework for LBT, including the three components of policy formulation of LBT, establishment of LBT information center, and establishment of LBT training system.

		*( ) : No.of participants Note: mobile courses were conducted in Katavi, WPU, TANAPA
	Indicator 2: Number of visitors to the Principal's Office of ATTI increased compared with the one in TFY (Tanzanian Fiscal Year) 2006	(Project Completion)2006: 87 2007: 168 2008: 209 2009: 162 2010: 110 source: Terminal Evaluation Report (2010 Oct)
	Indicator 3: Evaluation from related stakeholders on ATTI improved.	(Terminal Evaluation (Extension)) No data available (Ex-post Evaluation) No official evaluation by related stakeholders
	Indicator 4: Standardizing training curriculum and module for LBT	(Project Completion)The training curriculum and module developed by the project were practiced in Tanzania. source: Terminal Evaluation Report (2010 Oct) (Ex-post Evaluation) They have been practically used as the national standard, but they have not been stipulated in any Acts/regulations.
	Indicator 5: Evaluation of ATTI in "Taking use of LBT to Scale" report	(Project Completion)No data available due to no evaluation conducted. source: Terminal Evaluation Report (2010 Oct) (Ex-post Evaluation) No official evaluation conducted by Tanzanian side.
(Overall goal) Improvement of capacity of LBT trainees to utilize knowledge for planning, designing and implementation of infrastructure works using LBT	Indicator 1: The ex-trainees can adapt the skills and knowledge to different situation and transmit it to the people he/she has to work with	(Ex-post Evaluation) No quantifiable data but some TANROADS and LGA offices have been continually procuring contractors using LBT for infrastructure works.
	Indicator 2: X kilometers rural road constructed and/or maintained using LBT	(Ex-post Evaluation) Data not available.

Source：Terminal Evaluation Report, Interviews with counterparts

3 Efficiency

Both of the project cost and period were exceed the plan (ratio against the plan: 144% and 121%) because of the extension of project period was necessary to enhance the capacity of counterpart staff of monitoring and evaluation to the planned level. Therefore, efficiency of the project is fair.

4 Sustainability

In the policy aspect, although "Taking the use of LBT to Scale (TULS)" (December, 2003) by MoID is no longer effective at the time of ex-post evaluation, this project is still given importance in the current development policy, namely NSGRP2(2010) and the National Construction Industry Policy. They underline utilization of LBT as a key option in employment creation and poverty alleviation initiative through implementation of infrastructure works including road construction and maintenance. Further, the Local Government Transport Program 2 (LGTP2), the following phase of LGTP1[3], has also launched.

Institutionally, MOW is in the last stages to merge ATTI and Morogoro Works Training Institute (MWTI) and provide the new institute with the legal status as a national institute for LBT training and for authorizing other related construction sector disciplines. . ATTI has been continuing trainings based on the training curriculum developed by the project and equipment installed by the project. In addition, ATTI has been continuously collaborating with other LBT related institutions in other countries by inviting other institutions as lecturers in ATTI training. In terms of promotion of LBT, although the number of staff of the section decreased from 4 in 2011/12 to 3 in 2012/13, the Promotion Information Section has continuously been functioning through participation to various exhibition events such as Nane-nane[4], Public Service Week, LGA Week, Annual PMO-RALG Engineers' conferences and so on. For the system of provision of equipment for road works using LBT, ATTI is piloting equipment leasing system.

In the technical aspect, 12 trainers trained by the project have been continuously engaged in the training courses delivered by ATTI and the number of trainers has been sufficient to deliver the trainings. The trainers of ATTI have been maintaining their training skills and knowledge for the LBT training courses but no refresher training for further improvement and updating information has been available for the trainers so far due to the lack of budget. The training materials, curricula and syllabus developed by the project have been still core training materials for the LBT training courses at ATTI. Despite that the ex-trainees have been engaged in LBT contract works, no official evaluation of the ex-trainees capacity of LBT has been conducted due to lack of budget.

As for the financial aspect, LGTP2 estimated the total budget of 996.9 million USD[5] for road construction and maintenance. Despite the delay of disbursement for new construction, maintenance budget allocation has started. LGTP emphasizes to utilize LBT for rural road development and maintenance; however there is no clear figure for LBT only. Also, the Road Fund Board (RFB) and PMO-RALG request LGAs to utilize LBT more than certain percentage of all road works and performance. The revenue of ATTI reduced from 818 million TZS in 2010/11 to 311 million TZS 2013/14 since other development partners'

[3] Local Government Transport Program (LGTP) (2009-2012) prepared by PMO-RALG (Prime Minister's Office, Regional Administration and Local Government): "labour-based methods" as one of the Strategic Approaches.

[4] 8th August, Agriculture day of Tanzania. On the day, agriculture related exhibitions take place.

[5] The budget covers FY 2012/13- FY2016/17. 1 US dollar ≒ 1663 Tanzanian Shilling as of September 2014

financial support through PMO-RALG has been terminated in 2012. The total expenditure of ATTI, including training and promotion cost, has been covered by the total revenue of ATTI. The training courses conducted based on participation fee paid by LGAs and other trainees' organization. Besides the training fee, ATTI has own revenue source from the LBT equipment leasing service which has started in 2011/12.

From these findings, it is considered that the project has some problems in technical and financial aspects of the implementing agency; therefore, sustainability of the project is fair.

5 Summary of the Evaluation

This project has partially achieved the project purpose. ATTI standardized and improved quality of the LBT training courses and the trained LGA staff and contractors have been engaged in road construction and maintenance works using LBT despite of no quantifiable data. The enhanced training capacity of ATTI has been acknowledged as a quality LBT training institution by ILO and the neighboring country training institutions. However, achievement of project goal is not confirmed because two out of the five indicators defined in PDM were not verified due to lack of available data. Moreover, no data regarding achievement of the overall goal was available either. As for sustainability, NSGRP2 and the National Construction Industry Policy have endorsed the promotion of LBT-based construction works to increase employment opportunities. On the other hand, the number of training courses decreased due to the limited budgets allocated to LGAs and it brought about the reduction of ATTI revenue. While the trained trainers and the training materials have been sustained, no refresher training for the trainers and the M&E system for the ex-trainees have not been conducted. In terms of efficiency, the extension of project period to enhance capacity of the counterpart personnel increased the project cost.

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

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

[ATTI] Since feedback from M&E should be reflected in curriculum and syllabus, M&E activities are crucially important to maintain and improve training quality. ATTI is recommended to conduct M&E activity considering practical approach within available budget and human resources such as monitoring activities by phone-calls instead of visits in person.

[PMO-RALG and MOW]

For ensured dissemination of LBT, PMO-RALG and MOW are recommended to consider accelerating participation from LGAs and contractors so that regular training will be conducted steadily. For example, admitting reallocation of RFB road maintenance fund for training budget in LGAs, and setting training record by ATTI as pre-qualification in tendering for LBT contract might be the strategies for improvement.

Lessons learned for JICA

-In this project, M&E manual was prepared in 1st year but it had not been utilized because it was too complicated and difficult for users to fill in. The importance of M&E was highlighted and project period was extended for one more year in order to enhance M&E capacity. At the ex-post evaluation, the activities introduced by project were observed but implementation of M&E activities by ATTI was not realized after the project completion due to financial constraints. Hence, because the total project period was 4 years, M&E should have been emphasized more and undertaken with much consideration for counterparts to easily use from the beginning stage.

- At the time of ex-post evaluation, it is observed relevant agencies have little incentives to receive the training and there are budget constraints for the implementation of the LBT related activities. Based on these facts, it is recommended that the project should have intervened and involved not only ATTI under MOW, training institute, but also PMO-RALG and LGAs, the key counterparts in rural road construction and management at the field level, so that they could have established the system for training participation of LGAs during the time of project implementation and project sustainability could have been strengthened.

- In this project, most of the data to measure achievement of indicators for project purpose were not obtained sufficiently. Further, those of overall goal were not available either since TULS report was not actualized. As a result, this ex-post-evaluation could not obtain any relevant quantitative data. Therefore, it is recommended for other similar projects to set indicators which are surely obtainable and measurable during the project and at the time of the ex-post evaluation.

Internal Ex-Post Evaluation for Technical Cooperation Project

conducted by Laos Office: October, 2014

Country Name	Project for Medical Education and Research for the Setthathirath Hospital
The Lao People's Democratic Republic	

I. Project Outline

Background	The Setthathirath Hospital is a general hospital constructed in 2000 with a Japanese grant aid project and supported through a technical cooperation project in 2000-2004. Besides being a central hospital that provides tertiary curative care, the Hospital plays a role of teaching other hospitals by providing clinical training and education for both undergraduate medical students and postgraduate medical doctors. In 2004, the Setthathirath Hospital was upgraded from the Vientiane Municipality Hospital to a university hospital of the Faculty of Medical Sciences of the National University of Laos (later changed to the University of Health Sciences: UHS) therefore, there was a strong demand on the Hospital to educate qualified medical doctors with ability to respond to the local needs and health issues.
Objectives of the Project	1. Overall Goal: Quality of clinical training for medical doctors in the Lao PDR is improved. 2. Project Purpose: Quality of undergraduate clinical training and early postgraduate clinical training for those who graduate from Faculty of Medical Sciences within two years at Setthathirath Hospital is improved.
Activities of the project	1. Project site: The Setthathirath Hospital and other teaching hospitals located in Vientiane Capital 2. Main activities: Activate the library, build Clinical Learning Center (CLC), provide training, develop learning materials, establish Teaching Management Committee (TMC), improve function of Medical Teaching Unit (MTU), promote project outputs through Human Resource Technical Working Group (HRH-TWG) of Ministry of Health, conduct training of trainers (TOT) workshops, organize Medical Education Seminar for clinical trainers, etc. (Note) MTU: an approach to make examinations and treatment of patients by a team of me dical students, residents and preceptors as an educational and learning opportunity. 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 17 persons 2) Trainees received: 4 person 3) Equipment: Training simulators, clinical training instruments, medical furniture Laotian Side 1. Staff allocated: UHS, Setthathirath Hospital and other teaching hospitals in Vientiane 2. Land and facilities: project office 3. Local cost: Utilities for the project activities, such as lighting and water expenses, other necessary expenses for maintenance and purchases for the project activities

Ex-Ante Evaluation	2007	Project Period	December 2007 to December 2010	Project Cost	301 million yen
Implementing Agency	Ministry of Health (MOH), Setthathirath Hospital				
Cooperation Agency in Japan	International Research Center for Medical Education, The University of Tokyo, and System Science Consultants Inc.				

II. Result of the Evaluation

1 Relevance

This project has been highly relevant with Lao PDR's development policy "strengthening the capacity of health staff in terms of attitudes, ethics, and technical skills" listed amongst the six key principles in the Health Strategy 2020, development needs "education for qualified medical doctors with ability to respond to the local needs and health issues" and "improvement of clinical training", as well as, JICA's Country Assistance Program (2006), at the time of both ex-ante evaluation and project completion. Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project aimed to improve the quality of clinical training at the Setthathirath Hospital (project purpose) by producing outputs such as development of the facilities/tools (library, CLC, medical records, etc.), introduction of a clinical training system based on the approach of MTU, and training for clinical trainers (TOT) at the Setthathirath Hospital. Consequently, it was expected that other teaching hospitals improve the quality of their clinical training (overall goal) by applying the approach established at the Setthathirath Hospital.

The project purpose was achieved by the time of project completion. The above-mentioned outputs were all produced as planned except for the internal monitoring (assessments of quality control of clinical care by UHS), which was abandoned as the monitoring system of UHS had not been consolidated during the project implementation. A notable achievement was MTU, which had been first introduced by other cooperating partners but had not been functioning before this project due to poor understanding of actual operating procedures. By introduction of a MTU management body called TMC and other related mechanism through the project, MTU came to function as a tool to improve the quality of services and transfer knowledge to students. As a result, the indicators designated at the ex-ante evaluation (students' satisfaction with and outside recognition of the clinical training at the Setthathirath Hospital) were achieved.

After completion of the project, the Setthathirath Hospital kept using most of the facilities/tools/textbooks and teaching materials developed or improved by this project. No clear information was available on whether medical records were kept appropriately by using the format introduced by this project. Medical education seminars (MES) have continued, while TOT became provided by the Education Development Center (EDC) established in 2010 by UHS with support from WHO so that teaching hospitals could concentrate on clinical education. It was found from interviews that UHS and teaching hospitals see

the importance and effectiveness of MES and TOT as well. The MTU approach is still taken at the Setthathirath Hospital with continuing management by TMC, which is recognized as an effective stage for planning and review of the student supervision according to the Hospital, UHS and other teaching hospitals. In this way, the quality of clinical training at Setthathirath Hospital is kept highly recognized by medical doctors, students/trainees and concerned outside organizations.

As for the overall goal of improving the quality of clinical training in the whole country, the indicator designated at ex-ante evaluation, "achievement of undergraduate / Family Medicine Specialist Programs (a two-year post graduate program)" at the hospitals that provide those programs, was not verified as the test scores to assess clinical students' achievement were not available as they were kept confidential. Therefore, the ex-post evaluation collected qualitative information to show the improvement of clinical training at other hospitals than the Setthathirath Hospital. It was confirmed that other teaching hospitals have improved their clinical training by applying the MTU approach developed by this project. According to UHS, mainly four central hospitals and four provincial hospitals (Vientiane, Luangprabang, Champasack and Savannakhet provinces), which had received TOT during the project implementation, have introduced and functionalized MTU. It was observed at those hospitals that the MTU has become regular duty to fulfill the need of teaching hospitals. It is noteworthy that since project completion, such hospitals have regularly implemented MTU on their own effort despite the insufficient inputs such as finance for supplying some more teaching materials as well as number of preceptors[1].

In this way, this project has achieved the project purpose and the overall goal. Therefore, effectiveness/ impact of the project is high.

Achievement of project purpose and overall goal

Aim	Indicators	Results
(Project Purpose) Quality of undergraduate clinical training and early postgraduate clinical training for those who graduate from Faculty of Medical Sciences within two years at Setthathirath Hospital is improved.	Satisfaction of trainees who completed clinical training at the Setthathirath Hospital increases.	(Project Completion) Increased. Based on interviews, satisfaction was generally favorable. A survey also showed increased satisfaction of clinical students of other teaching hospitals who took training at the Setthathirath Hospital. (Ex-post Evaluation) Still satisfied. Medical doctors and students of the Setthathirath Hospital commented that through the MTU, medical doctors/trainees could improve their knowledge through sharing experiences and learning new knowledge from the instructor or among trainees.
	Evaluation (reputation) of clinical training at the Setthathirath Hospital from the professional organization is enhanced.	(Project completion) Highly valued. In particular, the Minister of Health and other important personnel at the central level regarded MTU as being a common tool of clinical training of high quality. (Ex-post Evaluation) Still recognized. - The continuing approaches such as MES and MTU/TMC are highly recognized by UHS and other teaching hospitals. Also, Dept. of Health Care (DHC) and Dept. of Training and Research (DTR), in charge of technical training issue at MOH, recognize usefulness of clinical training after introduction of MTU.
(Overall goal) Quality of clinical training for medical doctors in the Lao PDR is improved.	Achievement of undergraduate / Family Medicine Specialist Programs increases.	(Ex-post Evaluation) The test scores to assess clinical students' achievement were not available as they were kept confidential.
	(Supplementary information) Improvement of clinical training at other hospitals than the Setthathirath Hospital	(Ex-post Evaluation) - MTU has become regular duty of teaching hospitals including the Setthathirath Hospital, three other central hospitals and four provincial hospitals to fulfill their needs. Each hospital reports the progress of clinical training to MOH regularly. - Medical doctors of the Vientiane Provincial Hospital commented that through the MTU, doctors/trainees improved their knowledge through sharing experiences and learning new knowledge. DTR/MOH also commented that MTU supported comprehensive learning of doctors/trainees who received clinical training.

Source : Terminal Evaluation Report; Final Report; interviews with doctors and students at the Setthathirath Hospital; interviews with UHS and other teaching hospitals.

3 Efficiency

Both the project cost and the project period were within the plan (ratio against the plan: 89% and 100% respectively). Therefore, efficiency of the project is high.

4 Sustainability

In the policy aspect, this project is still given importance in the current development policy as the Health Strategy 2020 is still effective and the Health Sector Development Plan (HSDP) 2015, a five-year plan developed in alignment with the Health Strategy 2020, is always referred to whenever in policy discussions on clinical training. Furthermore, Human Resource Development is the first priority program of the current Health Sector Reform Strategy 2011-2025.

In the institutional aspect, the organizational structure of UHS, which was not consolidated during the project period, has been improved, and all positions were filled. As mentioned in "2. Effectiveness/Impact", the newly developed EDC took over teaching hospitals' role of TOT and curriculums development/improvement. However, EDC is not well functioned since no budget allocation from the UHS/MOH, and the number of staff is limited. The organizational structure of the Setthathirath

[1] There had been one concern from the planning stage that too rapid increase of medical students would affect the quality of clinical education. So far, this concern has been well addressed: although the total number of medical students was not available, the number of students per preceptor decreased from 10-15 in 2010 and 2011 to 8-10 in 2012 thereafter, because provincial hospitals can provide clinical training by the time of the ex-post evaluation.

Hospital at the time of ex-post evaluation is same as the ones during the project implementation period. The Chair system (department-wise meetings across teaching hospitals to discuss clinical care and education), is mostly functioning. The number of preceptors is not enough, but lack of staff is a common problem in the public sector of Laos, and the teaching hospitals have managed to continue clinical training by applying MTU with the available human resources.

In the technical aspect, all ex-counterpart personnel are still working at the Setthathirath Hospital, and the curricula and reference materials developed by this project are still utilized. However, according to the Hospital, there are new generation of preceptors whose capacity needs to be improved more despite that they are being trained and working together with senior preceptors.

As for the financial aspect, information on budget amount was not available. The budget allocated by MOH covers only payrolls of the staff member (public servants), and other expenses are mostly to be financed from the revenue of hospitals. In general, it is difficult to allocate specific budget for each activity (e.g. training) of hospitals. For clinical education, as budget for teaching materials is difficult to secure, and therefore the existing materials need to be utilized for a long term. Nevertheless, after the project, the Setthathirath Hospital and other teaching hospitals have managed to secure budget to continuously carry out MES as their routine duty. No specific operation budget is necessary for implementing TMC. Some TOT workshops at EDC were held under financial support of external partners, but as mentioned above, the budget allocation to EDC is not enough for making it function as an education center to support clinical training by teaching hospitals.

From these findings, it is considered that the project has some problems in institutional, technical and financial aspects of the implementing agency; therefore, sustainability of the project is fair.

5 Summary of the Evaluation

This project has achieved the project purpose and the overall goal. For the project purpose, the quality of clinical training at the Setthathirath Hospital was improved through development of the facilities/tools (library, Clinical Learning Center, medical records, etc.), clinical training system using the approach of Medical Teaching Unit managed by TMC and TOT. For the overall goal, other teaching hospitals have introduced MTU/TMC for their clinical training. As for sustainability, this project is still given importance in the current development policy. However, there are problems in terms of institutional, technical and financial aspects such as insufficient function of EDC for improvement of curriculum and TOT, a need to improve capacity of new preceptors, and difficulties to secure budget for clinical education.

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

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

(1) To MOH: EDC should be strengthened as a center through which preceptors and students can access to the necessary knowledge. Explicit role/responsibility as well as operation budget and manpower should be allocated as necessity.

(2) To the teaching hospitals: maintenance of teaching materials needs to be improved so that they could be long used for education under the situation as there is no financial resource to reproduce them. For example, introduction of the 5-s concept of JICA could be one of the means for the improvement.

(3) To donors: further comprehensive support for medical education in Laos is needed in order to standardize of medical services. In addition, medical curriculum development/improvement also needs advices from the external experienced people.

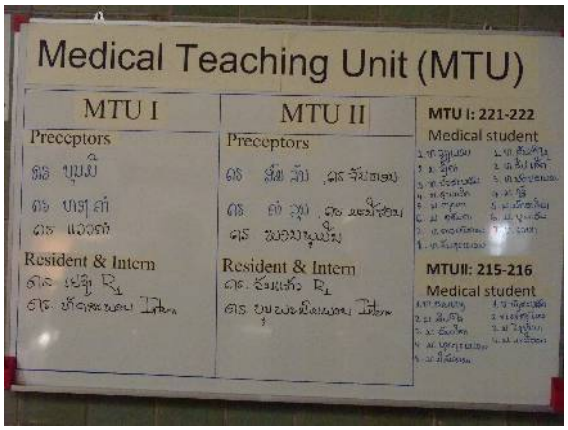
Lessons learned for JICA

(1) The approach introduced by this project was firmly established not only in the Setthathirath Hospital but also in other teaching hospitals because it was strongly needed by them and in line with the health sector policy. To develop a project based on needs of recipient organizations and priority area stipulated in sector policies is important to encourage the counterpart's involvement in activities during and after cooperation period.

(2) To introduce concept/system (e.g. TMC; MTU in case of this project) which can be continued with available resource/efforts of recipient country as routine duty is important to maintain its sustainability even after cooperation period.

(3) In this ex-post evaluation, achievement of the overall goal was difficult to assess as data for the indicator were confidential and thus not available. When setting indicators, availability of data should be carefully examined even for the overall goal (that is expected to be achieved within 3-5 years after the project completion) so that ex-post evaluation could be properly conducted.

(Teaching materials at Vientiane Provincial hospital-library)



(Example of MTU at Internal Medicine Ward)

Internal Ex-Post Evaluation for Grant Aid Project

conducted by Balkan Office (May 2014)

Country Name	The Project for Improvement of Medical Equipment for Primary Health Care Services (Phase II)
Former Yugoslav Republic of Macedonia	

I. Project Outline

Project Cost	E/N Grant Limit: 810 million yen		Contract Amount: 545 million yen
E/N Date	June 2006		
Completion Date	February 2008		
Implementing Agency	Ministry of Health		
Related Studies	Basic Design Study: July 2005 to January 2006		
Contracted Agencies	Consultant	International Techno Center Co., Ltd.	
	Contractor	-	
	Supplier	Sojitz Corporation (Package 1), Sirius Corporation (Package 2).	
Related Projects (if any)	Japan's cooperation • The Project for Improvement of Medical Equipment for Primary Health Care Services (2000-2002) Other donors' cooperation • World Bank Health Sector Management Program		
Background	From the 1970s to 2000s, the structure of causes of death among the people of Macedonia had changed greatly, and the latest issues in public healthcare included prevention and early detection and treatment of heart disease, cancer, and other lifestyle-related diseases; management of chronic illnesses; and appropriate treatment and management of general illnesses, particularly among children and the elderly. In these areas, efforts were needed to reduce the national burdens imposed by diseases. However, since independence, unstable economic conditions in Macedonia had made the share of the national budget for health care inadequate, and there had been virtually no improvement in medical facilities and equipment. It had been particularly difficult for the Health Centers (HCs), primary healthcare providers, to secure a new budget for facilities improvement other than operating costs, and it had not been possible to replace the existing equipment. To address these conditions, the Government of Macedonia requested the Government of Japan to provide grant aid for health sector in 1998 in order to equip 34 HCs. As a result, "The Project for Improvement of Medical Equipment for Primary Health Care Services" was implemented for 16 HCs in 2001. Thereafter, in October 2002, the Government of Macedonia drafted the aforementioned project (Phase 2) in order to equip the remaining HCs left out of Phase 1, and requested the Government of Japan for grant aid.		
Project Objectives	Outcome To improve the health service in primary health care institutions by providing the medical equipment in the Capital city of Skopje as well as in 16 other cities.		
	Output (s) Japanese side The following medical equipment was procured for 17 HCs. • Equipment (Radiographic X-ray equipment, Fluoroscopy, Spectrophotometer, Hemocytometer, Microscope, etc.) needed for general diagnosis (Radiographic/ Laboratory examination) • Equipment (Dentistry unit, Dentistry X-ray System, Aspirator, Ultrasonic Nebulizer, etc.) needed for childhood illness (Respiratory organs/ childhood dentist) • Equipment (Electrocardiograph, Ultrasonic Nebulizer, Mammography, etc.) needed for basic diagnosis of adult illness (Heart disease/Breast cancer) • The vehicle needed for emergency service (Emergency/ Traffic Accident) • Equipment needed for enhancing the sterilization functions (Sterilization) Macedonian Side • Removal of existing equipment • Protective construction for X-ray in Radiology		

II. Result of the Evaluation

Summary of the Evaluation
Health Centers (HCs) played an important role for early detection and treatment of circulatory system diseases, cancer, and chronic diseases, which were the latest health issues in Macedonia. However, due to the unstable economic conditions in Macedonia, it had been particularly difficult for the HCs to secure a new budget for facilities improvement other than operating costs, and it had not been possible to replace the existing equipment. This project has achieved its objectives at a limited level, partly because of the Health System Reform in Macedonia which was implemented in January 2007. The project allowed more accurate diagnosis and receipt of treatment, however, the project has not achieved the expected increase of services since the number of patients has decreased due to the Health System Reform in Macedonia, by which some parts of primary healthcare services have been transferred from HCs to

private sector. As for sustainability, no problem has been observed in the technical and financial aspects. With regard to technical aspect, the know-how on equipment operation and daily examination were gained in training during the procurement process and manuals have been effectively utilized by HCs. On the other hand, the project has some problems in the institutional aspects and in the current status of operation and maintenance. While clear procedure has been established in each HC to respond to the malfunction of the equipment, there is no established plan of daily examination and maintenance. Some equipment items are broken down. For the current status of operation and maintenance, the decrease of the medical staff was observed in the course of Reform following on the change of HC's services, but the number of maintenance staff of the medical equipment has not significantly changed from the time of ex-ante evaluation.

For relevance, the project is partially inconsistent with Macedonia's development needs at the time of ex-post evaluation. For efficiency, the project period exceeded the plan.

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

1 Relevance

This project has been relevant with Macedonia's development policy (Renewal of health facilities and equipment is deemed an urgent issue as set in Public Investment Plan 2005-2007 and Public Investment Programme 2009-2011) and Japan's ODA policy (to provide assistance for equipment and facilities for the health sector) at the time of both ex-ante evaluation and ex-post evaluation. It is partially irrelevant with development needs (improvement of medical equipment for HCs as primary healthcare facilities) at the time of ex-post evaluation. The reason is that some parts of primary healthcare were privatized in a course of the Health System Reform implemented in January 2007 and HCs do not basically provide those services at the time of ex-post evaluation.

Therefore, its relevance is fair.

2 Effectiveness/Impact

This project has achieved its objectives at a limited level. The project allowed more accurate diagnosis and receipt of treatment at each targeted HC in each region and therefore the quality of healthcare services were improved to some extent. However, the project has not achieved the expected quantity of services since the number of total patients treated in HCs has decreased in general, due to the Health System Reform and privatization of several primary healthcare services as mentioned above. Currently, the HCs still carry out some of examinations in their facilities in the areas of preventive healthcare, emergency assistance and home treatment for primary healthcare, and specialist – consultation examination at secondary level (those who are referred from the private primary healthcare physicians to the HCs), therefore the equipment procured by the project is still in use.

As for impact, since detailed information was not obtained and due to the privatization of primary health care services in Macedonia, it is very difficult to judge how the project contributed to the improvement of the referral system. As for impact on natural environment, 7 HCs still do not discharge X-ray liquid properly but medical waste collection and construction for radioactive exposure from x-ray has been done properly.

Since the Health System Reform and privatization became effective at the relatively early stage of the project implementation (January 2007), each HC shifted to the preventive service and was required to meet different health service needs at the time of ex-ante evaluation.

Therefore its effectiveness/impact is low.

Quantitative Effects

	2005 Actual Value (BD)	2007 Planned Value (Target Year)	2007 Actual Value (Target Year)	2011 Actual Value (the latest full fiscal year)	2012 Actual Value (January - June)(Year of Ex-post Evaluation)
Indicator 1: General X-ray Photography	182,608	Increase	131,357	144,628	51,124
Indicator 2: OB/GYN department ultrasonic wave diagnosis	361,698	Increase	6,499	6,136	2,754
Indicator 3: Abdominal ultrasonic wave diagnosis	29,767	Increase	16,434	21,381	8,905
Indicator 4: Electrocardiography	112,132	Increase	70,811	81,854	26,005
Indicator 5: Blood test	1,873,702	Increase	1,042,633	1,279,863	903,840
Indicator 6: Patients that visited HCs	2,317,488	N/A	620,048	726,984	264,253

Source : Questionnaire was sent and collected at the time of ex-post evaluation. The data above is about the public part of the Target 17 HCs (services delivered by the privatized sections of the target HCs are not included.).

3 Efficiency

Although the project cost was within the plan (ratio against the plan: 67%), the project period exceeded the plan (ratio against the plan 150%) because signing the contract with the contractor took 11 months, not 4 months as planned due to belated approval by the Macedonian side. Outputs were produced as planned. Therefore, efficiency of this project is fair.

4 Sustainability

The equipment provided by the project is maintained by HCs. The project has some problems in the institutional aspects and in the current status of operation and maintenance. As mentioned above, due to the Health Sector Reform, the institutional structure of the HCs has been changed to meet the shift of its function (provide the preventive services), which was not considered at the time of ex-ante evaluation. The decrease of the medical staff was observed in the course of Reform following on the change of HC's services, but the number of maintenance staff of the medical equipment has not significantly changed from the time of ex-ante evaluation. On the current status of maintenance, there is no established plan of daily examination and maintenance. Although 10 HCs have no problem on the conditions of equipment, there are breakdown of some equipment items in the rest of HCs.

However no problem has been observed in the technical and financial aspects. With regard to technical aspect, the know-how on equipment operation and daily examination were gained in training during the procurement process and manuals have been effectively utilized by HCs. In case of malfunction of the equipment, clear procedure has been established in each HC. In general, HCs have no problem in the financial aspect since most of the HCs have a revenue surplus, and the budget for maintenance expenses has been secured by almost all HCs.

In light of the above, sustainability of this project is fair.

III. Recommendations & Lessons Learned

Recommendations for implementing agency:

Recommendation to the HCs is to establish the plan for periodical operation and maintenance of the equipment as well as to apply the maintenance management training system.

Lessons Learned to JICA

Training during the procurement process and manuals is highly effective to maintain the procured equipment properly.

General X-ray apparatus

Ultrasound apparatus

conducted by Uzbekistan Office: December, 2014

Country Name	Improvement of The Tax Administration of the Republic of Uzbekistan
Republic of Uzbekistan	

I. Project Outline

Background	After the independence, the Uzbekistan government made efforts to promoting the private sector which was essential for economic growth by the series of administrative reforms and deregulation including tax administrative reforms. The JICA's technical cooperation project "Joint Research on the Improvement of Tax Policy and Administration in the Republic of Uzbekistan (2003-2004)" identified issues such as frequent amendments to the taxation system, high tax rates, and the extremely weak position of individual firms vis-à-vis the tax authorities. Under those situations, the Uzbekistan government requested the Japanese government to support trainings and skill-up of tax officials and improvement of relation between tax authorities and taxpayers.
Objectives of the Project	1. Overall Goal: STC (State Tax Committee) officials develop professional skills and knowledge in the field of taxpayer services and tax audit. 2. Project Purpose: The faculties of the Tax Academy and Tax Colleges acquire the capacity for improving curricula, instructional plans and teaching materials, so that appropriate training programs is delivered to STC officials in the field of taxpayer services and audit. (Note 1) Tax Academy is a higher education institution (college level) for tax administration; executive officers of the STC are educated in the Tax Academy. (Note 2) Tax Collages are the secondary higher education institutions (high school level) that provide tax administration and general education. Many graduates become tax officers, while a part of them are recommended to proceed to the Tax Academy.
Activities of the project	1. Project site: Tashkent, Fergana and Bukhara 2. Main activities: i) Surveys on tax system and tax administration in Uzbekistan; ii) modification of syllabuses and development of training materials at the Tax Academy and the Tax Colleges; iii) implementation of experimental classes based on the modified syllabuses; iv) implementation of workshops and seminars on tax accountant system 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 8 persons 2) Trainees received: 19 persons 3) Equipment: Copy machine 4) Cost for seminars, cost for material development Uzbekistan Side 1. Staff allocated: 17 persons 2. Land and facilities: Office space for Japanese experts and PCs

Ex-Ante Evaluation	2007	Project Period	May 2008 to March 2011	Project Cost	224 million yen
Implementing Agency	State Tax Committee (STC)				
Cooperation Agency in Japan	National Tax Agency				

II. Result of the Evaluation

1 Relevance

This project has been highly relevant with Uzbekistan's development policy of "tax reform and improvement of tax administration" as set in policy documents including the Presidential Decision (2006 and 2010) and Welfare Improvement Strategy of Uzbekistan (2008-2010), development needs of "capacity development of tax officials" at the time of both ex-ante evaluation and project completion, and it is consistent with Japan's ODA policy (JICA's Country Assistance Program (2006)) at the time of ex-ante evaluation. Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project conducted survey on tax system and tax administration, modified syllabuses of the Tax Academy and the Tax Colleges, and developed training materials. Through these activities, the project aimed to improve capacity of the faculties of the Tax Academy and the Tax Colleges so that they would deliver adequate training programs for the tax officials in the fields of taxpayer service and tax audit; and thereby the tax officials develop their professional skills and knowledge in the fields.

The project mostly achieved improvement of capacity of the faculties of the Tax Academy and the Tax Colleges by the time of project completion because the modified training programs were delivered to the students and the modified recurrent training courses[1] were delivered to the tax officers at the Tax Academy and the Tax Colleges. After the project completion, a total of 450 participants were

Some of the teaching materials developed by the project and used currently in the Tax Academy and Tax Colleges.

[1] The recurrent training courses aim to enhance the expertise of tax officials who have not been trained at the Tax Colleges and Tax Academy before being employed as tax officials (e.g. officials who were employed before the Tax Colleges and Tax Academy were established and officials who graduated from other universities.)

trained at the Tax Academy; 3,900 students were trained at the Tax Colleges by the time of ex-post evaluation (see details in the table below)[2].

At the time of ex-post evaluation, it is confirmed that faculty staff has conducted the training programs and minor updates of the syllabi in accordance with changes in tax legislation. However, the faculties' capacity for modification of training programs was not fully verified by this ex-post evaluation since major re-modification has not been made yet.[3]

As for the overall goal, taxpayer services have been improved partly owing to the project's advices on improving tax administration: for example, "Tax Weeks" campaigns are conducted every March before submission due date of the tax declarations, in order to provide information about tax declaration procedure to tax payers. STC set a telephone hotline in all 14 regions in the country to respond to inquiries related to the procedure of submission of tax declaration via electronic forms. The number of tax consultations (indicator 1) increased from 2,700 in 2011 to 3,600 in 2013 due to the extension of business hours of tax offices. STC has introduced several interactive services, which are provided at the web site of the STC, and also keeps track of and tries to respond to the customers' complaints and post the result on its website. At the time of the ex-post evaluation, taxpayers as well as accountants (who often interact with tax authorities on behalf of taxpayers) were interviewed, and they appreciated the new services such as Short Message Service to the taxpayers' mobile telephones to remind the deadlines related to tax payment, seminars on the amendments to the tax legislation held at regular interval, and internet tax filing system and so on. The quantitative data, which directly explain the change of customer satisfaction, were not obtained, but it might be perceived that the customer satisfaction (indicator 1) is increased since improvements in services are confirmed as above[4]. As to the tax audit process[5] (indicator 2), although the STC officials are trained to conduct tax audit based on the due process of the law and it is assumed that they are following the due process, no information was available to objectively and quantitatively confirm the situation. At the time of ex-post evaluation, it was confirmed that the activities of exclusive control of bazaars (public market retailers) by STC, which were introduced following the project's advices on improving tax administration, were endorsed by the Presidential Resolution in 2010; and that STC has conducted tax audit at the bazaars in order to prevent violation of fiscal, economic and tax legislations and criminal events.

The website of STC: the progress of handling customers' requests is shown by a pie chart.

No other impact by the project has been confirmed.

Therefore, effectiveness/ impact of the project is fair.

Achievement of project purpose and overall goal

<table>
<tr><th>Aim</th><th>Indicators</th><th>Results</th></tr>
<tr><td rowspan="2">(Project Purpose)
Improvement of the capacity of the faculties of the Tax Academy and Tax Colleges for improving curricula, instructional plans and training materials and delivery of appropriate training program for tax officials in the field of taxpayer service and tax audit.</td><td>Modified initial training program is introduced.</td><td>(Project Completion) Achieved.
The modified training program at the Tax Academy was implemented by using the modified syllabuses and the newly developed materials.
(Ex-post Evaluation) The modified training programs have been delivered after the project completion.
The number of student/participants of the training programs:
<table>
<tr><th></th><th>2011</th><th>2012</th><th>2013</th></tr>
<tr><td>Tax Academy (3-4 years)</td><td>150</td><td>150</td><td>150</td></tr>
<tr><td>Tax Colleges (3-4 years)</td><td>Less than 1400</td><td>Less than 1300</td><td>Less than 1200</td></tr>
</table></td></tr>
<tr><td>Recurrent training program for taxpayer services and tax audit is implemented</td><td>(Project completion) Achieved.
The modified training program at the Tax Academy was implemented by using the modified syllabuses and the newly developed materials.
(Ex-post Evaluation) The modified recurrent training programs have been delivered after the project completion.
The number of participants of the recurrent training programs:
<table>
<tr><th>2011</th><th>2012</th><th>2013</th></tr>
<tr><td>2,700</td><td>2,700</td><td>2,700</td></tr>
</table></td></tr>
</table>

[2] The teaching materials, syllabus and curriculum developed in the project were expected to be authorized by the Ministry of Higher and Secondary Specialized Education by the time of the Terminal Evaluation so that they could be utilized as official materials at educational institutions where tax related courses are offered. At the time of the ex-post evaluation, however, these materials are not yet approved by the Ministry of Higher and Secondary Specialized Education as main textbooks and are used only as reference or in extra classes at the educational institutions.

[3] The educational standard in Uzbekistan requires revision of training materials 5 years after the development. Since the Project developed the materials in 2010-2011, the revisions are planned in 2014-2015. (At the time of ex-post evaluation, 5 years have not passed yet)

[4] The project introduced the term and definition "tax payer services" for the first time in Uzbekistan. It was defined as "provision of information and individual support, and consolidation of social infrastructure by tax offices to enable taxpayers to independently file tax returns and pay their taxes." (Project Completion Report (Summary) p. 3-11)

[5] In Uzbekistan tax audit is usually conducted by tax officers of the STC with the participation of taxpayers. The entities (taxpayers) subjected to tax audit are selected in accordance with the Article 90 of the Tax Code. Tax audit is to examine if tax legislation is executed appropriately. It is generally conducted once a year in the form of inspection of the financial and economic activity, i.e. examining and comparing the accounting, financial, statistical and other documents of the taxpayer to check if taxpayers are complying with tax legislation. Duration of the tax audit is 30 calendar days for one taxpayer.

<table>
<tr><td rowspan="2">(Overall goal)
Development of STC officials professional skills and knowledge in the field of taxpayer services and tax audit</td><td>The numbers of the consultations and the customer satisfactions increases</td><td>(Ex-post Evaluation) The number of consultation increased.
The number of consultation:
<table><tr><td>2011</td><td>2012</td><td>2013</td></tr><tr><td>2,700 cases</td><td>3,000 cases</td><td>3,600 cases</td></tr></table>The quantitative data to directly explain the increase of the customer satisfactions is not available. Some interviewed taxpayers showed their satisfaction with new services that are offered by STC.</td></tr>
<tr><td>Tax audit on the due process of law is conducted.</td><td>(Ex-post Evaluation) The information is not available about the the extent to which tax audit is conducted based on the due process of law[6].</td></tr>
</table>

Source：Project Completion Report, Interviews with counterparts

3 Efficiency

The project period was within the plan (ratio against the plan: 97%), the project cost was higher than the plan (ratio against the plan: 113%). This is because additional trainings in Uzbekistan/Japan etc. were conducted to meet the earnest desire of STC and to achieve output 3 and output 6 (customer services and tax accountant system). Therefore, efficiency of the project is fair.

4 Sustainability

In the policy aspect, the Presidential Decision in 2010 is still valid at the time of ex-post evaluation and the government of Uzbekistan developed and implemented trainings for improvement of tax administration. Institutionally, there is no structural change in the Tax Academy and the Tax Colleges. The Tax Academy and the Tax Collages have continuously delivered trainings for the tax officials and the students to be tax officials. The Tax Academy and the Tax Colleges have sufficient number of faculties or teachers (Tax Academy: 52, Tashkent Tax College: 40, Fergana Tax Collage: 34, and Bukhara Tax College: 32) respectively. As for the technical capacity, the knowledge level of faculties of the Tax Academy and Tax Colleges to deliver trainings is assessed periodically, and it has been confirmed as sufficient[7]. The Tax Academy and the Tax Colleges conduct regular trainings for the teachers and faculties in order to build their capacity. Also, the knowledge level of the STC staff has been annually checked on all the fields including taxpayer services. On the financial aspect, it is assumed that the necessary budgets for the planned training programs have been allocated by the state government according to the interviews with the STC officials. However, it was not confirmed by financial data since no budget data is disclosed due to the internal regulation of STC.

Therefore, sustainability of the project is fair.

5 Summary of the Evaluation

This project mostly achieved the project purposes of improvement of the capacity of the faculties at the Tax Academy and Tax Colleges, as the modified training programs were delivered to the students and the modified recurrent training courses were delivered to the tax officers at the Tax Academy and the Tax Colleges. It is confirmed that the trainings have been continued after the project completion, while the faculty's capacity for re-modification of training programs was not fully verified at the time of ex-post evaluation. For the overall goal, the increase of the number of tax consultations is observed. For the customer satisfaction, STC has introduced several interactive services for tax payers, which are provided at the web site of the STC. These services are welcomed by taxpayers who were interviewed during field survey of the ex-post evaluation, but the customer satisfactions are not assessed quantitatively. As to the process of the tax audit, although the STC officials are assumed that they are following the due process, no information was available to objectively and quantitatively confirm the situation at the time of ex-post evaluation.

As for sustainability, no problem was observed in the policy background as well as the institutional set-up and technical aspect to deliver trainings at the Tax Academy and the Tax College. In the financial aspect, necessary budget is allocated according to the implementing agency, although no budget data is available. For efficiency, the project cost exceeded the plan.

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

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

Tax Academy and Tax Colleges should continue updating training programs and manuals. In particular, major modification of training programs and manual will be necessary in the period 2014-2015. Efforts should be made for their modification and at least for revising electronic versions. Also efforts should be continued for getting approval of the Ministry of Higher And Secondary Special Education for using teaching materials as main textbooks at Tax Academy and Tax Colleges.

Lessons learned for JICA

In the process of ex-post evaluation it was not possible to obtain some indicator data on project's overall goal (i.e. customer satisfaction, tax audit on due process of law) because those are not measurable and are not disclosed. For similar projects in the future, it is recommended to more carefully select indicators and specify the means of collecting data to verify the indicator so that they could be obtained after the project completion.

[6] Tax audit procedure defined by the law is as follows: The State authorized body approves the schedule of tax audit. Unscheduled tax audits are also conducted according to the legal proceedings.

[7] In Tax Colleges it is conducted every 3 years: the latest assessment was conducted in 2013 at Fergana Tax College and in 2014 at Tashkent Tax College and Bukhara Tax College. At Tax Academy, it is conducted every four years: the assessment was conducted in 2009 last time. Next assessment is scheduled in 2014/2015, while discussion for the detail schedule is under way at the time of ex-post evaluation.

conducted by JICA India Office: November, 2014

Country Name	Reproductive Health Project in the State of Madhya Pradesh (Phase 2)
India	

I. Project Outline

Background	The State of Madhya Pradesh, like other northern provinces in the country, has been considered as less developed and still suffered from high rates of maternal and neonatal mortality. Especially the situation in the rural area was very severe. To tackle these issues, the Government of India has made efforts under the National Rural Health Mission (NRHM) 2005-2012 and implemented the program named "Reproductive and Child Health (RCH)." To support this program in the State of Madhya Pradesh, JICA implemented the Project for Reproductive Health and Women's Empowerment (2005-2006) in the pilot areas in Sagar Division. Scaling up the results of the above project to other areas in the state was needed.
Objectives of the Project	1. Overall Goal: The State health sector ensures quality mother and new born child health services. 2. Project Purpose: To increase the number of pregnant women and mothers who receive quality maternal health (MH) services by the nursing cadres, with special emphasis on the Auxiliary Nurse Midwives (ANMs).
Activities of the project	1. Project site: State of Madhya Pradesh 2. Main activities: Training of ANMs and related cadres on (i) health facility management, (ii) procedure for data management, (iii) development of IEC (Information Education and Communication)/BCC (Behavior Change Communication) materials and (iv) awareness raising of community people. Dissemination of the pilot areas' results to other areas in the State 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 4 persons 2) Trainees received: 8 persons 3) Equipment: None Indian Side 1. Staff allocated: Officers from the levels of state, region, district, block and sectors. 2. Land and facilities: Information not available. 3. Local cost: Cost for printing MH cards, renovating health facilities, and implementing training, salaries to counterpart personnel, etc.

Ex-Ante Evaluation	2006	Project Period	January 2007 to January 2011	Project Cost	200 million yen
Implementing Agency	State Government of Madhya Pradesh (GoMP), Department of Health and Family Welfare (DoHFW)				
Cooperation Agency in Japan	None.				

II. Result of the Evaluation[1]

1 Relevance

This project has been highly relevant with India's development policy of "improvement of maternal and child health (MH) services" as set in policy documents including the 10th Five Year Plan (2002-2007), 11th Five Year Plan (2007-2012) and NRHM (2005-2012) at the time of both ex-ante evaluation and project completion, as well as development needs for quality MH services through training on ante-natal care (ANC) services. It was also relevant also with Japan's ODA policy: JICA's Country Assistance Program (2006) and Health and Development Initiative (2005) which showed Japan's commitment in MH assistance at the time of ex-ante evaluation.

Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project aimed to increase the number of pregnant women and mothers who receive quality MH services provided by ANMs and other related cadres[2] in Sagar Division[3] of Madhya Pradesh State, through the capacity development of ANMs and other related cadres regarding MH services, health facility management, data management and communication skills with community people. By disseminating the achievements in the Sagar division to other divisions, it was expected to strengthen mother and new born child health services in the State.

By the time of project completion, the number of pregnant women and mothers who received quality MH services in Sagar Division has been perceived increasing by the produced outputs such as i) trained health workers on SBA (Skilled Birth Attendant) and ANC, ii) strengthened systems for the regular supportive supervision of ANMs by block program manager and ANMs' reporting capacity and iii) strengthened ANM's communication capacity. However, ANMs who participated in the training on SBA were less than 22% of the total ANMs in Sagar Division. Further, this SBA training was not conducted in Sagar District. As for ANC training, 74-84% of ANMs/LHVs of the three districts were trained, but this ANC training was not organized in Chattarpur and Sagar Districts[4]. As for the number of pregnant women who had at least three ANC checkups, it increased only

[1] Constraint of Evaluation: The project did not set quantitative target in the indicators for the Outputs, Project Purpose and Overall Goal.
[2] Related cadres include Lady Health Visitors (LHV), Multi-Purpose Workers-male (MPW-M) and Male Supervisors.
[3] Project activities were implemented in all of the five Districts of Sagar Division, but some activities were focused on in the two pilot districts (Damoh and Tikamgarh).
[4] The ANC Trainings were not organized in Chattarpur District due to the time constraints. Since the District has 8 blocks with 180-200 ANMs

in Sagar and Panna Districts. The reasons why the number in Sagar District where training was not conducted increased and why that of other districts with training did not increase are unclear. One assumption for the latter is that the project's activity of awareness raising for pregnant women to see doctors might not be sufficient enough to increase the number. It is also suggested that indicator of the Project Purpose might not be appropriate to measure the outcome of each output.

After the completion of the project, all of the Community Health Centers in Damoh, Chattarpur and Sagar continue to utilize 5 trays and 4 corners[5] introduced by the project. Besides, it was observed in Sagar and Damoh Districts that the referral of the pregnant women with high risks to higher level facilities was increased with the use of referral slip which contains medical information about the woman referred. Among the 19 interviewed pregnant women and mothers in Sagar, Chattarpur and Damoh Districs, 18 are satisfied with treatment and communication manners of ANMs and other related cadres and health facility equipment. As for the institutional delivery rate, it has been kept the same from 2012 to 2014 in the five target districts. Only in Damoh and Sagar Districts, improvement has been observed: Damoh 75% to 87%, Sagar 75% to 80%. The number of pregnant women who have at least three ANC checkups by utilizing the project outputs of the ANC trainings has not been confirmed by the data and/or survey although the interviewed medical officers perceived that the number has been increasing.

Regarding the Overall Goal, mother and new born child related health services in Madhya Pradesh State has been improved. The state average of the maternal mortality ratio (MMR) decreased from 339 in 2006 to 227 in 2013. Also the division average (Sagar) decreased from 397 in 2011 to 322 in 2013. These might be contributed by increased ANC registrations and checkups by skilled heath workers, according to the Deputy Director of MH at the State level and other officials. Moreover, the neonatal mortality rate has decreased in all of the five target districts, as well as in the state too. It was difficult to specify the contributing factors to this improvement, but the interview conducted at the ex-post evaluation indicates that the project outputs such as skilled health workers, improved facility equipment and transportation somehow contributed to the improvement. Efforts were made to disseminate the guidelines, developed under the project, to other Divisions by the State and District officials. The materials are used in the States of Bihar and Rajasthan, too. Also, the impact survey conducted during the project revealed that ANMs have deepened the connections and relationships with communities as well as pregnant women, and further strengthened their skills in dealing with ANC cases at the field level. There have been no negative impacts observed. There was no land acquisition and resettlement.

In sum, the Overall Goal's indicator has been achieved at the time of ex-post evaluation, while it was difficult to firmly confirm how much the project has contributed to this achievement. Achievement of the Project Purpose was partial at the time of completion and at the time of ex-post evaluation. Therefore, effectiveness/ impact of the project is fair.

Achievement of project purpose and overall goal

<table>
<tr><th>Aim</th><th>Indicators</th><th>Results</th></tr>
<tr><td>(Project Purpose)
To increase the number of pregnant women and mothers who receive quality MH services by the nursing cadres, with special emphasis on the ANMs</td><td>Number of pregnant women who received at least three ANC checkups.</td><td>(Project Completion) Partially increased.
- Thu number of pregnant women who received at least three ANC checkups from 2008 to 2011 and the ratio are as follows:
<table>
<tr><th>District</th><th>2007-08</th><th>2008-09</th><th>2009-10</th><th>2010-11</th></tr>
<tr><td>Tikamgarh</td><td>41,519
100%</td><td>37,815
100%</td><td>33,344
87%</td><td>29,924
80%</td></tr>
<tr><td>Sagar</td><td>58,042
77%</td><td>59,822
83%</td><td>59,768
88%</td><td>57,858
86%</td></tr>
<tr><td>Chattarpur</td><td>40,388
80%</td><td>33,973
70%</td><td>36,995
95%</td><td>37,093
79%</td></tr>
<tr><td>Damoh</td><td>30,954
79%</td><td>28,869
78%</td><td>26,656
69%</td><td>28,871
74%</td></tr>
<tr><td>Panna</td><td>9,719
29%</td><td>9,697
31%</td><td>18,834
64%</td><td>22,465
78%</td></tr>
</table>
* These figures from HMIS(Health Management Information System) report might include some improperly registered.
(Ex-post Evaluation)
- Thu number of pregnant women who received at least three ANC checkups from 2012 to 2014 and the ratio are as follows:
<table>
<tr><th>District</th><th>2007-08
(baseline)</th><th>2011-12</th><th>2012-13</th><th>2013-14</th></tr>
<tr><td>Tikamgarh</td><td>41,519
100%</td><td>29,113
74%</td><td>29,433
80%</td><td>32,488
77%</td></tr>
<tr><td>Sagar</td><td>58,042
77%</td><td>54,572
74%</td><td>48,678
86%</td><td>41,965
78%</td></tr>
<tr><td>Chattarpur</td><td>40,388
80%</td><td>37,676
79%</td><td>39,264
87%</td><td>35,185
80%</td></tr>
<tr><td>Damoh</td><td>30,954</td><td>29,222</td><td>25,149</td><td>27,227</td></tr>
</table>
</td></tr>
</table>

it was difficult to conduct 6-day training for all during the limited project period and with the limited number of project staff. Thus, a 2-day Training of Trainers was conducted towards the end of 2009. In Sagar District, since it is a geologically huge district, the project couldn't cover all the blocks. Regarding SBA training, it was not conducted in Sagar District, neither, because it has been provided by the State Health Department since 2005.

[5] Idea of 5 trays (delivery tray, episiotomy tray, baby tray, medicine tray for delivery, emergency drug tray) and 4 corners (observation corner, service station, labour corner, newborn corner) was introduced to rearrange the labor room for smooth functioning of delivery activities during the Project period.

		79% 72% 74% 73% Panna 9719 22,537 20,377 20,901 29% 81% 80% 71% * These figures from HMIS report might include some improperly registered
(Overall goal) The State health sector ensures quality mother and new born child health services	MMR (maternal mortality ratio) of the State level.	(Ex-post Evaluation) Decreased.

	2006	2011	2012	2013
MMR in Madhya Pradesh State	339	310	277	227
MMR in Sagar Division	not available	397	386	322

Source: HMIS Report, Report, Interviews with counterparts

3 Efficiency

Both the project cost and the project period were within the plan (ratios against the plan: 63% and 100%, respectively). Therefore, efficiency of the project is high.

4 Sustainability

In the policy aspect, the project is still given importance in the current development policy such as the 12th Five-Year Plan (2012-2017) and National Health Mission (2013 onwards). MH services prioritized in these policies have been supported by the national program, Reproductive, Maternal, Newborn and Child Health and Adolescent.

Institutionally, for provision of MH services, functions/demarcations of ANMs and other related cadres have remained almost the same with the functions/demarcations of the project period. Further at the time of the ex-post-evaluation, ANMs are in charge of the data collection on causes of maternal and neonatal mortality and facility-wise on-line reporting, which were introduced after the project. The referral system in MH services has been improved after free ambulatory services were introduced. However, there is a shortage in assigned ANMs and also other related cadres in Sagar Division, mainly caused by the lengthy procedure of recruitment and selection and also other problems such as shortage of candidates and low retention rate. Supportive Supervisions are conducted every week by the Chief Medical and Health Officers, District Health Officers and District Immunization Officers to understand the situation. It sometimes hampers health workers' MH services because while attending the monitoring activities, ANMs need to stop providing services to mothers and children. Therefore, in order to fully provide health services, the problem of the personnel shortage needs to be addressed.

Regarding the technical aspect, health workers have kept applying techniques introduced by the project including 5S[6]. It was not possible to confirm how many personnel who worked for the project still remain in the same position, but for the new ANMs/LHVs who joined after the project, it is confirmed that training on SBA and ANC was irregularly provided. This training is provided also for senior ANMs as refresher courses at the block and district level. The training manuals and other materials developed by the project are still utilized. They, together with materials prepared by other donors, are sufficient to cover training needs.

In the financial aspect, the budget for training health workers, upgrading facilities, data management and implementing community activities come from NRHM, and they are sufficient, according to District and Block level-officers. However, there is a minor problem. The budget execution rate is low as the RCH budget and expenditure for 2013 were 7,777 million Rs. and 7,051 (execution rate: 90%), and the NRHM budget and expenditure for 2013 were 7,051 and 4,649 million Rs. (execution rate: 65%). Reportedly, this is caused by long and complex procurement procedure, and the late disbursement of the budget from the State Government to RCH/NRHM also makes the execution difficult.

From these findings, it is considered that the project has some problems in institutional and financial aspects of the implementing agency; therefore, sustainability of the project is fair.

5 Summary of the Evaluation

The project has partly achieved the Project Purpose and Overall Goal. As for the indicator of the Project Purpose, the ratio of pregnant women who had at least three ANC checkups increased only in two of the five target districts. For the Overall Goal, both MMR and NMR decreased at the level of both Division and State but it is difficult to confirm how much the project has contributed to this decrease. As for sustainability, provision of MH services has been still given importance in the current development policy. However, there are some problems in institutional and financial aspects, such as insufficient allocation of health workers and low budget execution.

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

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

To DoHFW, GoMP:

- To ensure the sufficiency of ANMs and other cadres, it is recommended to minimize irregular and frequent transfers of the assigned health workers and place the adequate number of the personnel to fully provide the health service, for instance, by improving the recruitment process.
- It is necessary to enhance and improve the pace of disbursement of allocated budget from the State Government RCH/NRHM so that the pace of execution would be improved.
- It is important to continue conducting periodic follow-up and refresher course of the health workers at the block and district

[6] 5S stands for Seiri (orderliness), Seiton (neatness & tidiness), Seiso (cleaning), Seiketsu (cleanliness), and Shitsuke (good manner).

level. In particular, it is important to regularize SBA trainings.

Lessons learned for JICA:

- While materials developed by the project have been utilized in other states, if more activities to enhance recognition of the project had been conducted, sustainability and visibility of the project effects could have been further strengthened. Therefore, it is recommended that similar project put more efforts on dissemination activities and include them into the project strategy.
- In this project, while the Overall Goal's indicator, "MMR (maternal mortality ratio) of the State level", is improved at the time of the ex-post evaluation, it is difficult to assess the causes for this improvement due to existence of other factors. Therefore, it is strongly recommended to set an indicator which is able to properly measure the contribution of the project to the Overall Goal in the baseline survey. Moreover, the "quality MH services" in the Project Purpose should be defined with explanations and shared among the related stakeholders, and its indicators need to be well elaborated at the time of the project planning stage.
- Indicators of the project and project activities should be related well each other to measure the outcome of the activities properly.

(ANM taking history from the pregnant woman before starting ANC Check-up)

(ANM checking Blood Pressure using instrument provided by the project)

Internal Ex-Post Evaluation for Grant Aid Project

conducted by Senegal Office: November 2014

Country Name	The project for the construction of classrooms of elementary and lower secondary schools
Republic of Senegal	

I. Project Outline

Background	The government of the Republic of Senegal aimed to achieve 100% enrollment for elementary education by 2015 and 50% for lower secondary education by 2007. In order to do so, the government planned to construct 2,500 elementary school classrooms per year and 500 lowersecondary school classrooms per year. However, due to the budget constraint, the government only constructed 1,250 classrooms per year in total (2006) and hence needed support for attaining the target. .				
Objectives of the Project	To improve the educational environment (relaxation of overcrowded classrooms and improvement of access to education) of elementary schools in 5 regions (Dakar, Thiès, Louga, Fatick and Kaolack) and of lower secondary schools in 3 regions (Dakar, Thiès, and Kaolack) by constructing classrooms, director's offices and toilets and by procuring furniture.				
Outputs of the Project	1. Project sites: (1) 5 regions (Dakar, Thiès, Louga, Fatick and Kaolack) for elementary education, (2) 3 regions for lower secondary education (Dakar, Thiès, and Kaolack) 2. Components: (1) The project is implemented by the Grant Aid for Community Empowerment scheme (2) Construction of 287 classrooms (247 for elementary schools and 40 for lower secondary schools) and 49 director's offices and 58 toilet blocks in 60 sites. (2) Procurement of furniture at the above schools (3) Technical Assistance (hereinafter referred to as 'soft component') for strengthening school management committees (Comité de Gestion d'Ecole ; CGE)				
Ex-Ante Evaluation	2006	E/N Date	5 December, 2006	Completion Date	26 August, 2010
Project Cost	E/N Grant amount: 996 million yen, Contract Amount: 969 million yen				
Implementing Agency	Ministry of Education (Currently, Ministry of National Education)				
Contracted Agencies	The procurement of the Project is done by the Japan International Cooperation System under the Agent Agreement with the Ministry of Education. Local Consultants : SATA AFRIQUE S.A.R.L Contractors : BAOL Construction (Lot 1), SOCETRA (Lot 2), EGEEB (Lot 3), ESMB (Lot1and Lot 4) Suppliers : A2ME SARL, SENEPRES, SISMAR				

II. Result of the Evaluation

1 Relevance

This project has been highly consistent with Senegal's development policy, such as improvement of access to basic education under the Basic Principles of Ten-Year Education and Training Plan (2000) and Projet d'Amélioration de la Qualité, de l'Equité et de la Transparence de l'Education et la Formation 2013-2025(PAQUET-ET, Project for Improvement of Quality, Equity and Transparency of Education and Training), and development needs to fill the gap of shortage of classrooms in elementary and lower secondary schools, as well as Japan's ODA taskforce meetings and JICA's Country Assistance Implementation Plan for prioritizing education, at the time of both ex-ante and ex-post evaluation. Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project has somewhat achieved its objectives, "to improve the educational environment (relaxation of overcrowded classrooms and improving access to education) of elementary schools in 5 regions (Dakar, Thiès, Louga, Fatick and Kaolack) and of lower secondary schools in 3 regions (Dakar, Thiès, and Kaolack)."

The number of students who study at the target schools has increased, however, the number of students enrolled at the target elementary schools has not reached the target as the output was not produced as planned (the number of classrooms actually constructed is smaller than the plan). It can also be explained by the fact that an elementary school at Fatick city has just opened in 2014[1] as well as the fact that the displacement of populations due to flooding (2 years ago) in 2012 have affected the number of students in the target schools in Dakar .

The education environment is relatively good as the average number of students per classroom of the target elementary schools (approximately 52) at the time of ex-post evaluation meets the government standard (53) of 2006, and has improved from the national average of 70 at the time of ex-ante evaluation. As for the schools visited for this evaluation[2], they have even better environment with the average number of students/classroom of 40. However, there is still a room for improvement as the government standard has become 45 at the time of the ex-post evaluation, and some of the lower secondary schools practice class rotation ("class rotation" is used when the number of educational classes (group of students) exceeds the number of physical classrooms) to handle the higher number of students per class than that of the national standard. Nonetheless,

[1] Until 2014, the school was used for training of teachers, which was not the intended use of the project. JICA Senegal office requested the Ministry of National Education to meet the purpose for which the school was built, i.e., hosting elementary school students. As a result, the school started hosting elementary school students in 2014.

[2] The evaluation team visited 2 elementary schools in Fatick, 3 elementary schools in Kaolack and 1 lower secondary school in Kaolack.

most of the classrooms are adequately used in accordance with the intended purpose, and teachers and students as well as parents are satisfied with the physical quality of classrooms and toilets constructed under the project.

As for impacts, as a result of the improvement of the educational environment, several directors interviewed revealed that students are more motivated to study, and explained that the project contributed to the improvement of the academic results of students[3].

Parents have become aware of the importance and role of school in the education of their children. Moreover, parents who are members of the CGE take part in activities to promote the CI (grade1) children's enrollment. Because of this CGE awareness raising activities and the proximity of school to their houses in some areas, the attendance and enrollment rate at the schools visited for this evaluation has significantly improved. According to the interview with directors (e.g. Director of Tataguine2 CGE), enrolment of girls has increased by the construction of toilets in the project, which has been facilitated with other initiatives by the government and contribution of CGE for raising awareness of the importance of girls' education by visiting each house and discussing with opinion leaders such as village heads and imams. The target region-wise, some improvements are observed including the transition rate from elementary to lower secondary schools (See figure 1). No negative impact on social and environment aspects is observed at the ex-post evaluation.

Although many positive aspects are observed, as the project has not achieved the target number of students, the effectiveness/impact of the project is fair.

Quantitative Effects

Indicator	Year 2006 (before the project) Actual value	Year 2009 (target year) Target value	2010/2011 (academic school year starting from October to June) (target year) Actual value	Year 2014 (ex-post evaluation year) Actual value
Indicator 1 Number of students estimated to study at the target 60 elementary schools in the target 5 regions (Actual 52 schools)	12,197	22,740	14,733	17,131
Indicator 2 Number of students who study at the target 8 secondary schools in the target 3 regions	1,748	2,400	6,017	8,683

Source: Direction de la Planification et de la Reforme de l'Education (DPRE)/Ministry of National Education

3 Efficiency

Although the project cost was within the plan (ratio against the plan: 97%), project period significantly exceeded the plan (ratio against the plan: 158%). This is because insufficient capacity of local contractors led to the significant construction delay, and therefore, some contracts were terminated and reselection of contractors was necessary. Outputs have been changed (the number of facilities to be constructed and the furniture to be procured have reduced) due to price escalation and foreign exchange loss. For details, the scope was changed from 314 classrooms, 56 director's office, and 288 toilet blocks in 68 sites to 247 for elementary schools and 40 for lower secondary schools and 49 director's offices and 58 toilet blocks in 60 sites. Therefore, efficiency of this project is fair.

4 Sustainability

The operation and maintenance of the school facilities constructed by the project have been carried out by each school, and CGE is a main body of school management and in charge of improvement of education environment (improving maintenance of infrastructure of schools and the quality of education)[4]. Inspection d'Académie（IA）and l'Education et de la Formation (IEF), regional and departmental offices of Ministry of National Education, are responsible for the training of CGE members and are also in charge of monitoring their activities. With the support of the project (soft component for strengthening the capacity of CGEs to draw up and implement the school facility management and sanitary education plans), all 52 target elementary schools established CGEs and have become function well at the time of the ex-post evaluation[5]. However, while the local governments are supposed to support the maintenance of schools, their involvement in the school operation and maintenance remains insignificant as they do not have sufficient financial resources to cover the needs of schools.

Technically, after the support under the soft component, CGEs are able to develop maintenance action plans continuously. In accordance with the plans, activities of repair of equipment such as desks, walls or tables are conducted. In addition, awareness raising activities on the importance of children education and that of involvement of the whole community in school management, as well as management activities such as seeking partners and funding for schools (NGOs) have been

[3] One of the examples of improvement in academic result is observed at Tataguine2 School in Kaolock where the success rate in the grade-six exam was 48% in 2009, whereas the success rate became 86% in 2013.

[4] The government is in direction to allocate resources directly to schools through the CGEs, and therefore, schools are required to have CGE to receive resources.

[5] The soft component does not include the target schools in Louga where the support for CGEs was implemented by a JICA technical cooperation project "Project on the Improvement of Educational Environment" (PAES).

implemented[6]. Although CGEs receive technical support from IAs, and especially from IEFs such as inspection and monitoring of CGEs, it is not clear whether the Ministry of National Education is able to further follow up to strengthen the capacity of CGEs.

Financially, according to the schools visited during the evaluation survey and interviews with the Ministry of National Education, the target schools are able to receive budgets for maintenance from the government to some extent and are able to collect contributions from parents to cover maintenance costs. There are some CGEs that are conducting income-generating activities which allow them to better meet maintenance needs.

As for the current status of operation and maintenance, generally, classrooms, director' offices, toilets and equipment constructed/procured by the project are in good condition. Some minor problems are observed (e.g. student desks' screws fall out), but the repair costs will be covered by CGEs. A major exception is Ndangane 3 school in Kaolack which has multiple problems[7]. Regarding the maintenance activities of classrooms and equipment, CGEs carry out maintenance based on the maintenance action plans they develop.

As there are some problems in the institutional and technical aspect, the sustainability of this project effect is fair.

5 Summary of the Evaluation

The project has somewhat achieved its objectives, "to improve the educational environment (relaxation of overcrowded classrooms and improving access to education) of elementary schools in 5 regions and of lower secondary schools in 3 regions". The number of students who study at the target schools has increased and the education environment has improved, however, the number of students in elementary school did not reach the target. The positive impacts are found that CGE activities somewhat contributed to students' motivation to study and raise parents' awareness of importance of education.

As for sustainability, there are some problems in the institutional and technical aspects, with the limited participation of local governments and unclear future technical support to CGEs from the ministry. For efficiency, the outputs have been changed and the project period exceeded the plan.

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

III. Recommendations & Lessons Learned

Recommendations to implementing agency:

1. Based on the mandate, greater involvement of local governments, such as budget support of renovation for buildings, and provision of textbooks, workbooks and so forth is needed in ensuring implementation of the maintenance action plan of schools each year.
2. For Ndangane 3 school, Municipality of Kaolack or Ministry of National Education is recommended to construct a wall as soon as possible to ensure a better school environment
3. Ministry of National Education is recommended to strengthen the capacity of directors in management and leadership in order for CGEs to function better.

Lessons learned for JICA:

1. In a school construction project, the strong involvement of communities should be encouraged. Communities are able to contribute to the management of schools significantly and ensure sustainability of project effect.
2. Careful site verification before construction is needed. One of the schools (Ndangane 3) under this project has been facing a problem that domestic wastes are always discharged by the neighborhood as the school site is surrounded by mechanic garages, restaurants and others. It is necessary to examine carefully the engagement of the beneficent government at the study stage, if there is a particular environment.

Students in class at Ndangane 3 school

A view of the building of Koutal school

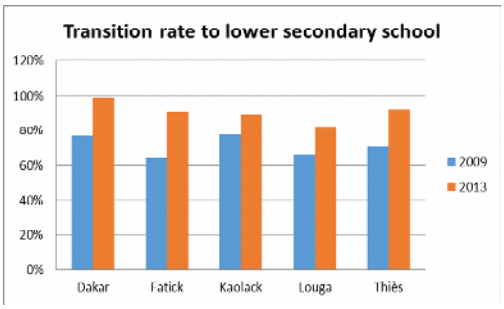


Figure 1

[6] In addition to the soft component of the project, with the support from the "Project on the Improvement of Educational Environment Phase2"(JICA's technical cooperation, PAES2), CGEs are better equipped in the area of management because the presidents and treasurers received training with suitable modules to improve and strengthen their capacities to develop realistic and achievable action plans and conduct management activities. All target schools under this grant aid project are supported by this PAES2 project.

[7] The school has following problems. (i) a rainwater drainage problem affected the building foundation (The CGE made some efforts but the problem has not been solved fundamentally). (ii) domestic wastes are always discharged by the neighborhood due to no enclosure wall in between the school site and surrounded mechanic garages and restaurants. According to the CGE, they have been asking for the construction of an enclosure wall since 2011. (iii) There is no water connection, although the municipality agreed to pay water bills.

Internal Ex-Post Evaluation for Technical Cooperation Project

conducted by Sri Lanka Office: March, 2015

Country Name	
Democratic Socialist Republic of Sri Lanka	Project for the Development of Culture-Oriented Tourism in Sigiriya

I. Project Outline

Background	Sigiriya is one of the six UNESCO World Cultural Heritage Sites in Sri Lanka and has been attracting tourists. On the other hand, local residents received limited benefits from the tourism based on the Heritage as the length of tourists' stay was likely to be short. In such circumstance, the Japanese government had been implementing several projects in the area for construction of the Sigiriya Museum and provision of equipment to the Museum thorough ODA loan and grant aid. While, in order to increase the effect of these projects, capacity development of public and private tourism organizations in the field of tourism development, marketing promotion, and operation and management of the Museum was necessary.				
Objectives of the Project	1. Overall Goal: Promotion of tourism in Sigiriya and Dambulla area. 2. Project Purpose: Synergetic enhancement (Note 1) of the museum activities and the tourism in the Sigiriya area. (Note 1) Definition of synergetic enhancement: the operation of Sigiriya Museum and the tourism promotion activities for Dambulla–Sigiriya are executed with a close coordination.				
Activities of the project	1. Project site: Sigiriya, Central Province, 2. Main activities: 1) training of staff of the museum, 2) preparation of museum operation and management plan, tourism promotion plan and marketing plan, 3) preparing of promotion materials, 4) establishment of Tourist Information Center (TIC), 5) establishment of ADSTP (Note 2), 6) implementation of pilot project (Note 2) ADSTP: Association of Dambulla-Sigiriya Tourism Promotion. The association was formed by private-public partnership with the support of the Project and registered to the Divisional Secretariat. 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 11 persons 2) Trainees received: 6 persons 3) Equipment: Van with 15 seater, PC, software, LDC projector, digital camera, printers, laboratory equipment, etc. Sri Lankan Side 1) Staff allocated: 11 persons 2) Land and facilities: Project office 3) Cost for ADSTP meeting and new year festival				
Ex-Ante Evaluation	2008	Project Period	July 2008 – December 2010	Project Cost	282 million yen
Implementing Agency	Ministry of National Heritage and Cultural Affairs (MNHCA) Ministry of Economic Development (MED)				
Cooperation Agency in Japan	Kokusai Kogyo Co. Ltd., KRI International Corporation				

II. Result of the Evaluation

1 Relevance

This project has been highly relevant with Sri Lankan development policy for "development of tourism sector and increase in number of foreign tourists" as set in policy documents including, the 10 Years National Development Plan (2007-2016) and the Tourism Development Strategy (2011-2016), development needs of tourism development in Sigiriya area through public-private partnerships at the time of both ex-ante evaluation and project completion. It is also consistent with Japan's Country Assistance Plan for Sri Lanka (2008) at the time of ex-ante evaluation. Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project aimed to promote the tourism development in Dambulla–Sigiriya area with a close coordination between the operation of Sigiriya Museum and the tourism promotion activities by private-public partnership through improvement of operation and management of the Sigiriya Museum, tourism promotion and marketing, and establishment of tourism development mechanism in collaboration with public and private sectors.

The project purpose was achieved at project completion. The number of visitors to the Sigiriya Museum during August 2009-July 2010 was 140,000, which is 78% of the target of 180,000 per year. The visitors' satisfaction with the Museum was around 90%, which fully met the target. Tourism Information Centre (TIC) at the Museum has data bases, which could provide information on accommodations, restaurants and shops, various kinds of maps, information brochures and pamphlets to the visitors. Also ADSTP and Central Cultural Fund (CCF) (Note 1) have jointly carried out two cultural events, traditional dance competition and a New Year festival in 2010.

Since the project completion, the declining trend in number of visitors to the Museum has been observed. The possible reason for this is that the dispersion of tourist-destination occurred between Sigiriya and other tourist sites in the North and East of the country such as Arugampe beach and Jaffna as a result of conflict ending in year 2010. However, the number of tourists in 2013, especially number of foreign tourists, was increased.

It was also observed that, around 90% of the visitors have been consistently satisfied with the Museum since project completion to the time of ex-post evaluation. The joint events such as cultural events at the Museum, traditional exhibitions, New Year festivals, Clean-up campaigns have been conducted continuously with the cooperation of ADSTP, Divisional Secretariat and CCF.

For the overall goal, it was found as achieved to some extent. The number of visitors to the Sigiriya Heritage site in 2011-2013 met the target of 600,000 per year. On the other hand, the satisfaction level of visitors to Sigiriya and Dambulla area could not be verified due to non-availability of data. The possible reasons for increase in the number of visitors to the Sigiriya Heritage site are: (i) attractive tourism promotional programs and marketing promotion activities in Dambulla-Sigiriya conducted by ADSTP and other local tourism agencies including Hoteliers etc., (ii) Infrastructure development in Sigiriya area financed by Japanese ODA loan, (iii) development of tourist facilities and infrastructure in Sigiriya area such as increase in number of hotels and guest rooms and various types of accommodations such a home staying, lodges, tree top rooms, etc., and (iv) restoration of peace and security of the country.

As for impact, it was observed that the Public and Private Partnership (PPP) model developed by the project has been explored at the Anuradhapura Museum under CCF, in which Anuradhapura regional chamber and Museum are closely working on tourism development of the area. There was no negative impact and the project did not associate with land acquisition and resettlement of people.

Therefore, effectiveness/ impact of the project is high.

(Note 1) Central Cultural Fund (CCF) is a government organization under the Ministry of National Heritage and Cultural Affairs (MNHCA), which is responsible for managing and conserving all heritage sites in Sri Lanka including operation and maintenance of the Sigiriya Museum.

Achievement of project purpose and overall goal

<table>
<tr><th>Aim</th><th>Indicators</th><th>Results</th></tr>
<tr><td rowspan="4">(Project purpose)
Synergetic enhancement of the museum activities and the tourism in the Sigiriya area.</td><td>(Indicator 1)
The number of visitors (both foreign and domestic visitors) to the Sigiriya Museum is increased to 180,000 per year.</td><td>(Project Completion) Mostly achieved
• It was 140,000 visitors during August 2009-July 2010.

(Ex-post evaluation)
<table><tr><td></td><td>2011</td><td>2012</td><td>2013</td></tr><tr><td>Foreign visitor</td><td>18,868</td><td>31,071</td><td>39,359</td></tr><tr><td>Domestic visitor</td><td>90,828</td><td>62,335</td><td>80,659</td></tr><tr><td>Total</td><td>109,696</td><td>93,406</td><td>120,018</td></tr><tr><td>Achievement against the target</td><td>61%</td><td>52%</td><td>67%</td></tr></table></td></tr>
<tr><td>(Indicator 2)
More than 70% of the visitors to the Museum are satisfied with the Museum.</td><td>(Project completion) Achieved
• According to the visitors' survey, around 90% of the visitors are consistently satisfied with the Museum.

(Ex-post evaluation)
• According to the sample interview survey to 12 visitors to the Sigiriya Museum, all respondents (100%) rated the Museum as Excellent or Good.</td></tr>
<tr><td>(Indicator 3)
Tourism Information Centre (TIC) at the Museum makes public available more than two kinds of information collected by ADSTP.</td><td>(Project completion) Achieved
• Four data bases, many kinds of maps, information brochures and pamphlets are available at TIC.

(Ex-post evaluation) Achieved
• Same status as Project completion</td></tr>
<tr><td>(Indicator 4)
ADSTP and CCF carry out joint-events more the two times in 2010.</td><td>(Project completion) Achieved
• ADSTP and CCF jointly carried out two cultural events, traditional dance competition and a New Year festival.
•</td></tr>
<tr><td rowspan="3">(Overall goal)
Promotion of tourism in Sigiriya and Dambulla area.</td><td>(Indicator 1)
The number of visitors to the Sigiriya Heritage site is increased to 600,000 per year.</td><td>(Ex-post evaluation) Achieved
<table><tr><td></td><td>2011</td><td>2012</td><td>2013</td></tr><tr><td>Total</td><td>665,046</td><td>546,534</td><td>663,068</td></tr><tr><td>Achievement against the target</td><td>111%</td><td>91%</td><td>111%</td></tr></table></td></tr>
<tr><td>(Indicator 2)
The satisfaction level of visitors to Sigiriya and Dambulla area is increased.</td><td>(Ex-post evaluation) N.A.
Data is not available</td></tr>
<tr><td>(Indicator 3)
ADSTP carries out tourism promotion</td><td>(Ex-post evaluation) Achieved
• ADSTP has successfully managed to regularly conduct its tourism</td></tr>
</table>

	activities regularly by getting fund.	promotional activities by getting stable funds such as membership fees, government subsidies and donations.

Source: Terminal Evaluation Report, Interviews with counterparts.

3 Efficiency

Both of the project cost and period were within the plan (ratio against the plan: 98% and 96%). Therefore, efficiency of the project is high.

4 Sustainability

In terms of policy aspects, there is no significant change in the tourism development policy of the government such as increase of number of tourists, human resource development, improvement of service standards, marketing and promotions, and so on.

Regarding institutional aspects, CCF Sigiriya Heritage Site Office is in overall in charge of operation and maintenance of the Museum. The Museum has 25 full time staff and one part time staff. Out of them, 11 staff are in charge of operation and maintenance (O&M) of the Museum, and it is considered the number of O&M staff is sufficient. ADSTP is in charge of planning and implementation of tourism promotion and marketing activities in Dambulla- Sigiriya area. ADSTP is a voluntary organization with the public-private partnership (PPP) established by the project, which consists of chairperson, committee members, working group, and committee/WG administration. The members of ADSTP are represented by officials of Dambulla District Secretariat and other government organizations, the guest house association, the Cultural Triangle hoteliers association, and women's union in Dambulla- Sigiriya area. The regular meetings of ADSTP are held in a monthly base. On the other hand, the responsibility of each stakeholder of ADSTP was not clearly defined at the time of its formulation. For example, ADSTP was originally located at the District Secretary (DS) office of the central government. However, benefit to DS office was negligible, whereas expenditures such as office administration cost were originally borne by the DS office. Due to this status, ADSTP office was proposed to be moved to the information center of the local government, but full time administrative staffs are not yet assigned. ADSTP functions as a secretariat for tourism promotion, such as conducting effective promotions via web, arranging tour packages or even being a local agent for travel agents where revenue could be generated. But it is not fully exploited due to this lack of full time staffs. As a result of this, revenue of ADSTP is mainly depending on member fees as mentioned below. In case, revenue would be generated, there was possibility in increasing further promotional activities in the area.

In terms of technical aspects, the regular orientation program under the OJT program is provided for trainees and new graduates employed by the Museum, but there is no regular training system to disseminate the know-hows introduced during the project period to other museums. In general, technical levels of CCF Sigiriya Heritage Site Office is sufficient in planning and organizing special lectures at the Museum Auditorium on a monthly basis, whereas temporary exhibitions, and reprinting promotional materials have been conducted as expected. Regarding ADSTP, it continues its tourism promotional activities as expected.

As for financial aspects, an appropriate O&M budget for the Museum has been secured since their main source of revenue from Heritage site ticket sales is stable and enough to cover the necessary O&M expenses of the museum as well. ADSTP's financial source depends on the membership fees, donations and government subsidy, which can cover the cost for administration works sufficiently. In 2013, ADSTP received 121,415 LKR for revenue and spent 111,350 LKR for its administration works. In case of organizing events, a special fund collection is conducted among non-members as well as voluntary contributions obtained through many parties. Thus, ADSTP does not have any financial difficulties.

From these findings, it is considered that the project has some problem in institutional and technical aspects of the implementing agencies; therefore, sustainability of the project is fair

5 Summary of the Evaluation

This project has achieved the project purpose and achieved the overall goal to some extent through improvement of operation and management of the Museum, tourism promotion and marketing, and establishment of tourism development mechanism through public and private partnership.

As for sustainability, the implementing agencies such as CCF Sigiriya Heritage Site Office and ADSTP secure the adequate budget to maintain their activities. However, some problems are observed in institutional aspects of ADSTP because there is no fulltime staff assigned to administration works of ADSTP. Also CCF Sigiriya Heritage Site Office has an issue in the technical aspect since no regular training system was established during the project period to disseminate the project know-hows to other museums in the country.

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

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

For CCF:

- This project was primarily designed as a PPP model in achieving synergetic enhancement of the museum activities and local tourism activities in the Sigiriya area. This synergy was expected to be created through joint planning and implementation of tourism activities with the local associations of the region that includes cultural events, exhibitions, and tourism promotional activities as to achieve increasing visitors to the Sigiriya area. Thus, it is recommendable that, this new model is carefully studied and disseminated to other applicable CCF's museums through structured staff training, which would be conducted by the staff of Sigiriya Museum who were trained during the project period.
- CCF is recommended to continue further fund allocation for marketing of the Sigiriya Museum in order that, Museum will be recognized as a Visitor Orientation Center besides as a Museum. This is expected to create a greater understanding of the Sigiriya Heritage site among its visitors.

For Museum:

- Towards strengthening its marketing activities, it is recommendable that, Sigiriya Museum promotes its facilities & cultural activities to the local and foreign travel agents & Hoteliers by means of sending bulletins, publications etc. regularly. This is expected to increase the number of foreign visitor arrivals to Sigiriya.
- The Museum is encouraged to effectively use the CCF official website in disseminating information by frequently updating the content with CCF. Cultural information of the region can also be promoted as a whole as to create synergy between the museum and the local activities in Sigiriya.
- It is also desirable that, museum actively promotes educational and research tours to local schools, as to increase its function as a visitor orientation center in disseminating Sigiriya site information.
- Easy access to Museum by visitors is further encouraged to be improved, by developing a new access road that directly connects the museum with the visitor arrival area.

Lessons learned for JICA

- In this project, ADSTP was established with the PPP model. However, the responsibility of each stakeholder was not clear. As the result of this, there is no full time staff allocated to ADSTP office and ADSTP's function as a secretariat for tourism promotion is not fully exploited. Towards establishing new PPP models, the role of each stakeholder needs to be sufficiently defined among stakeholders, in order that all parties will be benefited through the PPP establishment. All arrangements should be conducted within the allowed provisions and roles of each institution.

(Tourists visiting the Museum)

(A project discussion at the Ministry)

Internal Ex-Post Evaluation for Technical Cooperation Project

conducted by Cambodia Office: January, 2015

Country Name	Strengthening of CMAC Function for Human Security Realization
Kingdom of Cambodia	

I. Project Outline

Background	Landmines and Explosive Remnants of War (ERW) remained in Cambodia as a lethal legacy of the three decades of the war and civil conflict until as late as 1998. More than 40% of all Cambodian villages were said to be affected by landmines and Unexploded Ordinance (UXO) and more than 5 million people were said to face threat of them (2007). Demining activities in Cambodia was mainly handled by Cambodian Mine Action Center (CMAC) which was a governmental organization, and around 15% of mine contaminated areas were said to have been cleared at the time of ex-ante evaluation. Japan had been supporting CMAC since 1998 through provision of equipment (mine detectors, demining machines and vehicles etc.), financial support to demining activities through international organization or grass-roots grant aid scheme, dispatching of JICA experts in maintenance of equipment and information management etc. All these supports had been implemented separately which made it difficult to see how these assistances contributed for streamlining of management ability of CMAC and promotion of demining activities with safety. In order to see more visible and tangible effect, JICA and CMAC started this technical cooperation project.
Objectives of the Project	1. Overall Goal: To realize the target of "CMAC Five-Year Strategic Plan 2010-2014" 2. Project Purpose: Strengthening the function of CMAC and technical transfer system for demining operation
Activities of the project	1. Project site: CMAC (Phnom Penh, Battambang, Kampong Chnang and Siem Reap) 2. Main activities: 1) Development of Information System, 2) Training and technical guidance for maintenance, (3) improvement of curriculum, manuals and others. 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 4 persons 2) Trainees received: 3 persons in Japan, and 7 persons in the third country 3) network devices, computers, machines and tools for maintenance, audio visual devices etc. Cambodian Side 1. Staff allocated: 24 persons 2. Land and facilities: Office space and facilities provided (Headquarters, Central Workshop (CWS) Training Center) 3. Local cost: Cost necessary for project activities

Ex-Ante Evaluation	2007	Project Period	April 2008 – September 2010	Project Cost	263 million yen
Implementing Agency	Cambodian Mine Action Centre：CMAC				
Cooperation Agency in Japan	-				

II. Result of the Evaluation

1 Relevance

This project was highly consistent with Cambodia's development policy such as Cambodian Millennium Development Goals (MDGs), National Strategic Development Plan (NSDP) 2006-2010 and other documents which regard reducing the victims of landmines as one of the national goals at the time of both ex-ante evaluation and project completion. The project was also consistent with development needs for clearing landmines/ERW at the above mentioned stages, as the number of landmines/ERW remains high. It is also consistent with Japan's ODA policy (Country Assistance Program to Cambodia 2002) at the time of ex-ante evaluation as it sets the comprehensive support for demining as one of the priority areas. JICA's country assistance implementation plan also aimed to achieve human security through capacity development, institutional development and infrastructure development. Therefore, relevance of the project is high.

2 Effectiveness/Impact

The project mainly implemented activities for enhancing CMAC's capacity of (1) information management system (development of data systems and upgrading of network and computers), (2) maintenance management system at Central Workshop[1] (development of guidelines, on-the-job training/technical advice, and training on basic maintenance skills) and (3) training management system (introduction of training management cycle, reorganizing training curriculum, and introduction of training management manual). Through these activities, the project aimed that CMAC's function as well as technical transfer system for demining operation is strengthened.

At the time of project completion, the project mostly achieved the project purpose in terms of improvement in information management capacity, maintenance capacity, and quality of training. As to the information capacity, under the project, accuracy of data and efficiency of data management improved as the system does not require paper-based record anymore. As a result of the project, CMAC's planning exercise became more evidence-based and more credible by making best use of

[1] The function of the Central Workshop is to conduct maintenance and repair activities, and it has served as a major facility t o repair and maintain key demining related equipment such as vehicles, brush cutters and demining machines.

accurate and centralized data. For example, for assessing the remaining problems of landmines, baseline survey was being carried out under the coordination of Cambodian Mine Action and Victim Assistance Authority[2]. In terms of maintenance capacity, the operating rate of machineries was regarded to be maintained at the time of terminal evaluation, but the data was not maintained as expected. With respect to training, training curricula and others were used properly, as essential resources.

At the time of ex-post evaluation, the newly developed information system under the project has greatly contributed to the improvement of CMAC operation and management and it has been continuously used and expanding. For example, in terms of planning and implementation, it enabled CMAC to consolidate features of all database for reporting purpose and apply the data to project management. The systems developed by the project also have been used for equipment planning, providing minefield information, and personnel information. As for maintenance capacity, there is no data on availability rate as the practice of recording data on maintenance time, which was introduced by the project as the basis for calculating availability rate, has yet to be carried out. However, CMAC has been maintaining the number of usable equipment. The training management cycle introduced by the project is still working, and training manuals, curriculum and equipment have been properly utilized and revised. These materials have contributed to improve the quality of training since the process of course and training assessment, the process of training request, the qualification examination, and etc. have been applied based on the training manual. With equipment installed, trainers could train efficiently and students also could study easily.

As for overall goal, although the zero victims has not been achieved, the number of causalities has decreased year by year, and the cleared contaminated area has increased as planned. The number of landmines and UXOs destroyed did not reach the target yet, however, its total number has been increasing and it is approaching to the target steadily. The project has contributed to these improvements in the demining activities through capacity development of CMAC. There is no negative impact on the natural environment, and CMAC rather carries out demining activities in an environmentally friendly fashion. There is no land acquisition and no resettlement accordingly.

In light of the above, effectiveness/impact of the project is fair.

Achievement of project purpose and overall goal

<table>
<tr><th>Aim</th><th>Indicators</th><th>Results</th></tr>
<tr><td rowspan="3">(Project Purpose)
Strengthening the function of CMAC and technical transfer system for demining operation</td><td>(Indicator 1) Necessary information on various activities is systemized and searching and processing of data is conducted effectively.</td><td>(Project Completion) (1) The development of data systems, upgrading network and computer–related devices, posting full-time management information system staff in all Demining Units (DUs) and training of MIS staff allowed CMAC information management capacity more systematic and efficient. (2) With such development, CMAC’s planning exercise became more evidence-based and more credible by making best use of accurate and centralized data.
(Ex-post Evaluation)
(1) The system has contributed to the improvement in planning and implementation of CMAC. (2)Fixed Asset Tracking System (FATS) has helped in in oversight and providing data for the equipment planning. (3) Operation Database helps in providing minefield information; mine/UXO found and destroyed, Baseline survey data, and etc. (4) Human Resource System provides information on the situation of personnel.</td></tr>
<tr><td>(Indicator 2) Current operating rate of machineries (especially brush cutters, vehicles) is maintained.</td><td>(Project Completion) Although data was not available, maintaining the current availability rate[3] of machineries is to be met through upgrading mechanics’ skills and knowledge and providing necessary machineries and equipment to CWS.
* At the terminal evaluation, operating rate was replaced by availability rate.
(Ex-post Evaluation) The data on the availability rate is not available. The number of usable equipment against the number of total equipment:
<table>
<tr><th></th><th>2012</th><th>2013</th><th>2014</th></tr>
<tr><td>Mine/UXO detectors (%)</td><td>50.45</td><td>42.37</td><td>N/A</td></tr>
<tr><td>Brush cutters (%)</td><td>62.50</td><td>59.46</td><td>N/A</td></tr>
<tr><td>Others (Demining equipment) (%)</td><td>82.64</td><td>81.34</td><td>N/A</td></tr>
</table>
*Slight decrease in the number of equipment in use is caused mainly by the end of product life.</td></tr>
<tr><td>(Indicator 3) Training curricula, management manual and equipment installed are properly used.</td><td>(Project Completion) All 46 standard training course curriculum, training management manual and equipment installed are used and expected to be used properly as they are well perceived by counterpart personnel as essential resources to Training Center.</td></tr>
</table>

2 The Cambodian Mine Action and Victim Assistance Authority (CMAA) has been working on policy guideline and strategic plan development for mine actions in Cambodia since 2000. Mine clearance, mine risk education, survivor assistance, and related mine action activities are conducted in Cambodia under the authority of the CMAA.

3 Availability rate here refers to “days/time that machineries and equipment are available for use” and can be raised by fixing the problems in Central Workshop in a shorter time. (Source: The Joint Terminal Evaluation Report for The Project of Strengthening of CMAC’s Function for Human Security Realization. P11)

<table>
<tr><td></td><td></td><td>(Ex-post Evaluation) 46 standard training course curriculum and training management manual have been continuously used. Most of the equipment items have also been continuously used.</td></tr>
<tr><td rowspan="3">(Overall goal)
To realize the target of "CMAC Five-Year Strategic Plan 2010-2014"</td><td>(Indicator 1) To contribute toward zero victims by 2012</td><td>(Ex-post Evaluation)
(1) The number of victims in 2012 was 181 persons.
(2) The number of causalities:
<table>
<tr><th></th><th>2011</th><th>2012</th><th>2013</th><th>2014</th></tr>
<tr><td>Mine</td><td>107</td><td>65</td><td>48</td><td>35</td></tr>
<tr><td>ERW</td><td>104</td><td>116</td><td>63</td><td>54</td></tr>
<tr><td>Total</td><td>121</td><td>181</td><td>111</td><td>89</td></tr>
</table></td></tr>
<tr><td>(Indicator 2) To clear at least 230 km^2 contaminated area within 5 years</td><td>(Ex-post Evaluation)
The total land areas cleared in 4 years is approximately 248 km^2
<table>
<tr><th></th><th>2010</th><th>2011</th><th>2012</th><th>2013</th><th>2014</th><th>Total</th></tr>
<tr><td>Cleared land area (km^2)</td><td>75.8</td><td>51.9</td><td>76.7</td><td>63.9</td><td>55.3</td><td>323.6</td></tr>
</table></td></tr>
<tr><td>(Indicator 3) To destroy approximately 1 million landmines and UXOs within 5 years</td><td>(Ex-post Evaluation)
Found and destroyed mines and UXOs:
<table>
<tr><th></th><th>2010</th><th>2011</th><th>2012</th><th>2013</th><th>2014</th><th>Total</th></tr>
<tr><td>Mine</td><td>18,469</td><td>14,573</td><td>16,106</td><td>11,249</td><td>7,056</td><td>67,453</td></tr>
<tr><td>UXO</td><td>135,176</td><td>83,673</td><td>96,439</td><td>111,428</td><td>51,217</td><td>477,933</td></tr>
</table></td></tr>
</table>

Source : (Project completion)Terminal evaluation report. (Ex-post evaluation) Questionnaire survey and Interviews with CMAC.

3 Efficiency

While the project period was within the plan (ratio against the plan: 100%), the project cost exceeded the plan (ratio against the plan: 125%) . Therefore, efficiency of the project is fair.

4 Sustainability

In the policy aspect, a landmine issue is still given importance in the current development policy such as Cambodian MDGs as well as Rectangular Strategy of Cambodia, and the Royal Government of Cambodia gives CMAC priority to landmine clearance activities. Institutionally, although there is a slight change in CMAC's organizational structure including the Department of Training, the organizational set up is appropriate as the organizational structure and terms of reference of departments show clear command and reporting line. Regarding the number of staff, the Training Management Manual and the CMAC work plan identify 72 instructors/trainers necessary, and CMAC has 72 instructors/trainers. Although some of them are not permanently stationed at the Training Center, these instructors/trainers have their own position and task besides responsibility as instructors/trainers. Training course do not require full number of instructors/trainers spontaneously, therefore CMAC has no problem with current number of instructors/trainers.

Technical level of staff of information management system is not sufficient. The system was developed by an outside programmer hired during the project and currently there is no programmer at CMAC, therefore the current staff cannot respond to the system problem, or develop new report format. However, technical level of daily operation and training management system is sufficient as training and internal technical transfer based on the manual produced by the project is continuously conducted. Financially, CMAC is mainly dependent on the development partners, and funding from the government and CMAC's own revenue are limited so far. However, to ensure CMAC's sustainability, the Royal Government of Cambodia has made efforts to increase its funding for CMAC. Actually, in the past recent years, CMAC has continuously received increased funding from Royal Government of Cambodia. Therefore, it is thought the financial situation of CMAC has been improved gradually.

In view of these facts, sustainability of the effects of the project is fair.

5 Summary of the Evaluation

This project has somewhat achieved the project purpose and overall goal. The information management system developed by the project continuously used and contributed to improvement in the project management of CMAC. The training management cycle, training manuals, curriculum and equipment introduced by the project have improved the quality of training. However, it is difficult to exactly measure the improvement in the maintenance capacity, as the data recording practices introduced by the project are yet to be carried out. As to overall goal, the number of causalities has decreased every year and the cleared contaminated area and the number of landmines and UXOs destroyed has continuously increased.

As for sustainability, while the project is still given importance in the current development policy, there are problems in terms of technical and financial aspects. The software problem of the data system cannot be solved with the current technical level of staff. CMAC's activity mainly relies on the development partners' fund although this situation has been improved gradually. For efficiency, the project cost exceeded the plan.

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

III. Recommendations & Lessons Learned

Recommendations for Implementing agency

Although funding from the government has gradually increased, CMAC financially relies on development partners' support, and many activities of CMAC are carried out on project basis, which means CMAC always faces uncertainty of continuity of activities. Therefore, CMAC should keep requesting the government to increase the budget or CMAC should seek approval from the government to earn own revenue through commercial demining. Most of the land in Cambodia is given as economic concession to private companies and their needs for demining is high.

Lessons learned for JICA

When JICA implement a project, it is necessary to consider how to secure the sustainability of the project activities. In the case of this project, it was recognized through ex-post evaluation that there are some problems in terms of sustainability of CMAC, for example, the shortage of technical staff, unstableness of operational budget and so on. Therefore, it is important to reveal the potential factor which can affect securing sustainability in the future and to take some measures against it within the project.

(Photo 1)The database system which was developed by the project is used in each Demining Unit

(Photo 2) Demining related equipment such as vehicles, brush cutters and demining machines is repaired by CMAC staff at central workshop.

Internal Ex-Post Evaluation for Grant Aid Project

conducted by Morocco Office: March, 2014

Country Name	The Project for Construction of Central Laboratories of the National Institute of Fisheries Research (Le Projet de construction des laboratoires centraux de l'Institut National de Recherche Halieutique)
Kingdom of Morocco	

I. Project Outline

Background	The National Institute of Fisheries Research (l'Institut National de Recherche Halieutique: INRH) is an autonomous institute under the Ministry of Agriculture and Fisheries (Ministère de l'Agriculture et de la Pêches Maritimes: MAPM). Its mission is to contribute to planning and implementation of fisheries development plans by providing MAPM with information and recommendations based on scientific evidence. At the time of ex-ante evaluation of this project, the headquarters of INRH located in Casablanca had two functions: i) research work as the central laboratories, and ii) monitoring of fishing activities and water quality, as a regional center, for the approx. 400km-long coastal area in Casablanca. Therefore, the headquarters could not focus entirely on research work to fulfill the function as the central laboratories. Also, the building of the headquarters was old (built in 1947) with the air conditioning system based on natural ventilation, which was not suitable for use of precision analysis instruments and bacteriological testing. To improve such conditions, it was an issue to secure adequate testing and research environment by developing new facilities and procuring equipment that would enable accurate and efficient research and analysis activity.		
Objectives of the Project	The project aims to optimize the research environment and efficiency of the central laboratories of the National Institute of Fisheries Research (INRH) in Casablanca City by developing facilities and equipment of the laboratories, thereby contributing to the enhancement of research capacity of INRH.		
Outputs of the Project	1. Project Site: Casablanca City 2. Japanese side: Grant Aid for the construction of the facilities and procurement of equipment as a follows. 1) Construction of the facilities: a central laboratory building with related facilities and exterior structures 2) Procurement and installation of the equipment: research instruments for the central laboratories (mainly the ones to cover a deficiency after dividing the existing research instruments that had been used to fulfil the central laboratory function of the INRH headquarters into the new central laboratories and the Casablanca regional center) 3. Moroccan side: Securement of land for construction; acquisition of the land ownership certificate; land preparation; construction of fences, gates and a guard station; construction of infrastructures such as electricity, water supply and communications; relocation of equipment from the existing INRH headquarters; procurement of necessary equipment and office equipment, etc.		
E/N Date	August 3, 2007	Completion Date	April 27, 2009
Project Cost	E/N Grant Limit: 968 million yen, Contract Amount: 967 million yen		
Implementing Agency	Responsible agency: Ministry of Agriculture and Fisheries (Ministère de l'Agriculture et de la Pêches Maritimes: MAPM) or former Ministry of Agriculture, Rural Development and Sea Fisheries (Ministere de l'Agriculture, du Développement Rural et de Pêches Maritimes) Implementing agency: National Institute of Fisheries Research (l'Institute National de Recherche Halieutique: INRH)		
Contracted Agencies	System Science Consultants Inc.; Konoike Construction Co., Ltd.; Mitsubishi Corporation.		
Related Studies	Basic Design Study: February 2007 – August 2007		
Related Projects (if any)	Japan's Cooperation: - The Project on Construction of a Fishery Research Vessel "Charif Al Idrissi" (Le Projet de construction d'un navire de recherche halieutique) (Grant Aid, 1985) - The Project on Construction of a Fishery Research Vessel "Al Amir Moulay Abdallah" (Le Projet de construction d'un navire de recherche halieutique) (Grant Aid, 1999) - The Project of Construction of Special Center for Seafood Processing Technology (Grant Aid, 2001) - Capacity Development of Fisheries Resource Monitoring for Sustainable Management of Small Pelagic Resources (Technical Cooperation, 2010-2015)		

II. Result of the Evaluation

1 Relevance

This project has been highly consistent with Morocco's development policy, such as "establishment of sustainable and responsible fisheries" as set in the Fisheries Sector Development Strategy (la Stratégie de développement du secteur des Pêches, 2000-2004) and "sustainable utilization of fisheries resources" as set in the Halieutis Plan (Le Plan Halieutis, 2009-2020), development needs for scientific research and study on high potential of fisheries development and the vast coastal waters, as well as Japan's ODA policy such as the Economic Cooperation Policy Dialogue in 1997 (which positioned "assistance in development and promotion of agriculture and fisheries" as one of the six priority areas), at the time of both ex-ante and

ex-post evaluation. Therefore, relevance of this project is high.

2 Effectiveness/Impact

This project has achieved its objective "to optimize the research environment and efficiency of the central laboratories of INRH" to a certain extent. The facilities and equipment developed under this project have been mostly used, but some instruments could not fully achieve the intended purpose or are broken[1]. The data to show the actual performance of the indicators for optimization of the research environment were not available. According to the implementing agency, while there are some issues such as insufficient research space for the wet laboratory and genetic analysis, the overall situation is that the new research instruments have enabled not only more researches and analysis of more samples but also practical training to researchers, which has improved the quality of their reports. As for research efficiency, time spent on data analysis and the number of tissue samples for pathology research have shown an improving trend by the time of this ex-post evaluation, i.e., the former has decreased to 1 month/year (half of 2 months as of 2006) and the latter has increased to 4,500 samples (1.5 times larger than 3,000 samples as of 2006), though they have not reached the target values for the year 2010.

With respect to impact, the number of research reports and articles have increased and attained the target (though the attainment took longer time than expected), and policy recommendations are provided based on research results. The fishery research vessels procured under other grant aid projects are utilized for study and research as well. As for environmental impact, no problem has been observed, as the laboratory waste is properly treated by a consigned professional disposal firm in accordance with the standard, and there has been no issue (such as effluent gas) reported. This project involved relocation of some residents from the construction site for the laboratory building[2], which was processed along with the JICA guidelines, and no problem has been reported. Therefore, effectiveness/impact of this project is fair.

Quantitative Effects

Indicators	2006 (before the project) Actual value	2010 (target year) Target value	2010 (target year) Actual value	2013 (ex-post evaluation year) Actual value
Indicator 1: indicators to measure optimization of research environment 1-1 Number of research reports on bacterial, virological and DNA analyses	10 reports/year	20 reports/year	Uncertain (2)	Uncertain (2)
1-2 Evaluation by EU study missions	EU recommended some points to be improved (1)	No points to be improved	Uncertain (2)	Uncertain (2)
Indicator 2: indicators to measure enhanced efficiency of research 2-1 Time spent on data analysis of nutrient salts	2 months/year	1 month/year	approximately 2 months/year	approximately 1 month/year
2-2 Number of tissue samples for pathology research	3,000 samples /year	5,000 samples/year	approximately 4,000 samples/year	approximately 4,500 samples/year
2-3 Number of high performance liquid chromatography (HPLC) analyses of bio toxin, etc.	500 analyses/year	1,000 analyses/year	approximately 300 analyses/year	approximately 1,000 analyses/year
Indicator 3: indicator to measure improvement of research capacity 3-1 Number of research reports and articles for recommendations for fisheries policy	20 titles	30 titles	22 titles	35 titles

Notes: (1) Before the project, EU recommended to improve the temperature control and airtightness of the microbiology laboratory.
(2) "Uncertain" means that the data on actual values were not available from the implementing agency.
Source: Questionnaire response from INRH

3 Efficiency

Although the project cost was within the plan (ratio against the plan: 100%), the project period slightly exceeded the plan (ratio against the plan: 111%) due to the construction delays caused by bad weather and the delay in the refund of the value added tax (TVA) to the Moroccan-side contractor. The outputs of the project were produced as planned. Therefore, efficiency of this project is fair.

4 Sustainability

The operation and maintenance of the facilities and equipment procured by the project have been carried out by INRH, the implementing agency. The implementation structure, namely, the role of the central laboratories, has sustained what it was considered desirable at the time of ex-ante evaluation even after the renewal of the organization of INRH in 2009. Detailed information on staff allocation was not available, but problems have not been reported. In the technical aspect, the academic level of the research staff had been high even before the project implementation, and the current situation is considered to be

[1] For example, although the quality of analysis using the auto analyzer has reached the expected level, the quantity of analysis is limited due to unavailability of the spare parts in Morocco. The stereo microscope lacks a micrometer to measure young fish, and therefore part of the research purpose has not been attained. The research purpose of using the flow cytometer has not been attained due to insufficient information on methods of plankton analysis. The automatic tissue processor (automate de traitement des tissus) is broken.
[2] Information on the scale of relocation was not available from the implementing agency.

mostly good, too. In the financial aspect, the budget necessary for operation and maintenance of the facilities and equipment has been allocated. As for the current status of operation and maintenance, the equipment procured under this project is cleaned and adjusted regularly by the central laboratory staff and once a year by professional agents. In case of breakdown, repair is entrusted to such agents. On the other hand, most advanced analytical instruments require more reinforced maintenance services (i.e. conclusion of a maintenance contract with a professional agent), and there is a room for improvement of the maintenance of air conditioning of laboratories.

Therefore, there are some problems in the structural aspect and in the current status of operation and maintenance, and sustainability of the effects of this project is fair.

5 Summary of the Evaluation

This project has achieved its objective, "to optimize the research environment and efficiency of the central laboratories of the National Institute of Fisheries Research (INRH)", to a certain extent: while there are some aspects that have not reached the expected level (such as the facility space and usefulness of some analytical equipment), improvements have been seen other aspects such as time spent on data analysis and the number of samples analyzed. As for sustainability, no problem is observed in the technical and financial aspects of the implementing agency as the staff's academic level is high and INRH has a firm status as a national institute under the Ministry of Agriculture and Fisheries. However, there are some problems observed in terms of the structural aspect and the current status of operation and maintenance due to some issues over concluding a maintenance contract in relation to air conditioning, etc. and availability of spare parts. For efficiency, while the project cost was within the plan, the project period slightly exceeded the plan.

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

III. Recommendations & Lessons Learned

Recommendations to implementing agency:

It is desirable to strengthen the maintenance system, e.g. to conclude a maintenance contract with a professional agent for analytical equipment.

Lessons learned for JICA:

There observed cases where some facilities and equipment developed and procured under this project could not fulfill the intended purpose due to lack of spare parts, etc. and breakdown. Therefore, in implementing a grant aid project, it should be thoroughly assessed whether the implementing agency has operation and maintenance capacity for the facilities and equipment to be developed, and the assistance that is suitable for such capacity should be considered.

In addition, even though INRH is a large organization that has regional and technical centers across the country, the management section at the headquarters in Casablanca could not promptly respond to the inquiries for this ex-post evaluation on the current status of the equipment procured under this grant aid project or other matters. Therefore, discussion with the implementing agency in the project planning stage should cover strengthening of the management section at the headquarters and institutionalization so that they could continue monitoring after project completion.

External appearance of INRH

Observation of plankton using a microscope procured under this project

Internal Ex-Post Evaluation for Grant Aid Project

Conducted by South Africa Office: December, 2014

Country Name	Project for Constriction of Secondary Schools in the Kingdom of Lesotho
Kingdom of Lesotho	

I. Project Outline

Background	Secondary education in Lesotho was a five-year educational course for students aged 13 to 18 years who have completed primary education. As of 2005, the net enrollment ratios (NER) in secondary education remained low at 25.4%. While the introduction of Free Primary Education (FPE) in 2000 raised NER in primary education to 83.2%. In this circumstance, it was expected that NER in the secondary education would be increased, and accordingly the demands for development of school infrastructures for secondary education would be significantly increased. In this respect, the Ministry of Education and Training estimated the shortage of 3,622 class rooms in 2015, and put a priority on the improvement of accessibility to the secondary education service by constructing new school facilities equipped with dormitories, kitchens and canteens combined with multi-purpose halls in the remote areas and highly populated areas.
Objectives of the Project	To improve the accessibility of secondary education service by constructing school facilities for secondary education and procuring school furniture in seven project sites/districts*. *The target seven district: Leribe, Maseru, Berea, Quthing, Butha-Buthe, Mokhotlong, Mafeteng
Outputs of the Project	1. Project sites: Hlotse (Leribe district), Maseru (Maseru district), Teyateyaneng (Berea district), Moyeni (Quthing district), Butha-Buthe (Butha-Buthe district), Mokhotlong (Mokhotlong district), Mafeteng (Mafeteng district). 2. Japanese side (1) Construction of seven secondary schools (one school per district) ➢ Ordinary classroom: 70 ➢ Integrated science laboratory/ICT training room building: 7 ➢ Staff room/Administration building: 7 ➢ Combined toilets: 7 ➢ Housing for teaching staff: 14 ➢ Kitchen/Dining hall (cum-Multi-purpose hall): 3 (Maseru, Moyeni, Mokhotlong) ➢ Boy's dormitory (capacity 60 persons): 3 (Maseru, Moyeni, Mokhotlong) ➢ Girl's dormitory (capacity 60 persons): 3 (Maseru, Moyeni, Mokhotlong) (2) Procurement of school furniture for seven secondary schools ➢ Desks, tables, chairs, kitchen instruments, table wares, beds, cabinets, etc. 3. Lesotho side: ➢ Provision of land and site preparation ➢ Construction of fences, gates/doors and janitor booths ➢ Water supply and power distribution ➢ Procurement of furniture and equipment that were not provided by the project ➢ Detailed design and construction supervision

Ex-Ante Evaluation	2008	E/N Date	March , 2008	Completion Date	September, 2010[1]
Project Cost	E/N Grant Limit: 715 million yen, Actual Grant Amount: 715 million yen				
Implementing Agency	Education Facilities Unit, Ministry of Education and Training				
Contracted Agencies	The procurement of the Project is done by the Japan International Cooperation System under the Agent Agreement with the Ministry of Education and Training. Local Contractors and suppliers: P.L. Lepota & Sons Construction, S.B. Construction, Monahali Construction, P.T. Ratalane Construction, T.J. Construction, Morning Star Construction, Selkol 1983 (Pty) Ltd., Nepad Trading 102 (Pty) Ltd.				

II. Result of the Evaluation

1 Relevance

This project has been highly consistent with Lesotho's development policy, such as the increase of enrollment rate in basic education under "Lesotho Vision 2020", "the Education Sector Strategic Plan for 2005-2015" and "the National Strategic Development Plan 20113-2017", and development needs to improvement of accessibility to the secondary education service in the remote and highly populated areas by development of school infrastructures at the time of both ex-ante and ex-post evaluation. It is also consistent with Japan's ODA policy for promotion of free primary education policy in Lesotho under the Japan's Country Assistance Program for Lesotho (2008) at the time of ex-ante evaluation.

Therefore, relevance of this project is high.

[1] Target schools opened/started their school year in January 2010. For those schools which were not completed at that timing, arrangements were made to accommodate students in temporary shelters (Source: Interview with official of Education Facilities Unit, Ministry of Education and Training at the time of ex-post evaluation.)

2 Effectiveness/Impact

The project has achieved its objective of "improving accessibility to the secondary education service in the target seven districts". Initially it was estimated that the number of receivable students at secondary schools in the target seven districts[2] would increase from 84,567 in 2007 (before project implementation) to 86,240 after the project implementation. At the time of ex-post evaluation, it was confirmed that the number of students enrolled in the target seven districts increased to 108,389 in 2014, however, the actual number of receivable students at secondary school in the target seven districts in 2014 could not be verified because the Ministry of Education and Training did not have the correct number of classrooms. According to the Ministry of Education and Training, majority of secondary schools in the target seven districts receive the students more than their designed capacity of classrooms because a shortage of secondary schools still exists in the country.

According to the Outline Design Study Report of this project, it was planned to receive additional 1,680 students by constructing 42 classrooms in the target seven districts (40 students/classroom x 42 classrooms = 1,680 students). Since the project actually constructed 70 classrooms against planned 42 classrooms, it is assumed that this project created additional capacity for 2,800 students in the target seven districts. In this respect, it can be said that as long as the target seven schools are concerned, the project largely achieved the target of "increasing 1,680 receivable students", which was planned by the Outline Design Study Report (Note 1).

As shown in the table below, both the number of students enrolled and the number of teachers in the target seven schools did not achieve their targets in 2010. This is because that most of the target seven schools admitted only the first grade students (grade A students) after the project completion in order to minimize the burden of school management caused by the rapid increase in number of students. The target schools are receiving all grades of students at the time of ex-post evaluation, and the number of students enrolled in the target seven schools increased to 3,760 in 2014, which exceeds the target. Regarding the number of dropout students in the target seven schools, it was 106 in 2010 which represented 10% of number of students enrolled. Although the actual number of dropout students in the target seven schools in 2014 was not identified due to lack of information, it was confirmed that at least the number of dropout students in 2014 at the four schools such as Hlotse School, Maseru School, Moyeni School, and Butha-Buthe School decreased from 2010.

Also the number of teachers in the target seven schools increased to 103 in 2014 (average 14.7 per school), which fully met its target of 77 (average 11 per school). Since the housing for teaching staff was constructed by the project, it can be one of the contributing factors that schools were able to employ the teachers more easily. While the Ministry of Education and Training proposes the desirable teachers and students ratio as "25 : 1" some of the target seven schools do not satisfy this requirement. However, there is no big difference in staffing ratio of teachers in comparison with other schools with similar condition and environment and no major negative impact on the class due to lack of number of teachers has been observed. Further, the issue on shortage of number of teachers is a common issue not only in the target seven districts but also Lesotho in general. Therefore, it is considered that shortage of number of teachers did not affect the realization of project effects.

Regarding the number of students live in the dormitories in the target three schools, it was 447 in 2014 (average 149 per school) which fully met the target of 360 (average 120 per school). According to the interviews with representatives of Maseru School and Moyeni School, the number of students living in the dormitories is more than expected because they give priority to the students who were not able to go to the schools due to the long distance from their residence and/or the students who suffered a long commuting time.

As mentioned above, the project effect on improvement of accessibility of secondary education in the target seven districts, particularly for students in poor accessibility to education service such as the highly populated area and remote mountainous areas was realized.

As for impact, it is assumed that the project has contributed to increase of net enrollment ratio of secondary education of the county to some extent since it increased from 25.4% in 2005 to 37.3% in 2013, and total number of students enrolled in the target seven schools represents about 3.0% of the total number of students enrolled in the country. Also some positive impacts were observed in three target schools with dormitories such as improved nutritional state of the students resulted from providing meals three times a day, disciplined manner of the students through grouping life, improved learning environment after school such as study rooms with lighting. Furthermore, some of orphan students were financially supported by the government or the minded private companies at Maseru School located in the capital city.

No negative impact on natural environment was observed, and the land acquisition was appropriately conducted according to the related Lesotho's low and regulations. There was no resettlement of people associated with the project.
Therefore, effectiveness/impact of this project is high.

Quantitative Effects

Indicators	(Before the Project) 2007 Actual	(After the Project) 2009 Planned	(After the Project) 2010 Actual	(Ex-Post Evaluation) 2014 Actual
Indicator 1 Number of receivable secondary school students in the target seven districts (Note 1) (person)	84,567	86,240	N.A.	N.A.
Supplemental information 1 (Note 2) Number of students enrolled in the target seven schools (person)	None	Maximum 1,680	1,058 (Boys: 506) (Girls: 562)	3,760 (Boys: 1,673) (Girls: 2,087)
Supplemental information 2 Number of dropout students in the	None	None	106	46 in 4 schools were confirmed

[2] The number of receivable students in the target seven districts does not mean the actual number of students enrolled in the target seven schools. It is calculated by a formula of (the number of classrooms) X (the capacity of classrooms).

target seven schools (person)				
Supplemental information 3 Number of teachers in the target seven schools (person)	None	77 (Average 11/school)	47 (Average 6.7/school)	103 (Average 14.7/school)
Supplemental information 4 Number of dormitory students in the target three schools (person)	None	360 (Average 120/school)	N.A.	447 (Average 149/school)

Source: Ministry of Education and Training

Note 1: At the time of project planning in Lesotho, as a result of increase in demand for the secondary education caused by the introduction of free primary education, there were students who were difficult to be enrolled in secondary education due to lack of classrooms (Outline Design Study Report in Japanese, p47). For this reason, the project targeted to increase "the number of receivable students" by constructing the new class rooms in the secondary schools. According to the Outline Design Study Report, it was planned to receive additional 1,680 students by constructing 42 class rooms in the target seven districts (It was assumed that one class room could accommodate 40 students. 40 students x 42 class rooms = 1,680 students). Based on the above assumption, the target value of Indicator 1 in 2010 was set as 86,247 (2,156 class rooms) by adding 1,680 to 84,567 (2,144 class rooms) in 2007 (While the ex-ante evaluation summary sheet indicates 86,240 as target value).

Note 2: This ex-post evaluation made an evaluation judgment based on the performance of the original indicator set at the project planning and other additional information in order to confirm the realization of project effects. The additional information was shown as supplemental information 1-4 to complement the original indicator.

3 Efficiency

Although the project cost was within the plan (ratio against the plan: 100%), project period significantly exceeded the plan (ratio against the plan: 160%) because (i) additional outputs, (ii) change of project site in Quthing district by the request of the Ministry of Communication and additional land acquisition caused by this change, and (iii) lack of capacity of local contractors. The outputs of the project were expanded because the number of ordinary classrooms increased from planned 42 to 70 by utilizing the remainder of the grant. Therefore, efficiency of this project is fair.

4 Sustainability

The operation and maintenance of the project facilities have been carried out by the School Management Board (SMB) of each school established by the Education Act. SMB consists of representatives of parents and teachers, school head, district administrative officer, and traditional leader. SMB is responsible for proposal and securement of operation and maintenance budget for school facilities, contract management with maintenance service providers, and monitoring of maintenance works while the inspectors of the Secondary Education Department of the Ministry of Education and Training and inspectors of each districts regularly visit each school and supervise the operation and maintenance. It is confirmed at the time of ex-post evaluation that the Ministry had been reinforcing school inspection to ensure regular school visits so that principals having problems can be assisted timely.

Regarding the technical aspect, the project facilities were designed to be almost maintenance-free so that no major items would appear for about 10 years after construction but it is recommended to repaint inner walls and trusses once per 10 years, repaint fixtures once 5 years and repaint blackboards once per 2 years. The actual repair works are done by the maintenance service provides selected by SMB, and selected service providers have sufficient technical capacity in general. However, there are some difficulties to find out appropriate maintenance service providers locally in some schools. Also even if the capable local service providers are found, the maintenance costs are sometimes expensive. In such cases, teachers, students and parents repair the facilities in some schools by themselves. In particular, as the service providers who are able to repair the septic tank of toilet are only available in Maseru, the capital city, and its maintenance cost is expensive, the maintenance of toilets has not been satisfactory done in some schools. Furthermore, each school does not have the maintenance manual of school facilities. For the above reason, some problems are observed in the technical aspect.

Every year the Ministry of Education and Training earmarks about 10 million maloti for annual maintenance budgets of school facilities of the country. The Ministry does not allocate a certain amount of maintenance budget to each school at the beginning of fiscal year. Instead, the Ministry provides the maintenance budget to each school only when the budget proposal is submitted by school. The Ministry has been communicating with schools and encouraging them to apply for subvention and conducted the trainings of SMBs country-wide so that members can assume their oversight function in schools much more diligently, particularly on the use of school funds. However, the interviewed target schools indicated some constraints on the current budget system since the allocation of budget from the Ministry to each school is not conducted in a timely manner. For the above reasons, some schools are obliged to implement their maintenance works by utilizing a part of tuition fees and donation by parents. Therefore, some financial problems are observed.

Regarding the current status of operation and maintenance, cracking at teacher's housing of Masenate High School (Leribe district), one of the target schools, was identified by the defect inspection in 2010, and it was repaired by mortar. However, at the time of ex-post evaluation, it was found that there was a cracking at entire one school building and doors could not be opened. Regarding this damage, the survey to examine the causes and necessary actions is planned by the JICA 's follow-up cooperation in the fiscal year of 2014/2015.

Therefore, sustainability of the project is low.

5 Summary of the Evaluation

The project has achieved its objective of "improving accessibility to the secondary education service in the target seven districts". It is assumed that the number of receivable secondary school students in the target seven districts has achieved its target value considering that the number of students enrolled in the target seven schools was 108,389 in 2014 though the actual number of receivable secondary school students in the target seven districts in 2014 was unknown.

Both the number of students enrolled and the number of teachers in the target seven schools did not achieve their target values in 2010 because that most of the target schools only accepted the first grade students (grade A students) just after the project completion. The target schools are receiving all grades of students at the time of ex-post evaluation, and the number of students enrolled in the target seven schools increased to 3,760 in 2014 The number of teachers increased to 103 (average 14.7 per school) in 2014 in the target seven schools, that met their respective targets at the time of ex-post evaluation. While, it was confirmed that at least the number of dropout students in the four schools decreased in 2014 in comparison with 2009. Regarding the number of dormitory students in the target three schools, it was 447 in 2014 (average 149 per school) which fully met the target of 360 (average 120 per school). As mentioned above, the project effect on improvement of accessibility of secondary education service in the target seven district, particularly for students in bad accessibility to education service such as the highly populated area and remote mountainous areas where are was realized.

As for impact, it is assumed that the project has contributed to increase net enrollment ratio of secondary education of the county to some extent. Also some positive impacts were observed in three target schools with dormitories such as improved nutritional status and disciplined manner of the students, improved learning environment after school.

Therefore, effectiveness/impact of this project is high.

Regarding sustainability, some problems are observed in technical, financial aspects as well as the current status of operation and maintenance since (i) some schools face difficulties to find out the appropriate maintenance service providers locally, (ii) each school does not have the maintenance manual of school facilities, (iii) there is a problem in allocation of maintenance budget from the Ministry of Education and Training to each school due to the issue of administrative procedures, and (iv) there was a cracking at entire one school building and doors could be opened in one school. Therefore, sustainability of the project is low.

As for efficiency, the project period significantly exceeded the plan because additional outputs, change of project site in Quthing district by the request of the Ministry of Communication and additional land acquisition caused by this change, and so on. Therefore, efficiency of this project is fair.

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

III. Recommendations & Lessons Learned

Recommendations to Implementing Agency

Through the field survey of the ex-post evaluation, the following issues regarding the financial sustainability of the project were observed at the interviewed schools that the application and disbursement process of the operation and maintenance budget from the Ministry of Education and Training to the schools are not fully recognized despite the several Ministry's circulations. It is recommended that the Ministry of Education and Training should continue the trainings for the SMBs regarding their oversight function, particularly on the use of school funds so that the schools apply timely for the necessary budget.

Lessons learned for JICA

- One of the characteristics of Grant Aid for Community Empowerment is to implement the project to utilize the local contractors thus reducing the project costs. However, there was a delay of the project implementation in several projects sites in this project due to inappropriate capacity of local contractors. When implementing the scheme of Grant Aid for Community Empowerment, JICA is suggested to carefully examine not only the economic efficiency but also the availability of local contractors who have the appropriate technical capacity of civil works and procurement capacity in respective countries. This scheme must be applied to the counties where it is considered that the project implementation by utilizing local contractors is appropriate.
- When planning the project in the countries with many mountainous areas and selecting the sites, it is important to consider the conditions such as availability of water supply to the project sites and accessibility to the sites. In case of this project, it was observed that capable local contractors did not participate in the tender considering the bad accessibility to the project sites. As a result, the local contractors without appropriate technical capacity received the order and the project implementation was delayed. The possibility of such risk must be kept in mind in the similar project in the future.

The classroom and water tower of the school in Leribe district

The scenery of class in the school in Berea district

Internal Ex-Post Evaluation for Grant Aid Project

Conducted by Indonesia Office: March 2015

Country Name	The Project for Improvement of Port Security System
Republic of Indonesia	

I. Project Outline

Background	On the occasion of the several heinous terrorist attacks which occurred concurrently in the U.S.A. on September 11, 2001, the International Maritime Organization (IMO) strengthened the anti-terrorism security measures such as amendment of the International Convention for the Safety of Life at Sea (SOLAS Convention) and its annexed International Ships and Port Security Cord (ISPS Code) in 2004. As a member country of IMO, the Government of Indonesia ratified the amended SOLAS Convention and has been tackling to enhance security system for the international ports in Indonesia in order to fulfill the requirements set by the ISPS Code. However, due to budgetary constraints, installation of security equipment in the Indonesian ports has not been progressed.				
Objectives of the Project	To improve the security of port facilities in the target eight ports in Indonesia based on ISPS Code introduced by IMO, by installation of security equipment.				
Outputs of the Project	1. Project sites: 8 Ports in Indonesia (Belawan, Dumai, Tanjung Pinang, Teluk Bayur, Palembang, Pontianak, Benoa, Makassar) 2. Japanese side • Procurement of a range of equipment for port security: CCTV cameras (indoor and outdoor) and CCTV monitoring system, lighting system, communication system, X-ray inspection system, walk through metal detector, emergency generator, Uninterrupted Power Supply (UPS) 3. Indonesian side: • Revision of Port Facility Security Plan (PFSP), installation of fence and gates, securing power supply and location for installation of facilities, storage area and site office space during period of equipment works, permission to use radio transmission in Belawan Port, banking arrangement				
Ex-Ante Evaluation	2008	E/N Date	June 25, 2008	Completion Date	August 10, 2010
Project Cost	E/N Grant Limit: 545 million yen, Actual Grant Amount: 434 million yen				
Implementing Agency	Directorate General of Sea Transportation (DGST), Ministry of Transport				
Contracted Agencies	(Consultant) Japan Port Consultants, Ltd. (Contractor) Kanto Business Kaisha Ltd.				

II. Result of the Evaluation

1 Relevance

This project has been highly consistent with Indonesian development policy “fight against terrorism and improvement of international security” as set in the policy documents including the National Mid-term Development Plan 2004-2009 and 2010-2014, and development needs to improve security system in international ports in Indonesia at the time of both ex-ante and ex-post evaluation. It is also consistent with priorities of Japan’s ODA policy for peace and stability including maintaining public security such as anti-terrorism measures, anti-piracy measures and maritime safety under the Japan’s Country Assistance Program for Indonesia (2008) at the time of ex-ante evaluation.

Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project has not achieved its objective, “to improve the security of port facilities in the target eight ports in Indonesia based on ISPS Code in SOLAS Convention”. Before the project, monitoring and inspection of port security in the target eight ports had been conducted by round patrol every 2-3 hours by patrol cars and motorcycles. After the project completion, seven out of eight target ports were able to conduct constant monitoring a whole day (24 hours) at monitoring room. However, only 20 out of total 54 units of CCTV monitoring system procured by the project are functional and the rest of 34 units are not utilized properly or broken at the time of ex-post evaluation. In particular, all equipment of CCTV monitoring system installed in Belawan, Teluk Bayur, and Pontianak Ports were not utilized (the reason of non-utilization is mentioned later). Almost target ports, which had some non-functional CCTV, were able to conduct 24 hours monitoring by the project equipment in combination with other CCTV equipment provided by the Indonesian Port Corporation (PELINDO)(Note1).

The project procured X-ray inspection system and walk through metal detector to three ports such as Belawan, Dumai and Benoa Port for inspection of baggage and personal possessions of passengers. However, only Benoa Port could inspect baggage and personal possessions by utilizing the equipment and reduced the inspection time. Regarding Dumai Port, they conducted 100% of baggage inspection, but they utilize the equipment provided by the Indonesian customs and the project equipment were not utilized anymore due to breakdown. Regarding Belawan Port, the walk through metal detector procured to the international passenger terminal of Belawan Port were not utilized because the terminal has been closed in 2012 (Note2) due to decrease in the number of passengers. Therefore, as long as the project concerned, only one out of three ports could improve the inspection system for baggage and personal possessions of passengers.

There were various technical factors that caused non-utilization of the equipment procured by the project, but some common

problems reported include the following: (i) some inner components (software/hardware) were broken, (ii) the cable was accidently cut off by some construction works; and (iii) insufficient or unstable electricity/power supply. At the time of ex-post evaluation, these problems have not been solved due to the insufficient takeover of O&M information among the implementing agencies' staffs and the delay of asset transfer issue as mentioned in more details in Sustainability(Note3).

On the other hand, in order to fulfill the requirements of ISPS Code in SOLAS Convention, PELINDO has taken the following measures by their own initiative: (i) installation of CCTV, walk thorough metal detector, and X-ray machine, (ii) construction of additional fences and the repair of broken fences; (iii) separation between public area and restricted area; (iv) skill and capacity improvement of security officers through in-house trainings/drills; and (v) increase in number of security personnel, etc. It was confirmed by the field survey that three ports such Belawan, Dumai and Benoa Ports obtained the certification based on the audit of ISPS Code implementation by DGST.

To sum up, the project supported the target ports to meet the requirement of ISPS Code in SOLAS Convention by the time of installation of security equipment, but its contribution was limited since more than half of the project equipment were not utilized at the time of ex-post evaluation.

The project has a limited positive impact on increase in the number of people and goods coming/going to/from the target ports to some extent. According to the interview results with DGST, PELINDO and shipping agents, they recognized that the continuous and proper security and safety measurement by utilizing the project equipment gave the sense of comfort into the activities in the ports, and this had positive impact on increase in the number of cargo and passenger increase to some extent. However, considering that more than half of the project equipment were not utilized, the contribution of the project to the above positive impacts were limited.

No negative impact on natural environment was observed, and there were no land acquisition and no resettlement of people associated with the project.

Therefore, effectiveness/impact of this project is low.

(Note 1) PELINDO is a state-owned enterprise and four PELINDO are established in 1992 to cover all ports in Indonesia.

(Note 2) Closure of international passenger terminals at Belawan Port was decided in June 2012 and the terminal was closure later in the year.

(Note 3) Regarding Belawan, the closure of international passenger terminals in 2012 was another reason for non-utilization of CCTV monitoring system procured by the project.

Quantitative Effects

Indicator	(Before the project) 2008 Actual	(After the project) 2010 Planned	(After the project) 2010 Actual	(Ex-post evaluation) 2014 Actual
Indicator 1 : Improvement of monitoring system and inspection way				
Belawan	Round patrol every 2-3 hours by patrol cars and motorcycles	Constant monitoring a whole day (24 hours) at monitoring room	24 hours CCTV monitoring (provided by PELINDO)	24 hours CCTV monitoring (provided by PELINDO) in container terminal
Dumai			24 hours CCTV monitoring	24 hours CCTV monitoring
Tanjung Pinang			24 hours CCTV monitoring	24 hours CCTV monitoring
Teluk Bayur			24 hours CCTV monitoring & car patrol	No CCTV monitoring is conducted in container terminal
Palembang			24 hours CCTV monitoring	CCTV monitoring in some area
Pontianak			24 hours CCTV monitoring (provided by PELINDO) & Car patrol	24 hours CCTV monitoring (provided by PELINDO) & Car patrol
Benoa			CCTV monitoring when ships come	CCTV monitoring when ships come
Makassar			24 hours CCTV monitoring (provided by PELINDO and procured by the project) & Car patrol	24 hours CCTV monitoring (provided by PELINDO and procured by the project) & Car patrol
Indicator 2: Improvement of inspection system for baggage and personal possessions of passengers				
Belawan	A few baggage and personal possessions are checked selectively by security guard	Inspection of all baggage and personal possessions by the equipment (Inspection rate: 100%)	100%	The international passenger terminal has been closed since 2012.
Dumai			100% (equipment provided by Customs)	100% (equipment provided by Customs)
Benoa			100%	100%

Source: Basic Design Report and DGST.

Allocation of project equipment and its status of utilization at ex-post evaluation

No	Port	CCTV monitoring system	Lighting system	Communication system	X-ray inspection system	Walk through metal detector	Emergency generator	UPS
1	Belawan	12 (0)	10 (0)	8 (0)	-	1 (0)	-	2 (0)
2	Dumai	4 (4)	-	3 (0)	1 (0)	1 (0)	-	1(1)
3	Tanjung Pinang	4 (2)	-	-	-	-	1 (1)	1 (1)
4	Teluk Bayur	6 (0)	7 (3)	3 (0)	-	-	-	1 (1)
5	Palembang	8 (5)	-	5 (0)	-	-	-	1 (1)
6	Pontianak	4 (0)	6 (0)	3 (0)	-	-	-	1 (1)
7	Benoa	6 (4)	-	3 (1)	1 (1)	1 (1)	-	1 (1)
8	Makassar	10 (5)	-	4 (4)	-	-	-	1 (0)

Source: DGST

Note: The number in bracket shows the number of equipment that is still being utilized as of August 2014.

3 Efficiency

Although the project cost was within the plan (ratio against the plan: 77%), project period significantly exceeded the plan (ratio against the plan: 160%) because construction period of Dumai port has been extended due to a breakdown of UPS during its transportation. Therefore, efficiency of this project is fair.

4 Sustainability

The operation and maintenance of the project facilities have been carried out by PELINDO office. Meanwhile, the Port Administrator (ADPEL) offices of each port, which are regional branch offices of the Directorate General of Seat Transport (DGST), the Ministry of Transport, are responsible for port security affairs. Each port is under the management of PELINDO No1-4 as follows: (i) Belawan, Tanjung Pinang under PELINDO No.1, (ii) Teluk Bayur, Palembang, Pontianak under PELINDO No.2, (iii) Benoa under PELINDO No.3, and (iv) Dumai, Makassar under PELINDO No.4. Basically the number of staff of PELINDO office and ADPEL office in target eight ports is sufficient to conduct the O&M for the existing equipment. However, there is no skilled staff who are able to maintain the project equipment as mentioned below. Also ownership of the project equipment has not been transferred from DGST to each PELINDO after the project completion in spite that it had been confirmed between Indonesia side and Japanese side at the time of Basic Design, and this has caused a problem that DGST could not allocate the O&M budget for the project equipment.

Regarding the technical aspect, the technical capability of O&M of PELINDO and ADPEL is not sufficient to conduct a proper maintenance of the project equipment, while guidance for initial operation and normal maintenance was provided by the contractors before handing over the equipment. In the Basic Design Report, it was noted that periodical maintenance of the machines and replacement of the spare parts by engineers of relevant makers and agents was necessary. However, due to inappropriate takeover of O&M related information among the implementing agencies' staffs, the current staffs do not know the contact lists of engineers of relevant makers and local agents. Except PELINDO No.3 in charge of Benoa Port, almost all ports do not provide the O&M training for their staff in charge. Generally operation manual is utilized but maintenance manual is not utilized by some PELINDO offices.

Regarding the financial aspect, due to delay of asset transfer issue as mentioned above, in all target ports PELINDO cannot receive the O&M budget from DGST for project equipment. Only PELINDO No.3 has made special discretion to include the project equipment into their O&M budget list for Benoa Port by its own initiative (Note 4). This is because it is considered that Benoa port should have budgetary priority to other ports since it has more passengers than other ports.

Regarding the current status of operation and maintenance, many project equipment are not utilized or broken. Particularly, all equipment of Belawan Port are not functional. Also there was a problem of procurement of spare parts because of inappropriate takeover mentioned above. Most of broken equipment has been replaced with the new ones made of parts, which could be easily and surely procured and maintained in Indonesia, by PELINDO.

From these findings, it is considered that the project has some problems in the institutional aspect and major problems in the technical, financial aspects as well as the current status of the operation and maintenance. Therefore, sustainability of the project is low.

(Note 4) The annual budget of the target ports were not disclosed except for Dumai and Benoa Ports.

5 Summary of the Evaluation

The project has not achieved its objective, "to improve the security of port facilities in the target eight ports in Indonesia based on ISPS Code in SOLAS Convention". The improvement of monitoring system and inspection way was realized in only four out of eight target ports. Similarly, the improvement of inspection system for baggage and personal possessions of passengers was achieved in only one out of three ports where X-ray inspection system and walk through metal detector were installed by the project. The main reason for the above limited achievements was that many of the project equipment were broken or not utilized at the time of ex-post evaluation. The project's contribution to meet the requirement of ISPS Code in SOLAS Convention by the target ports is limited. Therefore, effectiveness/impact of this project is low.

Regarding sustainability, the project has some problem in the institutional aspect and major problems in the technical, financial aspects as well as the current status of the operation and maintenance due to the insufficient takeover of O&M related information among the implementing agencies' staffs concerning O&M and the delay of asset transfer issue. Therefore, sustainability of the project is low.

As for efficiency, the project period significantly exceeded the plan due to extension of construction period of Dumai port associated with a breakdown of UPS during its transportation.

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

III. Recommendations & Lessons Learned

Recommendations to Implementing Agency

(1) DGST is recommended to hand over the project equipment to PELINDO as soon as possible in order to allocate the O&M budget for the project equipment, based on the agreement at the time of Basic Design. According to DGST staff, the reason of the hand over delay is not clear, so first step to do by DGST is to identify the bottleneck for hand over and make action plan to overcome it.

Lessons learned for JICA

(1) In case that the executing agency and the O&M agency are different in the project, at the project planning stage, these agencies should clarify their own responsibility securing the necessary manpower, technical capacity and financial sources of O&M, and JICA should confirm and agree with these agencies that these agencies will surely conduct the

appropriate O&M activities including the transferring ownership of equipment.

(Broken CCTV in Belawan port)

(Broken X-ray inspection system and Walk through metal detector in Dumai port)

Internal Ex-Post Evaluation for Grant Aid Project

conducted by Malaysia Office: January 2015

Country Name	The Project for Strengthening the Capabilities for Preventing Sea Smuggling and Other Illegal Activities
Malaysia	

I. Project Outline

Background	Maritime crimes such as smuggling, illegal entrance, etc. at the Strait of Malacca and the East Malaysia sea areas were hindering the economic activity toward sustainable growth in Malaysia and would help expand breaking out of piracy, armed robberies, terrors, etc. The Marine & Supporting Service of the Royal Malaysian Customs (RMC) was responsible for anti-smuggling, but its equipment was getting insufficient to control the expanding and diversifying smuggling routes laid along the long coast lines.				
Objectives of the Project	To enable RMC to expand sea areas under simultaneous 24-hour patrol and to patrol under pitch-black conditions at night against sea smuggling and other illegal activities in the territorial waters of Malaysia, especially at the Strait of Malacca and along the East Malaysia, by procuring patrol boats and onboard equipment for night patrolling.				
Outputs of the Project	1. Project Site: Bases under the maritime customs house along the Strait of Malacca (Langkawi, Penang, Lumut, Port Klang, Malacca, Johor Bahru) and the East Malaysia (Bintulu, Miri, Sandakan, and Tawau). 2. Japanese side: Procurement of Speed Boats (10 units) and Hand Held Thermal Imager (14 units) (the quantity is as planned but some details were changed, e.g. type of fire extinguishers, to follow the equipment standard of RMC more strictly). 3. Malaysia side: Arrangement of self-navigating of the boats to respective bases and securement of necessary fuel.				
Ex-Ante Evaluation	2008	E/N Date	March 30, 2009	Completion Date	February 25, 2011
Project Cost	E/N Grant Limit: : 714 million yen, Actual Grant Amount: 448 million yen				
Implementing Agency	Royal Malaysian Customs (RMC)				
Contracted Agencies	Shipbuilding Research Centre of Japan; Yamaha Motor Co., Ltd.				

II. Result of the Evaluation

1 Relevance

This project has been highly consistent with Malaysia's development policy and development needs at the time of both ex-ante and ex-post evaluation. Regarding development policy, it has been consistent with the 3rd Outline Perspective Plan 2001-2010 and the 9th Malaysia Plan (2006-2010) that aim to establish the economy through "sustainable growth route and recovery and competitive power", the Three Challenges of RMC (2007) that upheld response to the future movements including threats to the safety on borders, and the Malaysian National Blue Ocean Strategy (NBOS) (2011-) that promotes cooperation among government agencies[1] by conducting joint patrols nationwide to prevention of illegal act at sea. As for development needs, it has been consistent with a need to tackle illegal act at the Strait of Malacca and the East Malaysia sea areas through reinforcement of capacity of RMC. Also, the project was consistent with Japan's ODA policy to support the area that Malaysia cannot develop on its own as set in the Country Assistance Program (2002) and to introduce Grant Aid for Cooperation on Counter-Terrorism and Security Enhancement (to which this project was classified) at the time of ex-ante evaluation. Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project has mostly achieved its objective of enabling RMC to expand sea areas under simultaneous 24-hour patrol and to patrol at night under pitch-black conditions. Before the project, the number of boats had not been enough to carry out 24-hour control covering the whole sea areas even including low speed boats that could not chase an increasing number of high speed illegal boats. After the project, by using the boats procured under this project and the ones purchased with their own funds of the Malaysia side, all bases became equipped with enough number of speed boats (Indicator 1) and came to fully cover their designated patrol areas under 24-hour control (Indicator 2). All speed boats are mostly well used at the time of ex-post evaluation.

With the hand-held thermal imagers procured by this project, the bases became able to patrol at night under pitch-black conditions that had not been possible before the project. RCM became able to tackle illegal act such as smuggling of cigarette and transporting of drugs into Malaysia that are usually held at night. However, the number of working units of hand held thermal imagers gradually decreased from 14 (at 10 bases) in 2011 to 6 (at 4 bases) in 2014. RMC conducted a national seminar to recover full utilization of the imagers in January 2015 ; therefore, all equipment are expected to be fully utilized in near future(see "4 Sustainability).

As for the impacts, it is not clear from the available statistics whether the enhanced patrol capacity of RMC by this project has contributed to improvement of maritime security in Malaysia. The increase in total number of smuggling cases (land and sea) recognized by RMC bases slowed down in 2011, possibly due to the control and deterrent effect of RMC using the boats

[1] the General Operations Force (GOF), Royal Malaysian Police (RMP), Armed Forces, Royal Malaysian Navy (RMN), Royal Malaysian Airforce (RMAF), RMC, Immigration and Fisheries Departments.

and equipment procured by this project according to RMC. And the number of arrest cases and arrest rates decreased (see the graph below)[2].

Therefore, effectiveness/impact of this project is high.

Quantitative Effects

Indicators		Year 2008 (before the project) Actual value	Year 2011 (target year) Target value	Year 2011 (target year) Actual value	Year 2014 (ex-post evaluation year) Actual value
Indicator 1 Number of speed boats ready for patrol at each Base (include speed boats procured with self-funding by Malaysian side)	Langkawi, Penang, Lumut, Port Klang, Malacca Johor Bahru (Strait of Malacca) Sandakan, Tawau, Bintulu, Miri (East Malaysia)	3 units	4 units	4 units	4 units
	Langkawi, Penang, Lumut, Port Klang, Malacca Johor Bahru (Strait of Malacca)	1 unit	2 units	2 units	2 units
Indicator 2 Number of patrol areas under 24-hour control simultaneously at each Base	Langkawi, Penang, Lumut, Port Klang, Malacca Johor Bahru (Strait of Malacca)	2 out of 3 designated areas (1)	All of 3 designated areas (1)	All of 3 designated areas (1)	All of 3 designated areas (1)
	Sandakan, Tawau, Bintulu, Miri (East Malaysia)	1 out of 2 open sea area (2) (3)	All of 2 open sea areas (2) (3)	All of 2 open sea areas (2) (3)	All of 2 open sea areas (2) (3)
Indicator 3 Number of speed boats that can patrol with hand held thermal imager (i.e. number of speed boats that are capable of patrol at night, or number of hand held thermal imagers that are ready for use at patrolling)		None.	14 out of 111 units Langkawi:2 Penang:1 Lumut:1 Port Klang:2 Malacca:1 Johor Bahru: 2 Sandakan:1 Tawau:2 Bintulu:1 Miri:1	14 out of 111 units Langkawi:2 Penang:1 Lumut:1 Port Klang:2 Malacca:1 Johor Bahru: 2 Sandakan:1 Tawau:2 Bintulu:1 Miri:1	6 out of 111 units Langkawi:0 Penang:0 Lumut:0 Port Klang:0 Malacca:1 Johor Bahru: 2 Sandakan:0 Tawau:2 Bintulu:0 Miri:1

Source : RMC

Note: In the ex-ante evaluation, the area coverage was considered as follows: (1) At Langkawi, Penang and Lumut, control with the existing speed boats was impossible at the time of rough sea (i.e. about 20% of operation per year is impossible). Therefore, 24-hour simultaneous patrol of 3 areas for (365x0.8) days was considered to fulfill the target. (2) At Sandakan, Tawau, and Bintulu, control in one area with the existing boat was limited to 5 days/week due to daily maintenance/inspection. Therefore, 24-hour simultaneous patrol of 2 areas for 5 days/week was considered to fulfill the target. (3) At Miri, control with the existing boat was possible only in quite calm sea condition (i.e. about 35% or less of operation per year was possible in one area). In the other area, control was limited to 5 days/week due to daily maintenance/inspection. Therefore, 24-hour simultaneous patrol of 2 areas for (365x0.35x5/7) days was considered to fulfill the target.

3 Efficiency

Although the project cost was within the plan (ratio against the plan: 63%) due to the successful tender price that was lower than estimated, project period slightly exceeded the plan (ratio against the plan: 115%) in order to cope with a change the confirmation procedures for consultant contracts on the Malaysia side. The outputs of the project were produced mostly as planned. Therefore, efficiency of this project is fair.

4 Sustainability

The operation and maintenance (O&M) of the equipment procured by the project have been carried out by RMC, the implementing agency. Each base of RMC is in charge of O&M of the speed boats and thermal imagers deployed to it.

The O&M structure is sustained as what it was considered desirable at the time of ex-ante evaluation. The number of staff allocated to each base has been decreased as the government has streamlined its organizations so that efficient and effective security services are delivered at lower costs. Nevertheless, RMC commented that the current number of crew is enough to operate all the speed boat. As for the technical aspect, RMC regularly provides training especially on handling speed boats and equipment onboard to their staff, including on-board training. However, as the result of the survey which conducted in the middle of 2014, at 6 of 10 bases hand-held thermal imagers procured by this project are not fully utilized mainly due to the change of personnel: RMC conducted a national seminar on how to utilize the imagers in January 2015.

In the financial aspect, the budget secured for operation and maintenance of speed boats (e.g. approx. 322 thousand ringgit for the 10 boats in 2013) is much less than planned. However, allocation of maintenance budget is based on actual costs of repair, e.g., if it involves the maintenance of engines and needs more budget than allocated, additional budget would be allocated; therefore, there is no concern in the financial aspect. As for the current status of O&M, most of the procured boats and equipment are in good condition except a software problem of a thermal imager. Maintenance is regularly given by private agencies, and there is no problem with the stock and availability of spare parts.

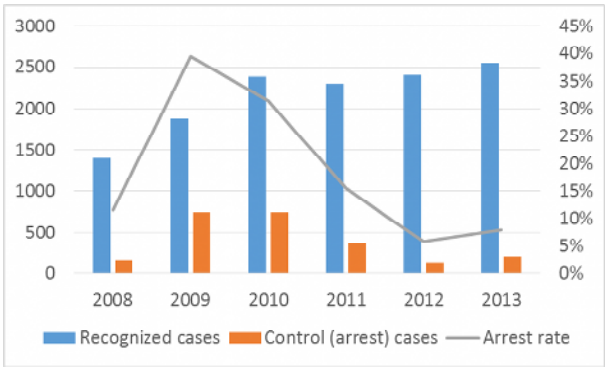
Therefore, there are some problems in technical aspect and the current status of O&M, and the sustainability of this project effect is fair.

[2] The increasing number of cases in 2009 due integrated large scale operation that had been implemented that year.

5 Summary of the Evaluation
The project has mostly achieved its objectives of enabling RMC to cover the whole sea areas under simultaneous 24-hour patrol using the speed boats procured and deployed at each base, while utilization of the hand-held thermal imagers procured for night patrol under pitch black conditions has declined. As for sustainability, while the structural aspect and the financial aspect have no serious problem in terms of securement of the organizational structure, number of staff and budget for O&M, some problems have been observed in the technical aspect and the O&M status due to transfer of personnel trained on how to use thermal imagers as well as software problems of one unit of the same equipment. For efficiency, the project cost slightly exceeded the plan. In light of the above, this project is evaluated to be satisfactory.

III. Recommendations & Lessons Learned

Recommendations to implementing agency: For RMC Headquarters: it is advisable to keep monitoring the utilization of equipment and provide necessary support, such as timely repair and conducting technical workshops etc., if it is found the equipment is not fully utilized due to default and/or the change of personnel. Lessons learned for JICA: Continuous training on how to handle those procured equipment by the partner country side after project completion should be reminded in the planning stage, so that change in personnel would not affect operation.



Number of smuggling cases (land and sea) recognized and controlled (arrested) by RMC bases

Speed Boat

Internal Ex-Post Evaluation for Grant Aid Project

conducted by Vietnam Office: May, 2014

Country Name	Project for Reinforcement of Customs Function at the Tan Cang Cat Lai Port of Ho Chi Minh City
Vietnam	

I. Project Outline

Background	In Vietnam, the volume of container handlings at ports increased rapidly as the economic growth after introducing the open-door and market economy policies in 1990s. In Vietnam, the necessity to introduce anti-terrorism measure and safety inspection was growing responding to anti-terrorism moves in the United States. Specifically, there is a pressing need to introduce the ASEAN Single Window System in Vietnam, and achieve the target of standardized custom clearance procedures determined by WTO and ASEAN. However, due to budgetary constraints, the necessary container inspection facilities and equipment were not installed at Vietnamese ports, which made it difficult to check the illegal import and export goods. Therefore, improvement of customs inspection method and reduction in container inspection time became the most urgent task in Vietnam.		
Objectives of the Project	To improve the customs inspection capability for handling both import and export container cargoes at Tan Cang Cat Lai Port by introducing X-ray inspection equipment, thereby contributing to promote export and import of container cargoes in the southern part of Vietnam and to early realization of "ASEAN Single Window" (Note). (Note) The ASEAN Single Window (ASW) is a regional initiative that connects and integrates National Single Windows (NSWs) of Member States. The ASW objective is to simplify the trade related procedures within the context of increased economic integration in ASEAN.		
Outputs of the Project	1. Project Site: Tan Cang Cat Lai Port, Ho Chi Minh City 2. Japanese side: 1) Large scale X-ray inspection equipment (1 system) 2) Facility for X-ray inspection equipment 3) Container cargo inspection station for X-ray equipment installation and operation 4) Office building 3. Vietnam side: 1) Land for the facilities 2) Utilities (water supply, electricity, telephone, sewage)		
E/N Date	October 15, 2008	Completion Date	February 28, 2010
Project Cost	E/N Grant Limit: 867 million yen, Contract Amount: 473 million yen		
Implementing Agency	Implementing Agency: General Department of Vietnam Custom(GDVC), Ministry of Finance Operating Agency: GDVC		
Contracted Agencies	Japan Marine Science Inc., Konoike Construction Co., Ltd., ITOCHU Corporation		
Related Studies	Basic Design Study: December 2007 – July 2008		
Related Projects (if any)	Japan's Cooperation: Project for Reinforcement of Custom Function at the Hai Phong Port (Grant aid, 2009-2011) Other Donors' Cooperation: None		

II. Result of the Evaluation

1 Relevance

This project has been highly relevant with Vietnamese development policy ("to modernize and strengthen the custom's inspection capacity" in the Modernization Plan for Customs Innovation and Development (2003) and the Development Plan of Vietnam Custom by 2020), development needs ("to improve the customs inspection method for reinforcement of security and anti-terrorism measures"), as well as Japan's ODA policy for Vietnam with the priority area of institutional building, at the time of both ex-ante evaluation and project completion. Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project has partially achieved its objectives "to improve the customs inspection capability for handling both import and export container cargoes at Tan Cang Cat Lai Port by introducing X-ray inspection equipment".

Firstly, the inspection time per container has been reduced from 60-120 minutes/container in 2007 to 20-30 minutes/ container in 2010 and 2013, but it has not been reduced to 15-20 minutes/container, which was set as a target to be achieved in 2009. Secondly, there were no cargoes reported as damaged during the inspection by the weather conditions in 2010 and 2013 since the equipment enables the non-destructive inspection (Note 1). Thirdly, the number of containers handled at Tan Cang Cat Lai Port has increased from 1,519,558 TEU in 2007 to 2,488,470 TEU in 2010 and 2,470,000 in 2013. However, the following issues are confirmed at the time of ex-post evaluation. (1) The number of container for customs procedures at Tan Cang Cat Lai Port in 2010 and 2013 were less than the amount of 2007 (see the details in the chart below). The main reason for this was that many import and export cargos at Tan Cang Cat Lai Port have been transferred to other bond areas such as Industry Zones and Export Processing Zones, where the inspection of cargoes are conducted by the customs branch offices at each locally. (2) The number of containers inspected by X-ray inspection equipment remains at the limited level. In 2010, the amount of 10,684 TEU, which was 10% of inspected containers at Tan Cang Cat Lai Port, was inspected by the equipment. It

is because the equipment started its operation in June 2010. For 2013, all inspection was manually conducted by the customs officers. It is because the X-ray inspection equipment has been out of service since July 2012 due to a series of problems related to software operating system, OCR, sensor and detector. According to the interview results with Ho Chi Minh City (HCM) Customs and local logistic companies, they recognized the project effects such as reduction in inspection time of import and export container cargoes, increase in the detection in damage on contained goods. Also although statistical data on the number of cases that the smuggle machines and narcotics are detected was not available, the customs officers perceived that the reinforcement of security and anti-terrorism measures at Tan Cang Cat Lai Port has improved after the introduction of X-ray system.

In sum, the project has realized to improve customs inspection efficiency and customs inspection capacities at Tan Cang Cat Lai to some extent by introducing the X-ray inspection equipment for container cargos. However, due to frequent malfunction of operation of X-ray equipment, the expected project effects have not been fully materialized at the time of ex-post evaluation. Regarding the malfunctioned X-ray equipment, HCM Customs have arranged necessary budget to contract the five-year maintenance contract with the qualified maintenance company in order to restore the X-ray equipment. Further, based on the effectiveness of the container X-ray machine at Cat Lai, GDVC has procured additional 8 X-ray scanned machines in several types (fixed, mobile and throughput X-ray machines) in 2012 in the customs field, of which 1 throughput X-ray machine and 1 mobile container X-ray machine were installed at Cat Lai Port in addition to the X-ray equipment procured by the Project

As for the impacts, according to the interview results with GDVC, they consider that the project have been contributing to reduce the handling cost and to prevent the wrongdoings of customs officials during the goods inspection. It would also contribute to the early realization of “ASEAN Single Window”. No land acquisition and resettlement of people was accosted with the project, and no negative impact on natural environment was observed.

Therefore, effectiveness/impact of this project is low.

Quantitative Effects

Indicator	Baseline value (2007)	Target value (2009)	Actual value (2010)	Actual value (2013)
Indicator 1 Inspection time per container (minutes/container)	60-120	15-20	20-30	20-30
Indicator 2 No. of cargo damaged case (no. of case/year)	N.A.	Reduced to zero (100% safety)	Reduced to zero	Reduced to zero
Reference data 1 (Note 2) No. of container handled at Tan Cang Cat Lai Port (TEU) (Note 3)	1,519,558	2,050,000	2,488,470	2,470,000
Reference data 2 (Note 4) No. of container for customs procedures at Tan Cang Cat Lai Port (TEU)	425,476	574,000	161,949	296,928
Reference data 3 (Note 5) No. of container inspected (TEU)	157,426	212,380	105,381	83,888

Source: Vietnam Customs.

(Note 1) Since 90% of the containers were manually inspected in 2010, there might be other contributing factors to this reduction.

(Note 2) No. of container handled at Tan Cang Cat Lai Port includes imported, exported and transshipped containers at the Port.

(Note 3) TEU: Twenty-Foot Equivalent Unit, a unit of container handling (1 TEU = 5.9m x 2.3m x 2.3m).

(Note 4) No. of container for customs procedures at Tan Cang Cat Lai Port means no. of exported and imported containers cleared at the Customs of Tan Cang Cat Lai Port.

(Note 5) No. of container inspected means no. of container that was actually inspected by the Customs among no. of container for customs procedures at Tan Cang Cat Lai Port

3 Efficiency

Both the project cost and project period were within the plan (ratio against the plan: 55% and 88%). The reason for significant reduction of actual project cost against planned cost was mainly caused by an appreciation of the yen against the US dollar. The outputs of the project were produced as planned. Therefore, efficiency of this project is high.

4 Sustainability

The routine operation and maintenance (O&M) of the project facilities have been carried out by HCM Customs under GDVC and major maintenance which cannot be handled by HCM Customs is outsourced to the private service providers.

Regarding the institutional aspect, X-ray Inspection Center was established as a district branch level organization of GDVC with the appropriate number of staff. Regarding the technical aspect, program/plan for the operation of the X-ray system as well as manuals/guidelines are regulated by specific decisions, official documents of GDVC and Vietnam Agency for Radiation and Nuclear Safety (VARANS) under the Ministry of Science and Technology (MOST). HCM Custom officers have sufficient knowledge and skills for adequate operation of X-ray equipment, but the accessibility to the maintenance service for X-ray equipment in case of breakdown is limited due to availability of qualified local maintenance service provider. Regarding the financial aspect, the X-ray related O&M budget has been allocated sufficiently. Regarding the current status of the project facilities, the operation of X-ray equipment has been suspended since July 2012 due to mechanical problems and availability of maintenance service in Vietnam. HCM Customs has arranged necessary budget and signed the five-year maintenance contract with the qualified maintenance company in order to restore the X-ray equipment.

Therefore, the project has some problems in the technical aspect as well as the current status of project facilities. Hence its sustainability is fair.

5 Summary of the Evaluation

The project has partially achieved its objectives of "to improve the customs inspection capability for handling both import and export container cargoes at Tan Cang Cat Lai Port by introducing X-ray inspection equipment". After the introduction of X-ray inspection equipment, the expected project effects had been observed to some extent such as (i) reduction in inspection time of import and export container cargoes, (ii) increased in the detection in damage on contained goods, and (iii) improvement in reinforcement of security and anti-terrorism measures at Tan Cang Cat Lai Port. However, since the operation of X-ray equipment has been suspended since July 2012 due to mechanical problems and availability of maintenance service in Vietnam, the above project effects has not been fully materialized at the time of ex-post evaluation. As for the impacts, the project is considered to contribute to the early realization of "ASEAN Single Window".

As for sustainability, the project has some problems in the technical aspect and the current status of project facilities since the problem of availability of qualified local maintenance service provider for X-ray equipment. For efficiency, both the project cost and project period were within the plan.

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

III. Recommendations & Lessons Learned

Recommendations to implementing agency:

Lessons learned for JICA:

- In the grant aid project, the maintenance service for the equipment is out of the project scope. For the partner country, the maintenance cost for the specific equipment such as X-ray inspection equipment is a heavy financial burden. Also the accessibility of the qualified local maintenance service provider as well as procurement of spare parts is also a constraint in many developing countries. Therefore, JICA should be aware of these kinds of issues and support the partner countries in preparing the appropriate maintenance plan including after the guarantee period. Also the maintenance aspect should be paid more attention in specification and selection of equipment to be provided by the grant aid.

X-ray inspection equipment (1 system)

Facility for X-ray inspection equipment

conducted by Cambodia Office: October 2014

Country Name	The Project for Infectious Disease Control
Kingdom of Cambodia	

I. Project Outline

Background	In Cambodia, the average immunization rates over the last decade had been improved by the government efforts for implementation of the National Immunization Program (NIP) with the donors' cooperation to provide vaccines and cold chain equipment, including Japan. However, there was still remaining issue of ensuring the quality of vaccines at end-use vaccination sites such as remote areas and urban slums. Cold chain equipment with solar system to adequately stock and control vaccines were not sufficiently available in such remote areas where gas supply for cold chain equipment was limited. Also, used syringes had not been safely disposed at health facilities due to the luck of incinerators. Therefore, installation of cold chain equipment and incinerators was a key issue to implement the Extended Program on Immunization (EPI) in the areas left behind.				
Objectives of the Project	To enhance immunization activities by installation of cold chain equipment for vaccines and incinerators for disposal of medical wastes as well as procurement of measles vaccines for the second round immunization campaign in 2011.				
Outputs of the Project	1. Project Site: Whole Cambodia including the following health facilities of the National Immunization Program, 24 Provincial Health Departments (PHDs), 28 Operational Districts (ODs), 376 Health Centers (HCs)/ Health Posts (HPs), and 24 Referral Hospitals (RHs) 2. Japanese side Cold chain equipment (refrigerator and icepack freezers, refrigerator and icepack freezers with solar system, vaccine cold boxes, vaccine carriers, data loggers, freeze watch indicators, refrigerator monitor cards), Incinerators, Motorcycles and pickup trucks, Measles vaccines, syringes for measles (Auto-disable (AD) syringes (0.5ml), disposable syringes (5ml)) 3. Cambodian side: Inland Transportation of procured equipment and vaccines, installation and training on operation and maintenance of equipment (excluding refrigerators with solar power system and incinerators)				
Ex-Ante Evaluation	2008	E/N Date	January 11, 2009	Completion Date	September 24, 2010
Project Cost	E/N Grant Limit: : 230 million yen, Contract Amount: 229 million yen				
Implementing Agency	Ministry of Health, National Immunization Programme				
Contracted Agencies	International Total Engineering Corporation, Toyota Tsusho Corporation				

II. Result of the Evaluation

1 Relevance

This project has been highly consistent with Cambodia's development policy prioritizing reduction of child mortality by immunization under "Health Sector Strategic Plan (2003-2007, 2008-2015)", and development needs for improvement of coverage of immunization programme for villages with low immunization coverage and for cold chain equipment at HCs in order to adequately control necessary vaccines for immunization at the time of both ex-ante and ex-post evaluation. It is also consistent with Japan's ODA policy for supporting socially vulnerable people through assistance in the area of health under the Country Assistance Plan (2002) at the time of ex-ante evaluation. Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project has mostly achieved its objectives, "to enhance immunization activities". At 94 HCs, the cold chain equipment, such as freezers and refrigerators were installed by the project. By the time of ex-post evaluation, all the HCs (1,093), including the HCs not covered by the project, have been equipped with the cold chain equipment also supported by other donors such as the World Health Organization (WHO). Out of the 94 HCs, 92 HCs have been utilizing the equipment for stock of necessary vaccines. On the other hand, out of 48 data loggers that were provided by the project and distributed to PHDs, 17 data loggers have not been utilized due to the limited capacity of the health staff and lack of equipment such as computer to connect[1]. Although it had been confirmed at the time of Basic Design Study that the Cambodian side would prepare computers for data logger, it has not been fulfilled. 50 motorcycles and 3 pickup trucks procured by the project have been utilized by Extended Program for Immunization (EPI) staff. Also, measles vaccines procured by the project were used for the 2011's Measles Vaccination Campaign and more than 1.5 million children aged between 9 months and 4 years were benefited. The most of incinerators at the RHs have been utilized for incineration disposal of medical waste including used syringes for vaccination.

The cold chain equipment and temperature monitoring devices such as freeze watch indicators and/or refrigerator monitor cards procured by the project improved temperature control and decreased the wastage rate of measles vaccines from 73% in 2007 before the project to 54% in 2013. In addition, types of vaccines stocked at the HCs equipped by the cold chain equipment have been increased.

As for their impacts, despite the limited data provided by NIP, the number of immunized population increased. The number of immunized infants (under 1) and pregnant women (only for tetanus) in 2013 were 354,614 and 383,043, respectively. This increase suggests the possibility that the project contributed to decrease in incidence of preventable infectious diseases such as measles. For example, the incidence of measles significantly dropped from 1,294 cases in 2007 to 0 case in 2013.

[1] At the time of ex-post evaluation, paper based data log system is used to monitor temperature.

Also, according to the National Health Care Waste Management Working Group, the installation of incinerators at the RHs prevented the second infections caused by inappropriate disposal of used syringes and disposed vaccines despite no available statistical data. There was no environmental negative impact observed.

Therefore, effectiveness/impact of this project is high.

Quantitative Effects

Indicator	Year 2007 (before the project) Actual value	Year 2010 (target year) Target value	Year 2010 (target year) Actual value	Year 2014 (ex-post evaluation year) Actual value
Indicator 1: No. of health facilities (HCs) not equipped by cold chain equipment	108	0	14*	0**
Indicator 2: No. of referral hospitals to begin safe disposal of medical waste	0	24	24	23****
Indicator 3: Volume of measles vaccines procured for the 2011's Measles Vaccination Campaign	0	200,000 vials***	200,000 vials	

Source: Ministry of Health National Immunization Programme

Note: *Out of 108 targeted HCs, 94 HCs were equipped by the project and the rest of 14 HCs were equipped by supports by other donors.

** Among 94 procured by the project, two refrigerators in the Health Center in Kokdong (Siem Reap Province) and the Health Center in Chiphat (Koh Kong Province) do not function at the time of ex-post evaluation because the solar power system has battery troubles. Instead, the Health Center in Kokdong, where electric grid was already established, is using electricity fridge, and the Health Center in Chiphat is using ice box, in which vaccine is kept with block of ice.

*** 1 vial= 10 doses (1 dose = necessary volume of vaccine for 1 person). 200,000 vials cover the target population for immunization in 2011 of around 1.6 million persons.

**** One of the incinerators installed by the project at Sot Nikum Referral Hospital was not in service at the time of the ex-post evaluation. According to the hospital staff, it is because the solar panel has some problems.

3 Efficiency

Although the project cost was the same as the plan (ratio against the plan: 100%), project period exceeded the plan (ratio against the plan: 140%) because it took longer than planned to install incinerators to all the target hospitals. Since the cost of incinerators procured increased due to the changes in specification to meet the technical level of the staff of RHs, the number of cold chain equipment to be procured, including refrigerators, cold boxes, vaccine carriers and refrigerator monitor card, were reduced. The target number of HCs also decreased from 108 in the original plan to 94. Therefore, efficiency of this project is fair.

4 Sustainability

As for the institutional aspect, there was no change in the organizational structure and arrangement for implementation of the national vaccination activities, and the operation and maintenance of the cold chain equipment and vehicles installed by the project have been carried out by each health institution. The sufficient number of staff have been deployed at each level of institution: 25 medical staff for EPI and 1 technical staff at NIP, 48 medical staff and 24 technical staff at PHDs (provincial level), 81 medical staff and 77 technical staff at ODs (district level), 1,096 medical staff but no technical staff at HCs (community level). For medical waste treatment at RHs, 104 staff in total, including 80 technical staff for maintenance of incinerators have been deployed.

In the technical aspect, the technical staff at PHDs, ODs, HCs have skills to carry out maintenance and repair works[2] for 94 refrigerators but have difficulty for maintenance of the solar system attached to the refrigerators (such solar powered refrigerators were installed in 30 out of 94 HCs). The technical level of manufacturers in Phnom Penh for major and complicated repairs of solar system is also not sufficient. For incinerators, the technical staff at RHs, who are contract-based, also have some difficulty for maintenance and repair works of solar power system but are able to carry out regular maintenance and repair of incinerators.

As for financial aspect, the revenue of NIP in 2013 was 4.8 million riels, which covers the cost of regular O&M for the refrigerators, incinerators and other equipment procured by the project. HCs and RHs have own budget to cover some of O&M cost from user fees in addition to the budget allocated by the Ministry of Health. But the budget to procure spare parts for repairing solar power system (i.e. solar battery) is not included in this regular budget and needs to be requested to the Ministry when necessary. Although the government spends average of 2 million US Dollars annually for procurement of traditional vaccines, the funding sources for procuring new vaccines depend on donors' funds such as the Global Alliance for Vaccines and Immunization (GAVI). GAVI's grant for supporting vaccination has been approved until 2016.

At the time of the ex-post evaluation, most of the refrigerators/freezers and incinerators function as well as all motorcycles and pickup trucks are well maintained, while two out of 30 solar powered refrigerators and one out of 24 incinerators did not function because of some troubles in the solar power system (power battery and solar panel). As there are constraints in technical level of the staff at health institutions and issues of the limited budget, no repair work has been taken for the solar power system.

Therefore, the sustainability of this project effect is fair despite some concerns.

5 Summary of the Evaluation

The project has largely achieved its objectives to enhance immunization activities in Cambodia. By the utilization of cold chain equipment and vehicles, the immunization activities have been improved and extended, and contributed to reducing incidence of preventable infectious diseases and infant mortality. In addition, incineration disposal of medical wastes including

[2] Regular maintenance for refrigerators and freezers are performed 2-3 times in a year. No technical training on maintenance and repair of solar power is conducted.

disposed syringes at RHs decreased the second infections caused by inadequate disposal. Therefore, effectiveness/impact of this project is high.

As for sustainability, the NIP and the health institutions in the country have no problem in the structural aspects as sufficient number of staff being deployed. However, there are some problems observed in terms of current status of operation and maintenance, technical level of the staff and budget allocation to maintain the solar system.

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

III. Recommendations & Lessons Learned

Recommendations to implementing agency:

- NIP needs to figure out causes of the battery problem on the solar power system and repair the two solar powered refrigerators installed at Kokdong HC and Chiphat HC as soon as possible.
- The Ministry of Health and the National for Health Care Waste Management Working Group should check the condition of incinerators, especially installed at Sot Nikum RH which is not working, and arrange for repair after analyzing the failure cause.
- O&M budget for the procurement of solar battery is not sufficient. MoH needs to consider to allocate enough budget for sustainable use of the equipment procured by the project.

Lessons learned for JICA:

- Although solar powered cold chain equipment procured on this project is a recommended model by other donors in Cambodia, malfunctioning of the equipment caused by financial constraint and limitation of technical level of the implementing agency was observed in this ex-post evaluation. It is suggested to carefully plan the specification of solar powered refrigerators by comparing with other power sourced refrigerators in all aspects, including budget availability for O&M and technical level of the implementing agency.
- Careful assessment of the staff skill and availability of proper environment for utilizing the procured equipment especially at the lower level health facilities are required. In this ex-post evaluation, it is found that data loggers are often not utilized due to lack of connections between data loggers and computers and due to lack of the staff's skill on data loggers at the Health Center level.

(Refrigerator with solar power system at Varin HC)

(Incinerator at Siem Reap RH)

Internal Ex-Post Evaluation for Grant Aid Project

conducted by Uzbekistan Office: 12 2014

Country Name	Project for Improvement of Equipment for National Center of Rehabilitation and Prosthesis of Invalids
Republic of Uzbekistan	

I. Project Outline

Background	In Uzbekistan, there were 772,314 persons with disabilities (PWD) in 2008, among which 539,621 had completely lost labor ability. The Ministry of Labor and Social Protection of Population has made efforts to promote medical-social rehabilitation of PWD. However, most of the facilities and equipment for support of PWD were deteriorating, and resulted in poor services including those of the National Center of Rehabilitation and Prosthesis of Invalids (the Center). The Center was a top referral facility, which receives the patients from the whole part of the county and provides advanced medical treatment and rehabilitation. The Center also functions as an educational facility which provides training for orthopedists and rehabilitation technicians. Under these situations, upgrade of the facilities and medical and rehabilitation equipment was an urgent issue to improve quality and quantity of the services.				
Objectives of the Project	To improve services provided by the Center in Tashkent by procuring equipment for rehabilitation and orthopedics and providing technical training to the personnel of the Center on operation and maintenance of the procured equipment.				
Outputs of the Project	1. Project Site: Tashkent (2 facilities: Territory 1 and Territory 2) 2. Japanese Side: (1) Procurement of equipment in the Center related to physiotherapy, laboratory, x-ray, operation & ICU, diagnosis and others., (2) Technical training on operation and preventive maintenance of the procured equipment, focusing on (i) use of the Passport (record sheet for operation and maintenance of the equipment) and (ii) maintenance based on the developed schedule. 3. Uzbekistani Side: Preparation of the rooms for installation of the procured equipment, renovation of the rooms for the x-ray protection, tax exemption, etc.				
Ex-Ante Evaluation	2009	E/N Date	February 19, 2009	Completion Date	April 16, 2010
Project Cost	E/N Grant Limit: 441 million yen, Actual Grant Amount: 363 million yen				
Implementing Agency	National Rehabilitation and Prosthesis Centre for People with Disabilities (the Center) (former Republican Center for PWD with locomotive system problems)				
Contracted Agencies	International Techno Center Co., Ltd., Mitsubishi Corporation				

II. Result of the Evaluation

1 Relevance

This project has been highly consistent with Uzbekistan's development policy at the time of both ex-ante and ex-post evaluation. Enhancement of rehabilitation services for and social protection of PWD has been emphasized in the "Law on Social Security of Disabled People in the Republic of Uzbekistan" (1991), "Program of Activities on Further Strengthening Addressed Social Protection and Social Services for Lonely Aged, Retires and Person with Disabilities 2007-2010," Cabinet's Resolution No.307 in 2010, and President's Decree No.1542 in 2011. It has been in line with needs for improvement of quality and effectiveness of rehabilitation services. Also, this project was consistent with Japan's ODA policy at the time of ex-ante evaluation, which put one of its priorities on supporting to enhance the quality of healthcare, including possible preventive care programs, as cited in the Country Assistance Program to the Republic of Uzbekistan (2006).

Therefore, relevance of this project is high.

2 Effectiveness/Impact

This project has largely achieved its objective of " improving services provided by the Center regarding rehabilitation and orthopedics," by fully utilizing all the procured equipment. Compared to the situation before the project, the number of surgeries on disk herniation and the number of inpatients increased, and the average days of hospitalization decreased in 2011 (see the chart below for the details). On the other hand, the number of diagnoses of CT scan did not reach the target figure in 2011 and the number of surgeries other than disk herniation and charged health check-ups did not increase as planned. It is because the services of the Center were stopped in 2011-2012 due to the facility renovation. Also, diagnoses of CT scan were suspended during its breakdown in late 2011 and early 2013[1]. After the renovation work, indicator 3 (the number of surgeries excluding disk herniation) and indicator 6 (charged health check-ups) reached the target figure in 2013.

The improved quality of services, such as diversification of available diagnoses and rehabilitation menus at the Center, improvement in accuracy of the diagnoses and patients' satisfaction, etc. was observed at the time of ex-post evaluation. More concretely, the Center can conduct diagnoses for acute disturbance of the blood circulation in the brain, detailed planning of reconstructive surgeries, etc., which was not available before the Project. Also, new medical rehabilitation menus such as correction of the spine using transpedicular fixation, endoscopic removal of spinal disc herniation, etc. were added after the project, .

As for impacts, the following positive impacts have been observed as expected at the time of ex-ante evaluation. First, the number of referred patients to the Center from other facilities increased from 20 in 2008 to 58 in 2013 due to supply and use of

[1] Even during the renovation works, some departments partly had been working, particularly surgery on disk herniation and the Centre had provided medical services for inpatients as well. Therefore, some indicators were not affected by the renovation works.

high technological medical equipment at the Center. Second, the training provided by the Center has been improved. As a result of installment of such as physiotherapy and diagnostics medical equipment and training devices procured by the project, the Center improved their knowledge and gained new skills in the field of comprehensive rehabilitation of PWD. And two to three training courses have been conducted every year for the staff of the Center and specialists from other regions of Uzbekistan. The Center answered that all the staff who participated in the training came to understand the importance of daily preventive maintenance. Third, more PWDs became able to physically perform a certain type of work after the rehabilitation than before; the percentage increased from 21.4% in 2009 to 30.0% in 2014. No negative impact on the natural impact has been observed. There were no land acquisition and resettlement.

Therefore, effectiveness/impact of this project is high .

Quantitative Effects

Indicators	Year 2007 (before the project) Actual Value	Year 2011 (target year) Target Value	Year 2011 (target year) Actual Value	Year 2013 (ex-post evaluation) Actual Value
Indicator 1: Number of diagnoses of CT scan	0	2,000	1,744	1,459
Indicator 2: Number of surgeries on disk herniation	174	Increase from 174	251	573
Indicator 3: Number of surgeries excluding disk herniation	809	Increase from 809	513	1,357
Indicator 4: Number of inpatients	4,193	Increase from 4,193	4,723	5,205
Indicator 5: Average days of hospitalization	14.3	Decrease from 14.3	14.0	13.3
Indicator 6: Number of charged health check-ups	4,154	Increase from 4,154	3,208	4,783

(Source) The Center.

3 Efficiency

The outputs of the project were produced with minor changes in terms of the installation place, and manufacturer and country of the origin of the procured equipment. The project cost was within the plan (ratio against the plan: 82%), but the project period exceeded the plan (140%). Therefore, efficiency of the project is fair.

4 Sustainability

The equipment procured by the project have been operated and maintained by the Center. At the time of ex-post-evaluation, the Center is still operated under the Ministry of Labor and Social Protection of Population. And, the Center consists of the two sub centers: Territory I and Territory II. The total number of employees at the Center has slightly increased from 2008 to 2013 and this number is considered to be sufficient. While the situation that no section or technician is responsible exclusively for maintenance of the medical equipment at the Center has still been the same since the time at the ex-ante evaluation, the Center, when need arises, has a contract for operation and maintenance (O&M) with Mangnum Medical and Phillips Companies which send its technicians to fix broken equipment. Further, users of the equipment such as physicians and staff conduct routine O&M.

In the technical aspect, many physicians have sufficient skills for O&M because they had received overseas training on endoscopic surgery even before the project. As to those who gained knowledge and skills from the training conducted as a part of the project, they can also operate the high quality equipment in their daily professional activities. For the new physicians and personnel who joined the Center after the project, the training was conducted on O&M of the equipment and they have no difficulty in O&M of the equipment and they are using the “passport for O&M of the equipment[2].” The manuals for O&M of the procured equipment are accessible to all the personnel who need to refer to.

With regard to the financial aspect, the Center has no major problem for O&M of the procured equipment. The income from the charged services for 2013 was 1,911 million sum[3], which is more than double of 2008 (864 million sum). Also the budget for O&M of the procured equipment has increased drastically, 9 million sum in 2008 to 90 million sum in 2013. This budget covers also for the equipment which the Center itself has purchased.

So as to the current status of O&M of the equipment, the Center has not faced serious breakdown problems by the time of ex-post evaluation. The maintenance plan has been prepared for daily checking and it has been conducted. The checking record such as operating time, breakdown etc., has been kept in the “passport.” Spare parts and consumables have been obtained without any difficulty, based on the filled “passport.”

The project has no problem in the institutional, technical and financial aspect and the current status of O&M of the Center. Therefore, sustainability of this project effect is high.

[2] The “passport” has been used for preventive maintenance of the procured equipment, which keeps information such as record of operation and breakdown. The O&M system with the use of the passport was originally introduced by a JICA volunteer dispatched to the Republican Scientific Center for Emergency Medical Care. The equipment procured by JICA in 2001 was well utilized at the time of Basic Design Study, and the system was effectively functioning. (source: Annex 6 (Soft Component Plan), Basic Design Study Report, 2008.)

[3] 1000 sum are approximately equivalent to 44 yen as of August 2014.

5 Summary of the Evaluation

This project has largely achieved its objective, “improvement of the services provided by the Center regarding rehabilitation and orthopedics.” There has been improvement in the numbers of surgeries on disk herniation, number of inpatients and hospitalization days, while the situation has not been improved in terms of the number of diagnoses of CT scan, number of surgeries other than disk herniation and charged health check-ups in the target year. However, the number of surgeries excluding disk herniation and charged health check-ups has reached the target value in 2013. As for impact, positive impacts have been observed including strengthened referral system and improved training at the Center. Regarding efficiency, the project period exceeded the plan, although the cost was within the plan.

As for sustainability, the Center has no problem in the institutional financial and technical aspects and the current status of O&M. In light of the above, this project is evaluated to be highly satisfactory.

III. Recommendations & Lessons Learned

Lessons Learned to JICA

- At the designing stage of this project, the survey was conducted to understand O&M system in Uzbekistan. The survey revealed the effectiveness of the “passport” which was introduced by JOCV and still utilized at the Republican Scientific Center for Emergency Medical Care. This “passport” system was co-opted in the project, and it is functioning up to the time of the ex-post evaluation. Thus, examining the existing appropriate system in the target country is crucial to increase the effectiveness and also sustainability of the project effects.

(Rehabilitation services provided with the procured equipment.)

Internal Ex-Post Evaluation for Grant Aid Project

conducted by Kyrgyz Republic Office: September 2014

Country Name	The Project for Reconstruction of Bridges in Chui Oblast
Kyrgyz Republic	

I. Project Outline

Background	Road traffic is very important in Kyrgyz as it had 90% share of freight and passenger transportation. In addition, international trunk road in Kyrgyz is a part of Asian highway network contributing to smooth distribution and economic growth in all Asia. However, the road infrastructures, including the project target bridges, were built in the former Soviet period, and they were not rehabilitated and reconstructed sufficiently due to economic stagnation after the independence in 1991.				
Objectives of the Project	To secure safe and stable traffic by replacing the heavily damaged bridges located on international trunk roads.				
Outputs of the Project	1. Project Site: Chui Oblast 2. Japanese side: (1)Replacing the existing Alamedin bridge (Bridge No.1) with a new bridge (42.0m), pavement of approach road and revetment, (2) Replacing the existing Ala-Archa bridge (Bridge No.2) with a new bridge (28.0m), pavement of approach road and revetment, and (3) Replacing the existing Ken-Bulun bridge (Bridge No.14, only outbound) with a new bridge (23.4m), pavement of approach road 3. Kyrgyz Side: (1) to install the distribution facility of public electric to the temporary yard and (2) to secure land for temporary offices, construction works, storage yards and others.				
Ex-Ante Evaluation	2007	E/N Date	(1) 3 October 2007 (2) 19 February, 2009[1]	Completion Date	13 January, 2011
Project Cost	E/N Grant Limit : (1) 476 million yen (2) 635 million yen, Actual Grant Amount: 669 million yen				
Implementing Agency	Department of Roads, Ministry of Transport and Communications (MOTC)				
Contracted Agencies	Katahira & Engineers International and Iwata Chizaki, Inc.				

II. Result of the Evaluation

1 Relevance

This project has been highly relevant with Kyrgyz's development policies and development needs at the time of both ex-ante and ex-post evaluation. Development policies such as Country Development Strategy (CDS) (2006-2010) and National Sustainable Development Strategy of the Kyrgyz Republic (2013-2017) set the transport sector as one of the most prioritized areas and focus on improvement of road network. There have been development needs for rehabilitating the target three bridges on international trunk roads which play an important role for transportation of goods and people. The project is also consistent with Japan's ODA policy at the time of ex-ante evaluation as one of the priority fields of Japanese ODA for Kyrgyz was the improvement/establishment of economic infrastructures including road infrastructure. Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project has largely achieved its objective to secure safe and stable traffic by replacing the heavily damaged bridges located on international trunk roads. As a result of the replacement of the old bridges, the loading capacity has increased as planned in all bridges (Indicator 2, 4, 6). In case of Alamedin bridge and Ala-Acha bridge, the passing speed on the both bridges also has increased as planned because of the flat surface after the replacement (Indicator 1, 3). In case of Ken-Bulun bridge, the traffic capacity has increased as planned as the width of the bridge was expanded (Indicator 5). At the time of ex-post evaluation, all three bridges are used with the increase of traffic volume of all types of vehicles[2]. Before the project implementation, the traffic volume at Alamedin bridge and Ala-Archa bridge was 13,981 vehicles/day and 8,224 vehicles/day (2005) respectively, while the traffic volume after the project completion has increased to 29,106 vehicles/day[3] (2014). The traffic volume per day at Ken-Bulun bridge, which is 8,850 vehicles/day in 2005, had also increased after the project completion, but it has decreased after the rehabilitation of a by-pass road which is located parallel to AH61 (Asian Highway where Ken-Bulun bridge is located) in 2013. The traffic volume per day at the time of ex-post evaluation (2014) is 8,174 vehicles/day, which is below the level before the project implementation.

The Alamedin Bridge

All bridge users interviewed during the site survey including truck drivers, passenger car drivers and users of mini-buses noticed the increase of passing speed, the absence of traffic jams and the stability while passing the Alamedin bridge and the Ala-Archa bridge. Some drivers on Alamedin bridge told that if the bridge was not rehabilitated, they would not be able to

[1] Due to the unsuccessful bidding, the consultant contract was terminated by completing the bidding documentation. After the termination of the above-mentioned consultant contract, the implementation review study was carried out in 2008 to re-examine the content and cost of the project; and another E/N was signed accordingly.

[2] The traffic volume data before the project is based on the survey by the World Bank conducted in 2005. The traffic volume at the time of ex-post evaluation was counted by the following measures: For Alamedin bridge and Ala-Archa bridge, collection point was 234km of Almaty-Bishkek-Tashkent Road (Asian Highway 5) and the data was counted on March 31, 2014, for 24 hours. For Ken-Bulun bridge, collection point was 57km of Bishkek-Naryn-Torugart Road (Asian Highway No.61) and the data was counted on April 7, 2014, for 24 hours.

[3] The traffic data after the project completion was collected by MOTC's DEP 39 in April 2014 on 234km of Almaty-Bishkek-Tashkent Road, which is the middle point between two bridges. (The distance between the two bridges is 4 km).

avoid huge traffic jams under ongoing traffic volume. As for Ken-Bulun bridge, both Traffic Police Data and interviews with DEP 954 confirmed the decrease of traffic accidents[4] from approximately 5-6 accidents (2007) to 1 accident during 2011-2013. For pedestrians, improved bridges' sidewalks as well as special protecting concrete walls that were newly constructed under the project have ensured safety pass. As for Ken-Bulun bridge, residents nearby mentioned that pedestrian's safety on this section is critically important because the bridge is located on the road along the two villages, Ken-Bulun and Drujba villages, and used by the villagers of the two villages including children for their commuting roads[5].


Painted and repaired shoulder in the Ken-Bulun bridge

As for impacts, freight traffic has increased along Almaty-Bishkek-Tashkent road where Alamedin and Ala-Archa bridges are located (5,444 trucks/day in 2014)[6] partly because of the better road and the bridge conditions after the project's rehabilitation. In addition, the neighboring residents noticed improvement of their access in overall not only to the nearest facilities, like bazaar, but also to places (home, work, etc) on the way by passing the bridge. As for Ken-Bulun Bridge, the access to education and health facilities has improved since the bridge is located on the road along two villages, Ken-Bulun and Drujba, where the villagers go and down the bridges to use most of those basic services.

No land acquisition occurred under this project, and no negative impacts on natural environment were observed. According to DEPs, there is a positive impact of cost savings of prevention measures against spring flooding which took place annually before the project implementation, as there was a high risk that old bridges' are destroyed. Additionally, capacity building of local construction companies and MOTC was mentioned as a positive impact appeared under the project during the Interview with MOTC. MOTC appreciates that it was a very good chance and practice for both local contractors and for MOTCs organizations to learn the Japanese technologies in bridge construction.

Therefore, the effectiveness/impact of this project is high.

Quantitative Effects

Indicator	Year 2007 (before the project) Actual value	Year 2009 (target year) Target value	Year 2011 (year of completion) Actual value	Year 2014 (ex-post evaluation year) Actual value
Alamedin bridge Indicator 1: Increase of vehicle speed for crossing the bridge	5km/hour	60km/hour	Not less than 60km/hour	Not less than 60km/hour
Indicator 2: Loading capacity	27.1t	40.9t	40.9t	40.9t
Ala-Archa bridge Indicator 3: Increase of vehicle speed for crossing the bridge	10km/hour	60km/hour	Not less than 60km/hour	Not less than 60km/hour
Indicator 4: Loading capacity	23.5t	40.9t	40.9t	40.9t
Ken-Bulun bridge (Outbound) Indicator 5:Increase of traffic capacity	1,900 vehicles /hour	2,270 vehicles /hour	2,270 vehicles /hour	2,270 vehicles /hour
Indicator 6: Loading capacity	28.4t	40.9t	40.9t	40.9t

Source: (Year 2007 and 2009) Basic Design; (Year 2011 and 2014) Interviews with DEP 39 and DEP 954, and actual measuring during the site survey on June 6, 2014

3 Efficiency[7]

Although the outputs were produced as planned, both the project cost and the project period exceeded the plan (ratio against the plan: 141%, 217%). The project cost exceeded the plan due to an unexpected and unavoidable price escalation which derived from rise of oil price and construction materials and machinery prices in the Middle East and Russia. The project period was extended due to the rebidding caused by the unsuccessful bidding as well as due to the civil unrest that occurred in 2010. Therefore, efficiency of this project is low.

4 Sustainability

The operation and maintenance (O&M) of the bridges has been carried out by MOTC (DEP 39 is responsible for the Alamedin bridge and Ala-Archa bridge, and DEP 954 is responsible for the Ken-Bulun bridge)[8]. Both DEPs carry out daily inspection and routine maintenance including patching, pavement, and cleaning works. Such implementation structure is sustained as considered at the time of ex-ante evaluation and the number of O&M staff is considered enough for continuity of project

[4] At the time of ex-ante evaluation, decrease in the number of traffic accidents on the Ken-Bulun bridge was anticipated by improving the bridge's line shape.

[5] Additionally, it was found in the Interview that, during the construction, the local government authority requested the Japanese contractor to install small pedestrian bridges inside one of the neighboring villages for children to go to school safely and to avoid the main trunk road which was not safe for kids. As a response, the contractor agreed to install two small metal pedestrian bridges so that the additional safety for children was ensured.

[6] Big trucks come from China pass through Alamedin bridge, which is on the way to the biggest markets in Central Asia.

[7] The evaluation judgment on efficiency was based on the following comparison: [Project period] Comparison between the 18.2 months specified in ex-ante planning sheet and the actual 36.1 months (from E/N signed date in 2007 to the project completion date). [Project cost] Comparison between the E/N Grant Limit amount 476 million yen calculated based on the Basic Design Study in 2007 and the actual Grant amount 669 million yen.

[8] Between the MOTC and DEPs, there is Road Management and Maintenance Departments (PLUADs) that are located in the regions and responsible for making plans for maintenance, repair and construction of roads and bridges and requesting budget to MOTC. .

effectiveness. There is no problem in the technical level of the staff in two DEPs since they are carrying out routine maintenance works on time by using equipment procured under the Japan's grant aid project[9]. Moreover, at the time of ex-post evaluation, capacity building training for bridge maintenance is conducted under the JICA's technical cooperation (TC)[10] for all DEPs across the country including staff from DEP 39 and DEP 954. Additionally, the TC supports the development of several new manuals for bridge maintenance.

The implementing agency has no problem in the financial aspect of O&M of the constructed bridges. According to the data from MOTC, the overall budget for O&M has been increasing. Moreover, both heads of DEPs during Interview confirmed the sufficient budget has been allocated from MOTC for bridges maintenance. As for the current status of O&M, during site-visit under this ex-post evaluation it was confirmed that all three bridges are in a good condition. For example, DEPs have repaired and painted the bridge's shoulders. Bridge's O&M are carried out properly and regularly by DEPs through routine inspection (every two weeks), structure inspection (twice per year), patching pavement (when necessary).

Thus, there is no problem in institutional, technical and financial aspects of the implementing agency and current status of O&M. Therefore, the sustainability of this project effect is high.

5 Summary of the Evaluation

This project has largely achieved its objectives by securing safe and stable traffic and transportation at target three bridges on international trunk roads as a result of the increased vehicle speed for crossing the bridges (the Alamedin bridge and the Ala-Archa bridge), the increased loading capacity (all target bridges), the increased traffic capacity (the Ken-Bulun bridge). According to interview results with DEPs, the number of traffic accidents have decreased after the project completion. As a result, positive impacts were identified such as smooth distribution of goods and stable usage of international trunk roads including people's access to social services. As for sustainability, no problems have been observed in institutional, technical and financial aspects and the proper operation and maintenance have been carried out. For efficiency, the cost and project period exceeded the plan.

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

III. Recommendations & Lessons Learned

Recommendations to implementing agency:

1. At the time of ex-post evaluation, JICA's TC provides series of trainings for master trainers to formulate maintenance management plans and develop bridge database system. The MOTC including PLUADs/DEPs are recommended to further strengthen the capacity of their staff for bridge maintenance by utilizing the TC's outputs such as trainings on Bridge Maintenance and Inspection, special manuals on Bridge Inspection, Condition Rating and Bridge Repair as well as operating the Bridge Database System.
2. MOTC on a regular basis should collect and analyze data related to traffic volume, traffic accidents etc to measure the continuity of the project effects.

Lessons learned for JICA:

The combination of TCs and grant aid projects proved to be effective for the sustainability of the project effects of the grant aid. The project's target bridges are operated and maintained properly by the implementing agency's staff who utilize knowledge and experience that were obtained through other TCs and grant aid projects, where these staff learned how to evaluate bridge condition, how to repair bridges in the case of severe damage, how to keep record of and maintain database etc.

[9] "The Project for Improvement of the Equipment for Road Maintenance in Issyk-Kul and Chui Oblasts" (2010-2011)

[10] "The Project for Capacity Development for Maintenance Management of Bridges and Tunnels" (2013-2016)

Internal Ex-Post Evaluation for Grant Aid Project

conducted by Burundi Office: January 2015

Country Name	Project for Improvement of Health Facilities in Bujumbura City
Republic of Burundi	

I. Project Outline

Background	The health sector in the Republic of Burundi (hereinafter referred as Burundi) had problems of shortage of human resources, lack and mismanagement of medicines and medical equipment, and as a result, medical services, especially maternal and child health service, were not provided appropriately. In order to improve the situation, an executive order of free medical services for pregnant women and under age 5 children was issued in 2006. This resulted in that hospitals which provide secondary and tertiary medical services became full of patients. In order to solve the concentration of delivery at the secondary and tertiary hospitals, there was a plan to enable health centers, which are the primary health service institutions to provide service for normal delivery. However, due to the budget shortage, necessary equipment was neither renewed nor supplemented at the health centers.				
Objectives of the Project	To improve maternal and child health service in Bujumbura, the capital, and the neighboring provinces by supplying the medical equipment of obstetrics and neonatal care to hospitals and health centers				
Outputs of the Project	1. Project site: (1) Three public hospitals in Bujumbura (tertiary medical institutes): Hospital Prince Regent Charles (HPRC), Clinique Prince Louis Rwagasore (CPLR) and Hospitalo-Academic Center of Kamenge (CHUK), (2) nine health centers in Bujumbura: the northern area: Kamenge, Ngagara, Buterere I, Mutakura, the central area: Bwiza-Jabe, Buyenzi, the southern area: Musaga, Kanyosha, Ruziba 2. Major Project Component: Fund necessary to procure equipment to the above sites: tocomonitor, ultrasound equipment, child birth instrument kits, infant warmers, oxygen masks, beds, operating tables and other obstetric related equipment and communication equipment: total 43 units) 3. Burundi side : Removal of existing equipment, renovation of the site for setting equipment, Renovation of facilities (electricity and water supply/discharge)				
Ex-Ante Evaluation	2009	E/N Date	20 February, 2009	Completion Date	16 April, 2010
Project Cost	E/N Grant Limit：230 million yen			Actual Grant Amount:158 million yen	
Implementing Agency	Ministry of Public Health and Fight against HIV/AIDS (‘Ministry of Heath’ at the time of the captioned project implementation)				
Contracted Agencies	International Techno Center Co., Ltd., Ogawa Seiki Co., Ltd.				

II. Result of the Evaluation

1 Relevance

This project has been highly relevant with the Burundi’s development policies at both ex-ante and ex-post evaluations. Poverty Reduction Strategy Paper (2006-2010), National Health Development Plan (PNDS, 2006-2010) and PNDS II (2011-2015) prioritize improvement of maternal mortality rate and neonatal mortality rate. The project also has been highly consistent with development needs at the both ex-ante and ex-post evaluation: improvement of maternal health related indicators which are much worse than the neighboring countries and necessity of equipment for maternal and neonatal related care which respond to the issue of continuous high birth rate in Burundi It was also consistent with Japan’s ODA policy (The second policy consultation for economic cooperation held on November 2008) at the time of ex-ante evaluation which prioritized “improvement of basic living environment” as one of the three priority areas and included implementation of health administration and maternal and child health program under the area. Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project has somewhat achieved its objective, “to improve maternal and child health service in Bujumbura, the capital, and the neighboring provinces”. Because of the limited number of medical/health facilities in Burundi, demand for delivery at the target facilities is still high. The number of delivery by caesarean section, which is needed to be operated at the tertiary hospital, has increased at the target hospitals. Equipment procured under the project such as operating ramps, anesthesia apparatuses, aspirators for operation, radio knife, patient monitor (adults and newborns) have contributed to the stable performance of delivery by caesarean section. The number of normal delivery has decreased at two out of the three hospitals, while the number of delivery and prenatal checkup has significantly increased at the health centers compared with the situation before the implementation of the project (refer to figure 1). The checkup kits procured under the project have been utilized for the checkup. According to the General Directorate of Resources maternal and child health service such as delivery and prenatal checkup has been widely utilized at the health centers, and therefore, less pregnant women have directly visited the tertiary hospitals and the concentration of delivery at the hospitals has been solved to some extent. According to General Directorate of Resources, in the areas where the health centers are located, people can receive maternal and child health service nearby without going to hospitals in the center of the capital, and therefore, one half of the pregnant women have taken prenatal checkup, which shows that the service to the people in the surrounding provinces of Bujumbura has expanded. A part of equipment procured under the project has not been fully utilized[1]. For example, as the parts have not been replaced,

[1] There were cases such as (1) after the type of services provided by each health institute have changed, (based on the health regulation in

ultrasound equipment, anesthesia apparatuses and washing machines have not been used. Delivery beds have not been used either since the footrests were broken as the beds did not fit the size of the Burundian women.

As for impacts, the difference of services performed by the health centers and target hospitals has become clear. It was identified by the follow up study (carried out in April, 2014) that the referral system have functioned as pregnant women were referred to hospitals when the abnormal delivery was found. Although the decrease in maternal mortality rate and neonatal mortality rate was expected at the time of ex-ante evaluation, it was difficult to confirm whether this expected impact is achieved, as only the data on the numbers of death of pregnant women and newborn babies at the target hospitals was available. However, causal relationship between these figures and the project is not clear. For reference, in case of entire country, both of under 5 mortality rate and maternal mortality rate have improved. Under 5 mortality rate has decreased from 190/1,000 births (2004) to 104.3/1,000 births (2012), and maternal mortality rate has decreased from 1,000/100,000 births (2000) to 800/100,000 births (2010)[2]. There is no negative impact on environment and no land acquisition and involuntary resettlement occurred.

In light of the above, effectiveness/impact of the project is fair.

Quantitative Effects (1) The number of normal delivery and delivery by caesarian section at the three target hospitals

Indicators	Name of hospitals	(Before the project) Actual	2011 (target year) Target	2011 (target year) Actual	2013 (The latest year before the ex-post evaluation) Actual
The number of normal delivery	HPRC	3,500～4,700	N/A	3,615	3,514
	CPLR	2,900～3,600	N/A	3,907	3,817
	CHUK	2,500～2,800	N/A	3,366	3,452
The number of delivery by caesarian section	HPRC	570～670	N/A	695	N/A
	CPLR	580～640	N/A	811	N/A
	CHUK	800～1,000	N/A	1,134	N/A

(Note) The year of actual value before the project implementation was not mentioned and the target value was not set. The data on delivery by caesarian section is not disclosed at the time of the ex-post evaluation.

Source : Basic Design Study, Interviews with the General Directorate of Resources and the Directorate of Public Health Information National System, JICA internal document

(2) Delivery service at the target health center (Delivery service is provided at 6 centers)

Indicators	Name of health center	(Before the project) Actual	2011 (target year) Target	2011 (target year) Actual	2013 (The latest year before the ex-post evaluation) Actual
The number of delivery	Kamenge	103	Increase	583	663
	Buterere I	50	Increase	381	363
	Ngagara	(no delivery service)[3]	Increase	(Delivery service started in 2013)	2
	Mutakura	(no delivery service)[4]	Increase	(Delivery service started in 2013)	415
	Musaga	54	Increase	168	195
	Kanyosha	(No delivery service) (started in 2008)	Increase	176	477

2013), ventilators procured under the project have not been used at the health centers which do not provide emergent obstetric service, (2) tocomonitors have not been used at the hospitals as the hospitals judge the stress is too heavy to pregnant women because the tocomonitors connect various parts to pregnant women, (3) accessories have problems (at the point of contact) and therefore the equipment items have left unused (probe of ultrasound equipment, rubber seals of washing machines, anesthesia apparatuses, foot rest of delivery beds, sterilizers which cannot be energized, worn radio knives due to overuse and others), (4) use of digital weight scales for the newborn is suspended because they do not function when the buttery is low, (5) even though there is no problem, some items were not used because staff does not know how to use them (dry heat sterilizers and digital weight scales for the newborn). Regarding (1), in accordance with the recommendation made by the follow up study (April 2014), ventilators have been transferred through appropriate procedure to the target hospitals where the ventilators are more frequently used. As to (2), (3), and (5), renewal of equipment, procurement of parts and training will be carried out by May, 2015 under the framework of follow up cooperation.

[2] ODA databook, UNICEF documents

[3] Ngagara health centre did not provide delivery services because there was no space for delivery in 2011, and there is a private hospital by Methodist Church right next to the centre which provided free obstetric service (the scope of free service is not unclear). Ngagara health centre constructed a new building and has provided normal delivery service.

[4] Mutakura health center started its normal delivery service in 2012. Due to security issues, the center had not provided any delivery service before. However, JICA constructed a fence throughout a technical cooperation project, “The Project for Strengthening Capacities of Prince Regent Charles Hospital and Public Health Centers in Bujumbura City for Improvement of Mother and Child Health” which enabled the center to provide the service during day and night.

（Note）For prenatal checkup, refer to figure 1

Source：Basic Design, Interviews with the General Directorate of Resources Reference Information

The number of death of pregnant women and the newborn

		2009	2010	2011	2012	2013
CPLR	The number of death of the newborn	2	10	8	7	19
	The number of death of pregnant women	0	4	7	5	17
HPRC	The number of death of the newborn	68	83	125	65	106
	The number of death of pregnant women	19	4	7	2	2
CHUK	The number of death of the newborn	N/A	0	N/A	18	N/A
	The number of death of pregnant women	N/A	14	10	16	9

Source: Interviews with the Directorate of Public Health Information National System

3 Efficiency

Although the project cost was within the plan (ratio against the plan: 69％), the project period slightly exceeded the plan (ratio against the plan: 115%) because it took time to transport the equipment. Outputs were produced as plan. Therefore, efficiency of the project is fair.

4 Sustainability

The operation and maintenance of the equipment at the target hospitals is conducted by several maintenance staff members who carry out maintenance and inspection, diagnosis for failure and repair. At the health centers operation and maintenance is carried out mainly by the chiefs of the centers. This institutional structure sustains what it was considered desirable at the time of ex-ante evaluation

Technically, the hospitals perform maintenance by themselves as much as possible, and the hospitals and the health centers are able to contact manufactures (agent, technicians) constantly and receive advices on the basic troubles. However, some equipment items cannot be diagnosed with the skills of the technical staff at the hospitals and centers. Manuals are kept especially for the equipment items whose usage is complicating, however, the internal technical transfer has not been made after the technical staff who took part in the training for the equipment usage was relocated. In addition, although the initial training was carried out and manuals were distributed, some equipment items (dry heat sterilizer and digital weight scale for the newborn) are left unused because how to use those items were not instructed.

Financially, subsidies from the Ministry of Public Health and Fight against HIV/AIDS to the target 3 hospitals have increased every year as planned; however, there are some variations depending on the hospitals. No subsidies were provided to the health centers from the Ministry, and the budget was supported by the development partners. Although there are some differences in the amount of budget, most health centers secure necessary budget.

On the current status of operation and maintenance, some equipment items have problems: some have been deteriorated due to frequent use; some have not been functional because voltage is unstable and people do not understand the proper usage. At the target hospitals, maintenance staff carries out checkup every day and keeps record. Based on the request from various departments, maintenance staff carries out minor repairs such as replacement of parts. Local agents[5] of manufacturers set the free one-year guarantee period. After the period, some parts were not supplied as there were no stocks and therefore, parts of some equipment items were not replaced at the time of ex-post evaluation. Generally, local agents sign maintenance agreement with a system to supply spare parts for five years after delivery of materials. However, in the case of this project, the implementing agency and local agents were not aware of the system. The reasons considered for this unawareness are; that although five-year after-sales service was included in a contract between counterpart the Ministry of Public Health and Fight against HIV/AIDS and Japanese procurement agencies, the coverage of the contract was not well understood at a level of hospital and health center; and that after-sales service were supposed to be provided via local agents however; they did not recognize this service well either. Thus, as there are problems in technical and financial aspects as well as the current status of operation and maintenance, sustainability of the project effect is fair.

5 Summary of the Evaluation

The project has somewhat achieved its objective, “to improve maternal and child health service in Bujumbura, the capital, and the neighboring provinces”. The project responds to the demand of high birth rate and concentration of pregnant women to hospitals has been solved to some extent. Convenience has improved as people are able to receive maternal and child health service (delivery and prenatal checkup) at the health centers nearby. As for sustainability, problems are observed in the technical and financial aspects as well as the current status of operation and maintenance. For efficiency, project period slightly exceeded the plan.

In light of the above, although the problems are observed in efficiency and sustainability, as the relevance is high and effectiveness/impact is fair, the project is evaluated to be partially successful.

III. Recommendations & Lessons Learned

Recommendations to implementing agency:

After the ex-post evaluation until 2014, the agents, the Ministry of Public Health and Fight against HIV/AIDS the target hospitals and the target health centers should share the same understanding on after sales service and should use the service effectively. After 2015, they are recommended to consider signing an after-sales service agreement to receive the service. Training and dissemination of manuals are not sufficient and therefore, newly assigned staff needs to take part in training by

[5] One company serves as an agent for all equipment items except one item.

technical experts of manufactures.

Lessons learned for JICA:

1. In this project, equipment items which are essential to achieve the project objective and which are frequently used (delivery beds, radio knives, high-pressure steam sterilizers and other obstetric equipment) were broken, and JICA carried out an follow up study (in April, 2014). On the selection of equipment items at the time of ex-ante evaluation, JICA should scrutinize items whose frequency is high, and pay attention to the specification to incorporate durability and easiness of maintenance

2. A sterilizer supplied to Hospital Prince Regent Charles by a grant aid project in 1993 has been used until now with replacement of parts one time, as maintenance staff at the hospital took part in training in Japan and therefore is able to make failure diagnosis and repair. On the other hand, sterilizers procured under the project were broken soon after the supply. Although efforts for repair were made, they were unsuccessful and the sterilizers were left unused since then. In project planning, equipment should be selected by taking the environment of the equipment (frequency of usage, technical level of staff and others) into consideration. Besides an appropriate training plan (including contents, period and evaluation of the result) for staff in charge of the equipment should be made and surely implemented.

A waiting room for people waiting for prenatal checkup and neonatal checkup (Health Centre Kamenge)

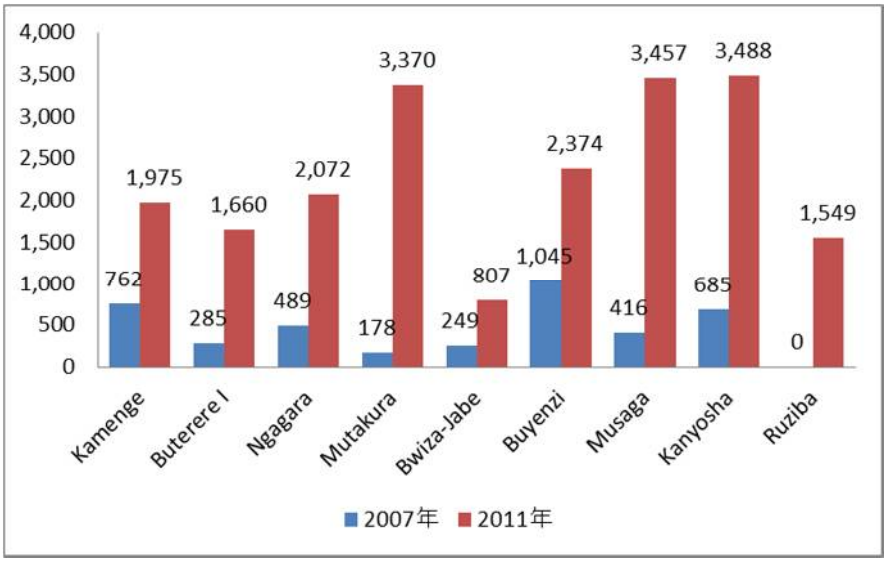


Figure 1: Changes in the numbers of prenatal checkup at the health centers before and after the project implementation

Note: (1) All figures increased from 2007 to 2011. (2) No information on the number of checkup at Ruziba before the project implementation.

Source: Basic Design Study, Interviews with theGeneral Directorate of Resouces

Internal Ex-Post Evaluation for Grant Aid Project

conducted by Paraguay Office: January 2015

Country Name	The Project of Development for Grand Water in Rural Areas
Republic of Paraguay	

I. Project Outline

Background	In Paraguay, there were about 5,000 villages with population of less than 10,000 where approximately 3.6 million people inhabited in 2007. Out of those small villages, about 2,000 villages had water supply facilities delivering water supply services to around 1.83 million people. However, the rest of 3,000 villages with 1.77 million inhabitants (49.2%) were not supplied safe water in 2007. Under those situations, the government of Paraguay prioritized improvement of water supply in rural areas and implemented water supply and sanitation projects with donors' supports. Although constructions of water supply facilities with deep wells as water source in around 1,200 villages were planned, the National Service of Environmental Sanitation (SENASA: Servicio Nacioncal de Saneamiento Ambiental), the implementing agency, was compelled to outsource well drilling with high cost to private operators since the drilling equipment owned by SENASA was malfunctioning due to aging and breakdown. On the other hand, reduction of construction cost for water supply facilities for the poor areas were a keen issue while the construction costs needed to be covered by subsidy from the government of Paraguay and the Water and Sanitation Committees (Juntas)' burden. Therefore, support for procurement of necessary equipment and materials for drilling of wells were requested by the government of Paraguay in order to implement development of water resources by SENASA for rural areas facing chronicle water shortage.				
Objectives of the Project	The project covers procurement of drilling equipment, construction materials for wells for the 25 prioritized villages and provision of technical supports, and the government of Paraguay implements construction of deep wells and water supply facilities[1] and covers the construction costs. By those inputs and activities, the Project aims at realization of safe and stable drinking water supply through procurement of drilling and hydrological survey equipment for SENASA and construction of water supply facilities by SENASA in 330 villages of the 12 eastern provinces in Paraguay in 7 years.				
Outputs of the Project	1. Project Site: 330 villages in the 12 eastern provinces including Concepción, San Pedro, Cordillera, Guairá, Caaguazú, Caazapá, Itapúa, Misiones, Paraguarí, Alto Paraná, Central Canindeyú 2. Japanese side Procurement of drilling equipment (track-based well drills, vehicle-based air compressors), drilling support equipment (vehicle-based wash/pumping test machines, vehicle-based repair workshop, long heavy load truck), hydrological and geological survey equipment (electrical exploration machines, well logging equipment and well camera), well construction materials (submersible motor pumps (220V/50Hz), submersible motor pumps (380V/50Hz), PVC casing for wells, PVC screen for wells) and technical supports (guiding operation and maintenance of equipment above) 3. Paraguayan side: Drilling of deep wells and construction of water supply facilities, origanizing Juntas in the target villages				
Ex-Ante Evaluation	2008	E/N Date	January 20, 2009	Completion Date	March 2, 2011
Project Cost	E/N Grant Limit: : 864 million yen, Contract Amount: 864 million yen				
Implementing Agency	SENASA (Servicio Nacional de Saneamiento Ambiental, Ministerio de Salud Pública y Bienestar Social)				
Contracted Agencies	Kyowa Engineering Consultants Co., Ltd., Sirius Corporation				

II. Result of the Evaluation

1 Relevance

This project has been highly consistent with Paraguay's development policy to reduce population without water supply under the policies such as "Poverty and Inequality Reduction Plan (2004)", "National Development Plan (2014-2018), and development needs to supply safe drinking water in rural areas at the time of both ex-ante and ex-post evaluation. It was also consistent with Japan's ODA policy prioritizing poverty reduction at the time of ex-ante evaluation. Therefore, relevance of this project is high.

2 Effectiveness/Impact

For "The number of deep well which SENASA can construct annually", which is the output indicator proposed at the time of Basic Design Study, was partially achieved by the project. The actual number for year 2011 (the target year) was 31 wells (41 wells including failed wells[2]) which accounted for about 60% of the target value (50 wells/year). The actual performance of SENASA in deep well development excluding failed wells were 54 wells in 2012, 46 wells in 2013 and 18 wells in 2014 (as of July).

[1] In general, rural water supply projects are composed of construction of wells for water source, elevated water tank for water supply to each household, water supply pipes and so on.

[2] As a result of drilling, a case with sufficient water volume is considered as "successful drilling", a case with setting casing for successful drilling is considered as "a successful well", and a case with failure is considered as "a failed well". A facility with submersible water pump which is utilized by the villagers for their water source is considered as "a water supply facility".

The achievement level of "construction of facilities to safely and stably supply drinking water in 330 villages in the 12 eastern provinces by water source development through drilling wells[3]", which was the project objective by 2018, was limited: 53 water supply facilities constructed as of Ex-Post Evaluation (July 2014). Since the project objectives was planned to be achieved during 7 years from 2011, 155 water supply facilities may need to be constructed by the time of ex-post evaluation after 3.5 years from 2011. Namely, the current achievement can be about 30% of the target value[4]. In addition, construction of water supply facility by the Paraguayan side using the construction materials provided by the project was completed in only one village out of the 25 prioritized villages in 2011. Even in July 2014, there were only 3 villages with the completed water supply facility. The fact indicates around 10% of achievement against the target value. In the rest of 22 villages, drilling of deep wells and setting of casing were implemented. However, the necessary funds to be covered by the villagers for construction of water supply facility were not ensured as planned. The drilled wells without setting submersible water pumps have not been utilized as water source due to the lack of fund for construction of water supply facilities. Since the procedures for the construction of water supply facilities[5] had not been taken as planned at the time of planning after the change of government, the well drillings had been implemented without explanation for villagers about users' payment for the construction cost. Most of the villages have been expecting supports from provinces, municipalities and SENASA.

In terms of improvement of technical skills of SENASA, it was confirmed that SENASA enabled deep well construction by themselves through improvement of skills and techniques for hydrological and geological surveys as well as well drillings which SENASA had outsourced such construction works before the project. As mentioned above, the actual number of deep wells constructed by SENASA mostly achieved the target value of 50 wells/year. In addition, the success rate (= the number of successful wells/the total number of drillings) has been improving year by year.

Furthermore, in the 3 villages where the constructions of water supply facilities using the materials procured by the project were completed, the operation hours of the water supply facilities have been 6-8 hours/day. The constructed water supply facilities contributed to reduction of load of water fetching at streams[6]. Also, the villagers of the 3 villages, who were interviewed by the field visits for the ex-post evaluation, did not mention incidence of water-borne diseases despite of no availability of statistical data on water quality and water-borne diseases.

Therefore, effectiveness/impact of this project is low.

Quantitative Effects

Indicator	Target Value (Target Year)	Data collected	Year 2007 (before the project) Actual value	Year 2011 (target year) Actual value	Year 2012 Actual value	Year 2013 Actual value	Year 2014 (Ex-post Evaluation) Actual value	Total Actual Value
Indicator 1: Number of deep wells which SENASA can construct	50 wells/year (2011)	Number of drillings (a)	1 drilling/year	41 drillings	69 drillings	55 drillings	19 drillings (60 drillings to be planned)	184 drillings
		Number of drillings with success out of (a) (b)	-	31 drillings	54 drillings	46 drillings	18 drillings	149 drillings
Supplemental indicator 1[7] : Number of water supply facilities constructed in the 12 target provinces	330 villages (2011-2018)	Number of water supply facilities constructed out of (b) (Note 1)	0	6	11	16	20	53
Supplemental indicator 2: Number of deep wells in the prioritized villages in the 1st year	25 villages (2011)	Number of water supply facilities constructed in the 25 prioritized villages (Note 2)	0	1	1	1	-	3

[3] The target number for construction of water supply facilities is 330 by the plan to construct one water supply facility in one village.

[4] Referring to BD p2-5, Table 2.2.1, the planned number of water facility for 3.5 year (from 1st to half of 4th year) is 155.

1st. year	2nd. year	3rd. year	4th. year	5th. year	6th. year	7th. year	Total
25	53	52	50	50	50	50	330

[5] The Basic Design Study Report mentioned selection criteria of villages, including electrification, consent for construction among the villagers, and so on.

[6] According to SENASA, the planned water supply volume of the constructed water supply facilities using the materials procured by the project was 2,000-30,000 litters/hour against the water consumption/household (5 family members)/day was 500 litters in average. The actual water supply volume at the time of ex-post evaluation was 5,000-7,000 litters.

[7] For this ex-post evaluation, as quantitative indicators, which verify the achievement status of effectiveness, supplemental indicators were added to the indicator 1, which was set at the Basic Design. The supplemental indicators were set to evaluate the level of achievement of the project objectives by 2018 and planned output in the 1st year, which were planned to be implemented by the Paraguay side. Considering these information, the evaluation judgment was made. The term of "Supplemental indicator" is used to supplement the indicator 1.

Source: SENASA
Note1: Data collected by the interviews with person in charge in SENASA.
Note 2: Data confirmed by the site visits for this ex-post evaluation.
Note 3: The success rate of deep well drillings were 75.6% in 2011 (31 out of 41), 78.2% in 2012 (54 out of 69), 83.6% in 2013 (46 out of 55) and 94.7% as of July 2014 (18 out of 19).

3 Efficiency

Since procurement of well drilling equipment, procurement of materials for construction of water supply facilities in the 25 prioritized villages and technical support were implemented as planned and the contract price was low, the project cost was considerably below the plan (ratio against the plan: 60%) and project period was also within the plan (ratio against the plan: 85%). Therefore, efficiency of this project is high.

4 Sustainability

The facilities and equipment procured by the project has been maintained by SENASA, the implementing agency. As for institutional aspect, there was no change in responsibility of SENASA to construct water supply facilities in rural areas and to maintain construction equipment including the ones procured by the project. The maintenance of the wells and water supply facilities in the rural areas have been implemented by Juntas established in each village under the technical and monitoring support of SENASA . 11 staff, including engineers and assistant/driver are deployed for the Drilling Unit of the Department of Water Resource, which is responsible for drilling of wells. The unit can set up 3 teams for construction of water supply facilities. 3 staff are deployed for the Hydrological and Geological Survey Unit. In addition, for the Department of General Sanitation responsible for activities of public awareness to organize Junta, 9 staff are deployed at the head office and a few staff each at 14 branch offices. Currently, the necessary number of staff has been deployed for maintenance of the equipment procured by the project. No information about future institutional arrangement is available since there is a move of merger of SENASA. This change of arrangement needs to be carefully monitored. However, layoff of staff is not planned at the time of ex-post evaluation. In the 3 villages where the water supply facilities constructed by using the materials procured by the project, Juntas have taken responsibility to maintain the facilities. In technical aspect, the engineers of the relevant units are very experienced and the engineers trained by the project have continuously worked for SENASA. Operation and maintenance manuals for the equipment procured by the project have been utilized. In addition, trainings on maintenance of drilling machines have been delivered; therefore, it is considered that necessary skill and knowledge are acquired by concerned staff members. As for financial aspect, t the change of government affected the budget of SENASA in 2012 &2013, continuous implementation of drilling wells, maintenance of equipment and ensured manpower indicated that the minimum of budget have been secured under the difficult situation and it is expected that the same size of budget will be sustained. On the other hand, although villagers as beneficiaries need to pay for a part of construction cost for water supply facility, difficulty to collect villagers' share induced delay of the construction and no water supply service started in 22 villages. Therefore, SENASA made efforts to mobilize public financial supports to cover the villagers' share, such as poverty reduction program by the government or donors' funds from 2013, and it would be mobilized in 2014. (It should be monitored whether those funds will be utilized.) For 3 villages, the necessary funds for operation and maintenance of the water supply facilities constructed by using the materials procured by the project have been ensured by Junta of the 3 villages. Also, those water supply facilities have been appropriately operated and supplying water to the villagers so far. Among the materials procured by the project, the submersible water pumps which are not set in the prioritized remaining villages have been stored in storage of SENASA. SENASA has been considering procurement of spare parts since some of the equipment necessary to change the parts. Most of the equipment have been adequately maintained and repaired and been usable. In the light above, it is need to carefully monitor future prospects of the institutional and financial aspects and there are slight concerns about status of the procured equipment.

Therefore, the sustainability of this project effect is fair

5 Summary of the Evaluation

The relevance and efficiency of the project are high and the sustainability of this project effect is fair. On the other hand, in terms of the effectiveness/impact of the project, the output indicator of 50 deep well construction per year was not achieved and the project objective by 2018 of the Paraguayan government to construct water supply facilities in 330 villages have been delayed. In particular, the constructions of water supply facilities were limited to 3 villages among the 25 prioritized villages. although some positive impacts, such as improvement of the success rate for well drilling by efficient implementation based on hydrological and geological information collected by the equipment procured by the project, reduction of burden for water fetching in villages by the construction of water supply facilities, are observed. In light of the above, since the low achievement of the target values show problems on project effects, this project is evaluated to be not satisfactory.

III. Recommendations & Lessons Learned

Recommendations to the Implementing Agency

The rural water supply projects through implementation of drilling wells by SENASA require beneficiaries to pay a part of construction cost for water supply facilities. However, at the ex-post evaluation, well drillings have been implemented in many villages without understandings and consents of the villagers for the beneficiaries' financial responsibilities. It may be one of the reasons to induce the considerable delays of constructions of water supply facilities. For implementation of the planned projects, sufficient discussions and consensus building under participation of villagers as beneficiaries are required. In addition, in the case that the beneficiaries have financial difficulties, it is important to make efforts to utilize other financial resources as currently doing. Also, efforts to urge concerned parties to change the system of beneficiaries' share for the construction cost for water supply facility can be worthy of consideration.

Lessons Learned for JICA

By this project, the expected project effects were constrained by the considerable delay of constructions of water supply

facilities since the villagers did not pay for the construction cost though deep well drillings by the implementing agency were implemented mostly as planned by effectively using the equipment procured by the project. At the time of the Basic Design Study, the users' charge system was recognized and the construction plan based on the system was considered and confirmed. However, the political factors constrained implementation of the construction as planned and caused the delays. The situation was occurred in the process of project implementation after the implementing agency procured the equipment and it was figured out by the continuous follow-ups by JICA. Therefore, it is essential for JICA to continuously request the implementing agency to realize the project effects by following up the implementation of the project after the procurement. This measure has been already taken by JICA but this ex-post evaluation reconfirm the importance of this measure be taken continuously.

Ñuahi Village, Achay Municipality, Paraguarí Province

(One of the 25 prioritized villages)

Completed deep well drilling and water supply facilities

Yvaroty, La Colmena Municipality, Paraguarí Province

(One of the 25 prioritized villages)

Construction of deep well: drilling of well and setting of casing

(not setting of submersible motor pump)

Internal Ex-Post Evaluation for Grant Aid Project

conducted by Mongolia Office: January 2015

Country Name	The Project for the Construction of Kharakhorum Museum
Mongolia	

I. Project Outline

Background	The remains of Kharakhorum, which used to be the capital of the Mongolian Empire, are located 350km southwest of Ulaanbaatar. Most of the ruins perished over time. On the remaining ruins buried underground, the Government of Mongolia conducted surveys such as those with Japan (using the UNESCO Japanese Funds-in-Trust) and Germany (UOB: University of Bonn), respectively. As the Orkhon Valley Cultural Landscape including the Kharakhorum ruins were registered as a UNESCO World Cultural Heritage site in 2004, establishment of a base for the protection, research, and exhibition of the ruins became an urgent task. However, there was no facility to preserve and store the relics from the ruins. Most of the relics were inevitably kept under very poor conditions, such as being kept in a garage of a nearby hotel under the management of UOB. It was anticipated that such conditions might lead the relics to further deteriorate and be damaged especially by the coldness of mid-winter.				
Objectives of the Project	To properly provide visitors with information on the Kharakhorum ruins and relics from the ruins and to promote proper management, restoration and storage of the relics by developing the facilities and equipment of the Kharakhorum Museum.				
Outputs of the Project	1. Project Site: Kharkhorin Town, Uvurkhangai Province 2. Japanese side: 1) Construction of a building and related facilities (exhibition rooms, a preservation and restoration room, storages, office rooms, a multipurpose hall, etc., with total floor area of 1,472.13m^2)(Planned floor area was 1,473m^2. Location of some facilities and design of the multipurpose hall were partly modified.) 2) Procurement of equipment for (i) exhibition and training (computers, projectors, etc.), (ii) training and preservation (restoration equipment) and (iii) environmental measurement (an illuminometer, hygrometers, etc.) 3. Mongolia side: Preparation of the land for construction of the planned facilities; securement of personnel and budget for operation of the museum; development of the software necessary for exhibition and securement and installation of exhibits; and extension of utilities such as power, water supply, sewerage and telephone lines up to the boundary of the project site. 4.				
Ex-Ante Evaluation	2005[1]	E/N Date	July 18, 2006 January 22, 2009	Completion Date	September 15, 2010
Project Cost	E/N Grant Limit: 297 million yen (Japanese Fiscal Year (JFY) 2006); 495 million yen (JFY2008) Actual Grant Amount: 521 million yen				
Implementing Agency	Bureau of Culture and Art under the Ministry of Education, Culture and Science				
Contracted Agencies	Yamashita Sekkei Inc.; Konoike Construction Co., Ltd.				

II. Result of the Evaluation

1 Relevance

This project has been highly consistent with Mongolia's development policy and development needs at the times of both ex-ante and ex-post evaluation. Regarding development policy, it has been consistent with (i) "conservation of the indigenous and unique culture and civilization" as set in the Mongolian Action Programme for the 21st Century (1999), a long-term development plan, (ii) "increasing investment in education and culture" as set in the Government Action Programme (2000-2015 and 2012-2016), and (iii) "active conservation of cultural heritage and integration of it to economic activities" as set in the Government Policy on Culture approved in the Parliament Order No.52 (May 22, 2012). As for development needs, it has been consistent with a need to disseminate knowledge on cultural heritage including the Kharakhorum ruins and conservation of it. Also, the project was consistent with the Country Assistance Program (2004), Japan's ODA policy at the time of ex-ante evaluation, in such ways that (i) it mentions in its basic policy the significance of protecting the natural environment and preserving traditional culture, and that (ii) one of its four priority areas "support for environmental protection" promotes assistance that would contribute to preservation of the traditional culture. Therefore, relevance of this project is high.

2 Effectiveness/Impact

This project mostly achieved its objectives, "to properly provide visitors with information on the Kharakhorum ruins and relics from the ruins and to promote proper management, restoration and storage of the relics". The facilities and equipment developed by the project have mostly been utilized[2]. The number of visitors to the museum has not reached the target but has

[1] This project was originally planned to be implemented in JFY2006, and ex-ante evaluation and signing of Exchange of Notes (E/N) were carried out accordingly. However, as the bidding was unsuccessful, only detailed design and bidding-related works were implemented (without construction and procurement) in JFY2006. In JFY2008, the project plan and cost estimates were reviewed through the implementation review study, and the E/N was signed again.

[2] At the time of site visit for this ex-post evaluation in July 2014, it was found that the sand blaster (equipment to remove mud, etc. from very

been increasing since the museum opened on June 4, 2011 (Indicator 1). With the support including the one from Japan Overseas Cooperation Volunteers (JOCVs), the exhibition methods as well as notation and contents of exhibit explanations have been improved compared to the time of opening of the museum, and visitors can obtain accurate information on the ruins. Visit to this museum is included in most of sightseeing tours in Kharkhorin, one of the biggest tourist destinations in Mongolia. At the time of field survey at the museum for this ex-post evaluation, it was observed that visitors were spending time to carefully look at each exhibit. Visitors' high satisfaction with the museum is seen in the visitors notebooks and their comments posted on the internet. The number of permanent exhibits is smaller than originally planned as the museum gives higher priority on accessibleness to every exhibit rather than merely increasing the quantity. However, the museum has made an effort to show visitors its collection more in ways such as special exhibition that is open to the public during certain time period. Also, the number of the stored items that are ready for display has achieved the target (Indicator 2). The stored condition of excavated articles was found to have significantly improved than before the project: they are systematically classified and properly stored at the storages with temperature and humidity control. While full-fledged restoration of the Kharakhorum ruins is supposed to be done at the Cultural Heritage Centre in Ulaanbaatar, the museum carries out restoration work necessary for it based on annual planning. There are also cases of joint restoration work with foreign research institutions. At the same time, research and training such as academic conferences and seminars on restoration and preservation of archaeological remains and related topics are conducted at the museum (the above-mentioned number of visitors, which is based on the number of those who paid the admission fee, does not include those who visited the museum for research and training purposes).

As for impact, the museum has raised awareness of Mongolia's traditional culture among local students through activities such as museum tours, art contests and opening of a special ger (in addition to the above-mentioned number of visitors, a cumulative total of 2,698 students of the three schools in Kharkhorin Town has observed the museum since 2011 up to the time of ex-post evaluation). Also, the museum has become a center of Mongolia-Japan friendship through joint research. In these ways, the impact that was expected in the planning stage has been realized. In addition, it was confirmed that the academic significance of the museum as an research institution is increasing: beyond preservation and exhibition of the remains excavated around Kharkhorin, the museum has come to be involved in restoration, preservation and exhibition of other archaeological remains such as the ancient tomb in Bulgan Province that was newly excavated and have more scarcity value. The design of the museum that can facilitate activities other than the exhibition rooms, e.g., the orientation hall, is useful for such research activities. It was further found that the museum has widely disseminated knowledge on the Kharakhorum ruins to non-visitors by means such as presentations of its research outputs in Japan or other places and provision of information both within and outside Mongolia thorough media[3]. Besides, there was no land acquisition and resettlement for this project, and the project had checked before the construction work that there had been no remains to be preserved in the construction site[4].

Therefore, effectiveness/impact of this project is high.

Quantitative Effects

Indicators	Year 2008 (before the project) Actual value	Year 2011 (after the project) Target value	Year 2011 (target year) Actual value	Year 2013 (ex-post evaluation year) Actual value
Indicator 1: Number of people who acquired accurate information on the Kharakhorum ruins (number of visitors to the Kharakhorum Museum) (Note 1)	0 person/year	20,000 persons/year (Note 2)	9,651 persons/year	13,070 persons/year
Indicator 2: Number of items that are stored and exhibited at the Kharakhorum Museum	0	Exhibited: 1,000 items	Stored: not known Of which, exhibited: not known	Stored: 1,501 items Of which, ready to exhibit: 1,166 items Actually exhibited: 652 items

Source: Kharakhorum Museum.

Note: The target number of visitors to the museum was set at 20,000 persons per year, which was the number of visitors to the Erdene Zuu Monastery (adjacent to the museum) in 2005, at the time of the basic design of this project. It was assumed that all of the visitors to the Monastery would visit the museum. The actual values in 2011 and 2013 were calculated based on the admission fee revenue to the museum and they did not reach the target. However, the real number of visitors could have been larger as government officers, researchers, under age or over 60 citizens who did not pay the admission fees (especially a number of invited researchers and local residents who visited the museum soon after its opening) were excluded from the count.

small parts of buried cultural properties by means of ultrasonic vibration; originally planned to be used outdoors) had never been used because it lacked a cover to prevent shedding of dust when used indoors. The cover had not been produced by that time despite a recommendation in the defect inspection study that it could be easily made by the museum staff themselves. By November 2014, the museum and researchers from Germany jointly made the cover, and the sand blaster became actually utilized.

[3] For example, the museum cooperated in production of TV programs such as the NHK World Heritage and NHK Special "Chingis Han wo Oe (*follow the track of Genghis Khan*)". It also cooperate with UOB/Institute for Archaeology in excavating the Erdene Zuu Monastery, and a the research outcomes have been put into a number of research papers. Also, the museum is engaged in joint research with many members of the Japanese Association for Mongolian Studies such as Otani University, Osaka International University, etc., and the research outputs are presented in publications such as the university journal. Furthermore, the museum plays a central role in the Japan-Mongolian Joint Expedition Project "BICHEES II", a research on remains and epigraph found around the Orkhon Valley.

[4] Source: pp.9, 13 and 14 of the implementation review study (2008).

3 Efficiency[5]

The project period significantly exceeded the plan due to the conduct of the implementation review study after the unsuccessful bidding (ratio against the plan: 250%). The project cost also significantly exceeded the plan due to price hike and other factors (ratio against the plan: 175%). It was confirmed that the outputs of the project were produced mostly as planned. Therefore, efficiency of this project is low.

4 Sustainability

The operation and maintenance (O&M) of the facilities and equipment developed by the project have been carried out by the Kharakhorum Museum under the supervision of the Bureau of Culture and Art under the Ministry of Education, Culture and Science, the implementing agency. The O&M structure has been fully established in accordance with the plan of ex-ante evaluation, and a larger number of staff than originally planned has been allocated. Also, there is cooperation with other institutions (such as the Cultural Heritage Centre) in restoration and exhibition of archaeological remains. In the technical aspect, thanks to supports such as the one from the JOCVs, the museum staffs have acquired a certain level of guiding skills and archaeological preservation and restoration skills as expected in the planning stage. The staffs are also encouraged to attend training and seminars for guides and restorers in the countries and overseas. As mentioned above, the staff will be required to deal with relics of higher academic value in the future: at the time of ex-post evaluation, they are gradually acquiring knowledge for it with advice from the JOCVs and through joint works with foreign researchers. In the financial aspect, the museum has income from stable allocation of national budget as well as an increasing amount of operational revenue (admission fee, etc.). The total expenditure is increasing, and a certain amount of maintenance budget for the facilities and equipment is expensed. As for the current status of O&M, while the facilities and equipment of the museum have mostly been managed well, some issues are observed such as insufficient control of air intake and exhaust in winter[6], partial inundation in heavy rainfall[7], and stains on part of the ceiling due to deterioration of rooftop water proofing blocks. Nevertheless, no influence of inundation on the exhibits and stored items has been observed.

In this way, no serious problems have been found in the structural, technical and financial aspects of the implementing agency as well as the O&M status, and the sustainability of effects of this project is high.

5 Summary of the Evaluation

The project objective was to properly provide visitors with information on the Kharakhorum ruins and relics from the ruins and promote proper management, restoration and storage of the relics at the Kharakhorum Museum. Although the counted number of visitors to the museum was smaller than expected, the number of stored items that are ready to exhibit reached the target, and the stored conditions of those items significantly improved. Also, the significance of the museum as an research institution is increasing as it is engaged in newly excavated articles. As for sustainability, there has been no problem observed in the structural and financial aspects as a sufficient organizational structure and stable income have been secured. In the technical aspect, the museum has come to be expected to restore relics of higher academic value than originally planned. Although the status of O&M has some issues related to intake and exhaust control and heavy rainfall, countermeasures have been planned, and these issues are minor in sustaining the originally-planned project effects. For efficiency, both the project period and project cost significantly exceeded the plan.

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

III. Recommendations & Lessons Learned

Recommendations to implementing agency:

For the museum:

(1) To respond to the remaining issues pointed out/recommended in the defect inspection (intake and exhaust control in particular) as soon as possible.

(2) To continue to be actively involved in joint research, etc. with research institutions in the country and overseas, and to prepare opportunities of capacity development for the staff (within next 2-3 years).

(3) To develop a long-term plan focused on further development of the museum. The operation of the museum has well reached the level that was expected in the planning stage. However, under the circumstances where important remains are being discovered one after another, the museum is increasingly expected to become a self-sustained research institution. It is therefore desirable that the museum put effort into development of staff with specialized knowledge in cooperation with the Ministry and related organizations (within next five years).

Lessons learned for JICA:

(1) While the Kharakhorum Museum was planned to be a museum only to exhibit the archaeological remains that are registered as a world heritage and have high cultural value, the importance of the museum has increased, beyond the original expectation, for both tourists and research institutions. Therefore, in such situation, it was effective that the museum was designed from the planning stage with space such as the orientation hall in prospect of long-term development and expansion.

(2) In operation of the museum after its opening, provision of human resources such as dispatched JOCVs (especially in charge

[5] The evaluation judgment on Efficiency is based on the following comparison:
Project period: comparison between the planned period of 20 months (mentioned in the basic design report) and the actual period of 50 months (from signing of JFY2006 E/N to project completion).
Project cost: comparison between the planned amount of 297 million yen (JFY2006 E/N grant limit) and the actual grant amount of 521 million yen.

[6] At midwinter, smoke exhaustion from the boiler chimney flows backward and causes a smell of coal in the building. The backflow is considered to be due to (i) non-functioning of the exhaust fans during power outage and (ii) underutilization of the ventilation system procured by this project. As the museum purchased a private electric generator in 2014, the exhaust fans are expected to work during power outage. Also, more utilization of the ventilation system could address the problem of smell in the future.

[7] The museum constructed a drain ditch to avoid inundation, but it was not enough in case of heavy rainfall. The museum have a plan to construct a more effective ditch (to be implemented in 2015).

of museum guide/curation)who can readily advice the museum staff on details of notation, tips of guiding, preservation techniques, etc. played an important role.

Main entrance to the exhibition hall

Exhibition

Internal Ex-Post Evaluation for Grant Aid Project

conducted by Ethiopia Office: January 2015

Country Name	The Project for the Improvement of the Equipment for Groundwater Development
Federal Democratic Republic of Ethiopia	

I. Project Outline

Background	In Ethiopia, the population with access to safe water was about 22% (by UNDP in 2004). The Government of Ethiopia aimed at achieving the water supply coverage 98% in rural area and 100% in urban area by 2012 (Universal Access Program in 2005). For achieving the goal, around 50,000 technical staffs to be engaged in water supply projects were needed besides construction costs. JICA had been supporting technical trainings at the Ethiopian Water Technology Center (EWTEC) through technical cooperation project, "The Ethiopian Water Technology Center Project (EWTEC Project)[1]". Further, it was necessary to replace the aged training equipment and facilities of EWTEC and Technical and Vocational Education and Training Colleges (TVETCs) in order to cope with new training needs.				
Objectives of the Project	To improve quality and quantity of practical technical trainings for groundwater development by installation of training equipment for practical training at EWTEC and TVETCs.				
Outputs of the Project	1. Project Site: EWTEC (Addis Ababa) and 9 TVETCs (Assela, Woliso, Bahir Dar, Kombolcha, Maychew, Awassa, Merka, Jijiga, and Asossa) 2. Japanese side Procurement of equipment of 99 items in total, including 300m excavator, service rig, high pressure compressor, electromagnetic explorers, crane truck, vehicles, etc. 3. Ethiopian side: Energy source, storage spaces for the procured equipment				
Ex-Ante Evaluation	2009	E/N Date	March 10, 2009	Completion Date	May 25, 2011
Project Cost	E/N Grant Limit: : 557 million yen, Actual Grant Amount: 417 million yen				
Implementing Agency	Ministry of Water, Irrigation and Energy (MOWIE) (before October 6, 2006, Ministry of Water Resources)				
Contracted Agencies	Kokusai Kogyo Co., Ltd., Kanto Bussan Co., Ltd (Lot 1), Sirius Corporation (Lot 2)				

II. Result of the Evaluation

1 Relevance

This project has been highly consistent with Ethiopia's development policy to increase water supply coverage in rural area under the programs such as "Water Sector Development Program (2002-2016)", "the Universal Access Program (2002 and 2011) and the One WASH National Program (2013), and development needs to train technical human resources to be engaged in groundwater development in order to improve access of rural population to safe water at the time of both ex-ante and ex-post evaluation. It was also consistent with Japan's ODA policy for supporting capacity building for development of underground water prioritized by the Country Assistance Plan (2008) at the time of ex-ante evaluation. Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project has partially achieved its objective, "of improving quality and quantity of technical trainings for groundwater development". In the target year of 2012, the number of trainees exceeded the target value at EWTEC and 9 TVETCs, respectively. As EWTEC has been transitioned to the Ethiopian Water Technology Institute (EWTI) since August 2013, the number of trainees received in Academic Year 2013 and 2014 was limited. This transition process severely hampered the training operations because of preparation works such as developing strategic plan, designing of training courses and materials and turnover of staffs. At the TVETCs, the number of trainees has been fluctuating because the number of training courses has been changed by each TVETC based on change of needs and strategy of Technical and Vocational Education and Training (TVET). Also, the absence of the qualified trainers constrained continuously delivering the various training courses at TVETC level. On the other hand, the proportion of practical trainings in the training curriculum at EWTEC and TVETCs considerably increased from 10-30% before the project to more than 60% after the project because of utilization of the equipment procured by the project. In terms of quality of trainings, the instructors of EWTEC and TVETCs, who were responding to survey of this ex-post evaluation, supposed that the practical trainings using the procured equipment significantly contributed to promote trainees' understandings what they theoretically learned in the classroom.

As for their impacts, 1,581 trainees successfully completed the training courses at EWTEC in total under the EWTEC project phase III[2] supported by JICA. 503 participants were instructors of TVETCs while 622 participants were officers from different

[1] On 6th August 2013 the official proclamation for the establishment of Ethiopian Water Technology Institute is declared by council of Ministers in Federal Negarit Gazette, with Regulation No. 293/2013. Hence, "EWTEC" refers to the training center before Aug 2013, EWTI refers to training center after Aug 2013. In this Ex-post Evaluation Report, the EWTEC project Phase III indicates the technical cooperation project "the Groundwater Development and Water Supply Training Project Phase III" (2009~2013). EWTEC was under MOWIE and EWTI is an autonomous intuition which directly receives budget from Ministry of Finance and Economic Development (MoFED).

[2] The Groundwater Development and Water Supply Training Project (Phase I-III) (TC, 1998-2003, 2005-2008, 2009-2013) had

level of water offices, including regional, zonal and woreda[3]. The trained instructors of TVETCs and the trained officers from the water offices improved their technical knowledge and practical skills. Some of the ex-trainees transferred technical skills and knowledge to their fellows and colleagues. There was no environmental negative impact observed.

In sum, as for project purpose, indicator 1 was achieved and 2 was partially achieved in the target year, while indicator 1 and 2 are achieved except indicator 1 for EWTEC at the time of ex-post evaluation. The number of trainees participating at the EWTEC declined in Academic Year 2013 and 2014 due to influence of EWTEC's transition as mentioned before, although Technical Cooperation Project was implemented .

Therefore, effectiveness/impact of this project is fair.

Quantitative Effects

Indicator		Year 2008 (before the project) Actual value	Year 2012 (target year) Target value	Academic Year* 2012 (Target Year) Actual value	Academic Year 2013 Actual value	Academic Year 2014 (Ex-post Evaluation)
Indicator 1: The number of trainees participating the training courses per year	EWTEC	300-500	300-500	325	114	88
	9 TVETCs	1,350	1,350	1,486	2,054	2,062
Indicator 2: Proportion of practical trainings in the training curriculum	EWTEC	10-30%	70%	66%	68%	70%
	9 TVETCs	10-30%	70%	60%	65%	70%

Source: Interviews conducted during Ex-post Evaluation Survey in July, August and September, 2014

*note1: Academic year starts in September and ends in following June. (Year 2012: Sep 2011 ~ Jun 2012, Year 2013: Sep 2012 ~ Jun 2013, and Year 2014: Sep 2013 ~ Jun 2014)

3 Efficiency

Although the project cost was within the plan (ratio against the plan: 74.9%), project period considerably exceeded the plan (ratio against the plan: 205%) because handover of the rig was delayed by trouble after the arrival of equipment. Therefore, efficiency of this project is fair.

4 Sustainability

As for the institutional aspect, EWETC was transferred to EWTI in 2013 according to approval of the Council of Ministers. As a result, EWTI became an independent autonomous public institute and has a responsibility to provide high quality trainings continuously. Thus, EWTI plans to increase staff size including academic and support staff from the current (2014), which is 64 total number of staff to 218 during July 2015 to June 2016. However, recruitment plan of adequate number of technical staff has not been realized at the time of ex-post evaluation. The mandate for overall management of the Water Departments in all 9 TVETCs has been transferred from the former MOWIE to TVET Agency/Commission at zonal and regional level since 2010. Then in 2012, most of TVETCs have been upgraded and fully accredited to Polytechnic Colleges.[4] The surveyed 9 TVETCs have 122 teachers but the available number of teachers in the Water Department at each TVETC varies due to the types and number of training courses at each TVETCs. Due to above mentioned management transfer, comparing to before the project, TVETCs accept less number of students[5] and turnover of teachers became higher. Besides, there is no independent O&M unit established at the TVETC, therefore teachers have to be responsible on O&M of procured equipment. From these, therefore, there are some concerns in the institutional aspect.

In the technical aspect, the course coordinators and instructors of EWTI have sufficient knowledge and skills to utilize most of the equipment installed by the project for the practical trainings. However, they have only limited knowledge about some of the equipment installed by the project, such as nozzle tester, diesel compression gauge set, and so on. For TVETCs, since many counterpart personnel have left after the project completion, knowledge transfer was not well achieved, therefore, course management ability in some courses is low. On the other side, most of the teachers of TVTECs have no problem to use the equipment installed by the project for the practical training though some newly assigned trainers have limited knowledge to use some equipment such as water quality tester to fully utilize for the practical trainings at 3 TVTECs. The manuals for maintenance of those equipment delivered by the project have been used except 1 TVETC.

As for financial aspect, the budget for EWTI from Ministry of Finance and Economic Development (MoFED) has been secured since it became an independent autonomous public institute. The annual budget of EWTI dramatically increased from 1.651 million Birr in the fiscal year of 2012/2013 (actual) to 15.0 million Birr in 2014/2015 (approved) to cover necessary O&M cost. On the other hand, most TVETCs do not have sufficient budget to cover cost for necessary operation and maintenance activities

been implemented.

[3] Administrative Division in Ethiopia: Region, Zone, Woreda and Kebele.

[4] All TVETCs used to provide training programs from level 1~3. However, most TVETCs shifted to a Polytechnic college which provides training program including level 4~5 focusing some selected courses based onthe Ethiopian Occupational Standard.

[5] There are 2 reasons; (1) before the mentioned management transfer, students in water department received incentives such as cash, but after the management transfer, students are required to shoulder a part of cost, while (2) although TVETCs expected to receive students from nearby woreda (the third-level administrative division in Ethiopia), in these nearby woredas, the vacant positions in the water offices got saturated with students.

in spite of significant increment in these years. Although most of TVETCs are capable to generate own revenue for better class management, the amount they can earn is not enough to finance necessary O&M.

The equipment procured by the project at EWTI have been functional and are ready for full utilization for the practical trainings except few equipment. For TVETCs, some of the equipment installed at TVETCs have not been properly utilized due to the lack of proper knowledge and skills of teachers and absence of specific need for the trainings using those equipment. In addition, in the case of critical breakdown, such as submersible pump and generator with a sign of problems, TVETCs need to request the Regional TVET Agencies to repair, but it takes time and is not delivered when needed. Moreover, TVETCs do not have any experience to procure spare parts except some consumables; therefore, it might be difficult for them to procure spare parts quickly. Consequently, it affects timing to conduct trainings.

Therefore, the sustainability of this project effect is fair

5 Summary of the Evaluation

The project has partially achieved its objectives to improve quality and quantity of the trainings for groundwater development at EWTI and TVEECs. In particular, the equipment installed by the Project largely improved quality of practical trainings. The improved practical trainings contributed to improvement of technical knowledge and skills of the trained officers from various water offices.

As for sustainability, institutional and financial capacity of EWTI has been enhanced due to the transition to the independent autonomous public institute. Though there are some problems observed in terms of current status of operation and maintenance, technical level of teachers and limited budget at TVTECs, each TVETC is making their level best to maintain equipment as much as possible.

In terms of efficiency, the project period considerably exceeded the plan.

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

III. Recommendations & Lessons Learned

Recommendations to implementing agency:

For TVETCs and Polytechnic Colleges

1. Provision of short-term on-demand trainings: the Ex-post evaluation study revealed that some teachers have limited skill and knowledge on how to utilize some equipment. In this respect, it is important to build technical capacity of teachers and enable them to properly utilize procured equipment for the practical trainings and transfer their knowledge and skill to their students. Hence, it is necessary for respective TVETCs to make necessary arrangement for their teachers to get short term trainings at EWTI. To this effect it is possible to get the following short-term trainings courses at EWTI (i) Electro Mechanical & Machinery Maintenance (EMMM) and (ii) Water supply Engineering. Moreover, as EWTI is identified as a "center of excellence" in capacity building in water sector. Each TVETCs can enquire EWTI to arrange on-demand trainings based on their particular area of training needs and capacity gaps.

2. Creating an internal revenue generation mechanism: Most visited TVETC mentioned that allocated budget is not sufficient enough to properly undertake necessary O&M measures. Hence, taking the lesson from Asella Polytechnic College it is advisable for TVETCs to engage in an internal revenue generation activities by utilizing existing capacity, without jeopardizing the business of the private sector i.e. SMEs, in order to resolve problems related to budgetary constraints. In this regards, major income generating efforts include a sales of educational materials and furniture from its production unit, COC (Competency assessment) fee, extension training program fee, Garage maintenance services, fees paid by the training participants, and from sales of other production activity in different department (wood work and metal works) should be referred.

For EWTI:

1. Capacity building for trainers: As EWTI is currently recruiting new instructors, those newly employed trainers do not have enough knowledge to make use of equipment for practical trainings. Therefore, technical handover and/or transfer from skilled trainers to unskilled ones are imperative in order to conduct practical training by fully utilizing the procured equipment. It is also advised that EWTI would incorporate such capacity building for trainers as part of strategic plan as well as annual plan with necessary budgetary allocation. Especially capacity building training for trainers in the following training areas should be considered in this regards;

- Technical training on Drilling Machinery Maintenance: application of measuring and maintenance equipment and tools (i.e. Diesel tacho tester, Nozzle tester, Diesel compression gauge set, Valve spring tool, Valve lifter & compressor, Valve lapper, etc) Electromechanical equipment installation and maintenance: application of electrical/ electronics trainer and measuring equipment (i.e. Experimental machine for DC motor & generator, for 3 phase induction motor and generator, for Synchronous motor & generator, low voltage switch gear experimenter, etc).

Lessons learned for JICA:

[Coordinated project implementation with technical cooperation project]

- Procurement of such diverse and different kinds of equipment to many vocational training institutions is very difficult to sustain its effectiveness. Geographical locations of TVETC and Polytechnic Colleges are so scattered around the country and integrated monitoring is not so easy. However, technical cooperation project that had close linkage with TVETC and Polytechnic Colleges helped effective implementation as well as contributed to realization of positive impact of the Project. Therefore in such a case, program approach, such as integrated implementation of both Grant Aid and Technical Cooperation should be taken into consideration when the project is formulated.

[Adaptation to local environment and capacity of colleges]

- Operational capacity of the colleges are different from place to place. Those which upgraded to Polytechnic Colleges have courses with higher level (such as level 4 and 5) and they are also capable of generating own revenue for better class management and equipment maintenance. However, comparatively small colleges, such as Lucy and Jijiga, are not so much capable of generating enough maintenance budgets for the all equipment and facility. Therefore, during the preparatory survey for the similar project in the future, specific needs of each college should be investigated more carefully in consideration of their respective capacity and training requirement; so that more suitable equipment be provided.

Pic 1 Practical Training at Bahir Dar Polytechnic Collage

Pic 2 Donated Bus at Assosa Collage

Pic 3 Arc welding machine at Bahir Dar Collage

Pic 3 Generator at Kombolcha

Internal Ex-Post Evaluation for Grant Aid Project

conducted by Marshall Office: March 2015

Country Name	The Project for Construction of Fish Market Center at Majuro Atoll
Republic of the Marshall Islands	

I. Project Outline

Background	In "National Strategic Development Plan: Vision 2018", the long-term national development plan, the first priority was to pave the way to economic self-reliance, and the development of fishery industry was a center of this plan since it is the sole potential sector for self-sustaining. The fishery development plan focused development of coastal fisheries; in particular, promotion of fisheries of outer islands. While Majuro, a capital of the country, has been a major destination of consumption, the marine products have been landed at the four major outer islands, Arno, Aur, Maloelap and Jaluit. However, only two aged boats owned by the Marshall Islands Marine Resource Authority (MIMRA) were available for transportation between the supply bases and the demand site. The aged boats limited their roles to transport marine products landed at the outer islands. In addition, the Outer Island Fish Market Center (OIFMC), which was located in the industrial area of Majuro, was not appropriate for marketing fresh fish due to a long way from residents' area, and the limited spaces and sales facilities. Therefore, installation of functional boats to transport marine products and development of fish market in Majuro was a key issue for the country.				
Objectives of the Project	To increase in the volume of fresh marine products landed at the outer islands to be supplied in Majuro Atoll by construction of fish market center, installation of fish collection boats and implementation of technical trainings of handling of fresh marine products in Majuro Atoll.				
Outputs of the Project	1. Project Site: Uliga, Majuro Atoll 2. Japanese side Construction of fish market: Total floor area of 406.0 m^2, including fish market building, ice making machine, ice storage, chilled storage, etc. and mooring facility Procurement of market equipment: Fish carrying boxes, carts, fish storage boxes, insulated containers, band saw, high pressure water washer, and fish collection boats (2 boats) Technical Assistance (Soft Components of Grant Aid): Support for improvement of quality control technique for fresh fish, improvement of landing and handling of fish, etc. 3. Marshall Islands' side: • Securement of construction site, incoming of electricity line and water pipe, implantation of shrubs in the construction site and coral in the construction waters, demolition of wastes, relocation of radio antennas, planting and installation of furniture.				
Ex-Ante Evaluation	2009	E/N Date	March 27, 2009	Completion Date	February 25, 2011
Project Cost	E/N Grant Limit: : 825 million yen, Actual Grant Amount: 769 million yen				
Implementing Agency	Marshall Islands Marine Resources Authority (MIMRA)				
Contracted Agencies	Fisheries Engineering Co., Ltd., Dai Nippon Construction,				

II. Result of the Evaluation

1 Relevance

This project has been highly consistent with Marshall Islands' development policy, such as provision of opportunities for earning cash for local fisher and fostering of the outer island fisheries specified under "National Strategic Development Plan: Vision 2018" and "National Fisheries Development Plan", and development needs for fresh fish in Majuro at the time of both ex-ante and ex-post evaluation. It was also consistent with Japan's ODA policy to Marshall Islands to support installation of infrastructure and equipment for improvement of marine products distribution included in one of the priority areas of "Industrial Development" at the time of ex-ante evaluation. Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project has limitedly achieved its objectives of "increasing in the volume of fresh marine products landed at the outer islands to be supplied in Majuro Atoll". The volume of fresh fish supplied to OIFMC from the outer islands, such as Aur, Arno, Maloelap and Jaluit in 2013 was 47.35 tons/year which was far below the target of 100 tons/year though increasing from 23 tons/year in 2007. The sales volume of fresh fish at OIFMC was 32,433kg/year in 2013 which was below not only the target of 96,922kg/year but also the actual value of 46,466kg/year in 2007. That has been because of incidence of fish's disease named Ciguatera, which is a foodborne disease by eating reef fish contaminated with toxins produced by planktons in tropical waters of Jaluit and Arno. Also, there have been difficulties for the boats to transport fish constantly and efficiently from the target islands to OIFMC due to the following issues; (i) broken refrigerators at the islands to preserve caught fish, (ii) broken communication devices at the islands to report catches of fish to OIFMC. Therefore, 117 times(Note1), which was the number of times collecting fresh fish by the installed boats in 2013, was unable to reach the target value 178 times(Note2).

On the other hand, the quality of fresh fish has improved by utilization of proper handling skills instructed by the soft component (technical support) of the project. The market facilities offered additional services to customers, such as filleting, descaling, grilling and gutting, and deboning.

As for the impacts, the annual sales revenue for the target outer islands considerably expanded from the annual average of

49.26 million USD for the period between 2005 and 2007 to 323.5 million USD in 2013. The reasons for increase of the annual sales revenue could include (Note3); (i) increase in the cost price of certain fish, (ii) increase in the selling price of fish, and (iii) increase in the number of customers at OIFMC. The project can be considered to contribute to the increase of selling price as quality of products has improved through improvement of the fish freshness and values added by the implementation of the soft component. Similarly, the increase in the number of customers is also attributed by the project, since the project relocated OIFMC to the location which is more convenient and accessible to customers in comparison with the original location before the project. However, these could be also brought about by the other technical support by JICA Senior volunteer (2012-2014) and experts of Overseas Fisheries Cooperation Foundation of Japan (OFCF), who developed and introduced the marketing promotion plan, value added processing methods and clean operation of sales facilities and service to customer's request. Without the detail data concerning the price of fresh fish and the trend of number of OIFMC's customers, it is difficult clarify to what extent this expansion of sales revenue was brought about solely by the project, while it is also difficult to deny some contributions of the project. No land acquisition, resettlement and negative impacts were observed at the time of ex-post evaluation.

Therefore, considered a comparison between the actual value at the time ex-post evaluation and the target value which was set at the planning stage by the agreement between the implementing agency and JICA, effectiveness/impact of this project is low.

Note 1: This actual value includes 25 times which was the number of times collecting fresh fish from the islands unexpected at the time of Basic Design.
Note 2: According to the MIMRA, a rise in the fuel price is considered as one of factors, which affected few number of times collecting fresh fish from the installed boats.
Note 3: OIFMC sells only fresh fish supplied from the outer islands, but not other products.

Quantitative Effects

Indicators	(Before the project) 2007 Actual	(After the project) 2014 Planned	2013 Actual	(Ex-post Evaluation) 2014 Actual (January to April)
Indicator 1: The annual total volume of fresh fish supplied to OIFMC from the outer islands	23 tons/year	Approximately 100 tons/year	47.35 tons/year	21.08 tons/year
(Supplemental Information) Annual sales volume of fresh fish at OIFMC	46,466kg/year*	96,922 kg/year* (114kg/day)	32,433.06 kg/year	18,065.35kg/year

Source : Basic Design Report (2009), OIFMC Market Data 2014
Note: *The sales volume is estimated by the expected sales loss of 5% due to the improvement of handling efficiency and quality control.

o3 Efficiency

The both of project cost and project period were below the plan (ratio against the plan: 93% and 96%). Therefore, efficiency of this project is high.

4 Sustainability

OIFMC, under the Coastal Communities Service Department of MIMRA is responsible for Operation and Maintenance (O&M) of the fish market center and the fish collection boats installed by the project.

The implementation structure is sustained to provide a transport between outer islands and Majuro and supply fresh fish landed at the outer islands. The sufficient number of staff has been deployed for O&M of the market center as well as fish collection boats: 11 staff, including the manager, for the market center and 6 staff for the two boats. In addition, the JICA senior volunteer in the fishery development area (October, 2012 to September 2014) contributed to improvement of management and maintenance of the market facilities such as introduction of personnel management using timecard, improved cleanup of the facilities, and so on.

In technically, the technical staffs of the Workshop Section of the Coastal Communities Service Department have adequate level of skills. Also, the staff of the market center and the crew of the boats have adequate skills and knowledge to handle the market facilities and the boats. The manuals for landing and handling of fresh fish developed by the project have been utilized. The MIMRA mechanics are on-hand to assist boat crews in troubleshooting and addressing major repairs. Training for the mechanics is annually conducted in-house with assistance from the OFCF. The MIMRA mechanics also do regular checks on the facility to ensure that operations run smoothly.

As for financial aspect, the revenue of OIFMC including the own revenue and the budget from MIMRA, has sufficiently covered the necessary expenditure, including O&M cost of the facilities and the boats installed by the project which amounted 6,440 USD in 2013. For the same year, the own revenue of OIFMC was 323,545 USD and the budget from MIMRA was 355,857 USD. The cost driver for OIFMC was the electricity cost which has been covered by MIMRA. Although the solar power system installed by the project had not been functioning for 14 months until February 2014 since the inverter was installed in unsuitable place, it is expected that it can contribute to reduction of electricity cost as it has been fixed. For the required periodical maintenance of the boats, OIFMC allocated the necessary amount of budget in 2014.

In terms of the current status of O&M of the market facilities and the boats, the Workshop Section of MIMRA conducts regular inspection once a week and carry out trouble shooting on demand. Also the Workshop Section has an inventory database of all the spare parts, materials and equipment. Although the ice making machine and the solar power system had been

malfunctioning and not fixed, they were fixed.
Therefore, the sustainability of this project effect is high.

5 Summary of the Evaluation

The project has limitedly achieved its objectives, “to increase in the volume of fresh marine products landed at the outer islands to be supplied in Majuro Atoll” since the actual volume of fresh fish supplied to OIFMC from the outer islands were less than the target volume which was set at the planning stage. On the other hand, the project contributed to improvement of handling fresh fish, better services of the market center to the customers, and the revenues of the outer islands through supply of fresh fish to OIFMC.

As sustainability, the sustainability of the project effects has been ensured by the adequate management structure for O&M of the market center and the boats, the sufficient skills and knowledge of the staff and the sufficient financial source of OIFMC.

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

III. Recommendations & Lessons Learned

Recommendations to implementing agency:

- It is recommended for MIMRA to repair and improvement of communication system between the OIFMC and fishing bases in outer islands for the implementation of more efficient collection of fish.

Lessons learned for JICA:

- Although it is difficult to clarify which factors mainly affected the expansion of sales revenue of OIFMC, it is observed at the time of ex-post evaluation that trainings provided under the soft component and technical support by JICA Senior volunteer were somehow contributing to improvement of the sales revenue of OIFMC. These activities seem to be appropriate to meet the demand and tendency of Fish Market Center’s customers. When designing the project including the development of marketing fresh fish as one of project purpose, JICA should cautiously consider the project design and components to be included from perspectives of the demand and preferences of customers as well as perspectives of improving the supply of fresh fish.

(Handling of fish improved by the project,)

(OIFMC and 2 fish collection boats)

Internal Ex-Post Evaluation for Grant Aid Project

conducted by Djibouti Office: Dec 2014

Country Name	Project for Rehabilitation of Program Production Equipment for RTD
Republic of Djibouti	

I. Project Outline

Background	Djibouti had implemented a national development plan in accordance with principles of the Poverty Reduction Strategy (PRSP, 2004), which prioritized poverty reduction and raising of awareness on education and health including improvement of literacy rate. In Djibouti, while written medium such as newspapers and magazines as well as electric medium such as internet did not spread to the public, television sets spread extensively with roughly 80% coverage of approximately 820,000 population of Djibouti (estimated by the Djibouti government, 2009). Thus, radio and television played a major role of information dissemination/awareness raising. Radiodiffusion Télévision de Djibouti（RTD）which was established in 1977 was the only public broadcasting institution in Djibouti. RTD was required to broadcast awareness programs under the law and therefore produced a variety of awareness raising programs with the request of the Ministry of Education, Ministry of Health, and others. The equipment procured under a grant aid project supported by Japan in 1991 deteriorated and RTD faced difficulties in procuring spare parts as the analogue equipment items were becoming old models and thereby RTD was on the risk of suspension of broadcasting. As the severe financial conditions of the Government of Djibouti did not allow RTD to renew the equipment, the Government requested the Government of Japan for providing grant aid for renewing equipment for production studios, a master control room and others.				
Objectives of the Project	To enable RTD to continue broadcasting and to produce more awareness raising programs by renewing the existing equipment and by efficient TV production through digitization.				
Outputs of the Project	1. Project Site: RTD (Djibouti City) 2. Japanese side: Procurement and installation of the following broadcasting equipment: (1) Production studio system, (2) News studio system, (3) Master control system, (4) Format conversion system, (5) Filed recording (ENG) system, (6) Portable light set for ENG, (7) Wireless microphone for ENG, (8) Video non-linear editing system, (9) Announce booth equipment for non-linear editing system, (10) 1:1 editing system, (11) Maintenance equipment and tools, and (12) Consumable parts. 3. Djibouti Side: Allocation of budget and personnel for operation and maintenance (O&M)				
Ex-Ante Evaluation	2008	E/N Date	April 3, 2009	Completion Date	December 2, 2010
Project Cost	E/N Grant Limit:925 million yen			Actual Grant Amount: 919 million yen	
Implementing Agency	Radiodiffusion Télévision de Djibouti（RTD）				
Contracted Agencies	Yachiyo Engineering Co., Ltd. and Mitsubishi Corporation				

II. Result of the Evaluation

1 Relevance

This project has been highly relevant with Djibouti's development policies and development needs at the time of both ex-ante and ex-post evaluation. Development policies such as PRSP (2004 and 2011-2015) prioritize the raising of awareness on education and health and the role of media on those awareness raising is set in INDS[1]. There have been development needs for renewing equipment for program production and broadcasting as RTD needs to continue public broadcasting as the only broadcasting institution which can produce and edit television programs and is required by law to broadcast programs for awareness raising. The project was also consistent with Japan's ODA policy at the time of ex-ante evaluation as the priority fields of Japanese ODA for Djibouti include basic human needs (health, education and others) and public works. Therefore, relevance of this project is high.

2 Effectiveness/Impact

This project has somewhat achieved its objectives "to enable RTD to continue broadcasting and to produce more awareness raising programs by renewing the existing equipment and by efficient TV production through digitization"

The number of produced/broadcasted awareness raising programs increased from 40 programs/year before the project implementation to 314 programs/year after the project completion (in 2013). The programs include health, education (primary, lower secondary and higher secondary), and social and culture related programs[2]. The equipment procured under the project are mostly utilized and has contributed to the increase in the number of program production, implementation of the live broadcasting and improvement in editing techniques. In the meantime, some of the digital recorders[3] (a part of Production

[1] "National Initiative for Social Development" [Initiative Nationale pour le Développement Social]

[2] RTD produces 26 health programs in Somali and Afar respectively and broadcasts them every Monday evening. As to education related programs, 120 programs for primary education and lower secondary education are produced (60 each), and two programs are broadcasted every day. As for higher secondary education, 120 programs for baccalaureat (eligibility for admission to an university examination) are produced and broadcasted one hour a day during four months before the examination. RTD also produces 48 social and culture related programs and broadcasts two programs a week in Afar and Somali.

[3] Nine recorders were observed to be malfunctioned at the time of ex-post evaluation. RTD alternatively uses a DVCPRO-SD recorder (DVCPRO is a standard for digital videos for broadcasting) which RTD have owned.

studio system, News studio system, Master control system, Format conversion system, 1:1 editing system) and filed recording cameras[4] were broken down in 2012 and were not utilized at the time of ex-post evaluation study. However, alternative equipment items have been used and therefore the entire system have been in continuously in use.

Interviews with RTD reveals that, after the project completion, RTD has procured and exchanged spare parts and therefore the broadcasting has continued without any interruption[5]. Digitalization of broadcast system has enabled RTD to upload news to the official RTD web site where the viewers can read the news of the past one week. Also, RTD has digitalized past recorded videos by using the procured equipment under the project.

As to impacts, digitalization of broadcasting equipment under the project has contributed to the improvement of quality and quantity of broadcasting, such as the extension of broadcasting hours, broadcast of news programs and awareness raising programs in multiple languages, diversifications of such programs, enhancement of image quality and others. However, there is no data on the audience share on such programs and it is difficult to judge whether impacts such as increase/decrease in number of audience and the degree of awareness enhancement of the public by RTD programs have been produced or not .

Thus, although the project achieved objectives, some of the equipment items have been malfunctioned and the use of them needs to be improved. Therefore, effectiveness/impact of this project is fair.

Quantitative effects

Indicator	2009 (Before the project) Actual	2013 (Target year) Target	2013 (Target year) Actual	2014 (Ex-post evaluation year
Indicator 1 Number of produced and broadcasted awareness raising programs	40 programs	50 programs	314 programs	350 programs (Plan)

Source : RTD

3 Efficiency

The outputs of the project were completed as planned and both the project cost and the project period were within the plan (ratio against the plan: 99%, 95%). Therefore, efficiency of this project is high.

4 Sustainability

The operation and maintenance (O&M) of the equipment procured under the project has been carried out by the implementing agency: RTD. The institutional structure has been sustained what it was considered desirable at the time of ex-ante evaluation, and while it is not sufficient, the number of staff has been increasing.

As to technical aspect, there is no regular training in RTD nor systematic training for new employees. However, the new employees are trained through on the job training. RTD said that there is no technical problem on the operation of the equipment as the staff members to whom the operation techniques were transferred at the time of equipment delivery have continuously worked for RTD and have transferred techniques to mid-level and younger staff members. Although regular check-ups have been carried out by the several experienced employees, as they are retiring, successors need to be nurtured. In the meantime, technical staff of RTD does not have capacity to repair the malfunctioned equipment and therefore, broken equipment items have been unrepaired.

Financially, although revenue of RTD has increased every year, RTD has continuously incurs loss which hampered salary delivery on time. RTD makes effort for obtaining further allocation from national budget, earning more revenue, and cutting costs, however, the prospect for the future is not clear at the time of ex-post evaluation.

As for the current status of O&M, RTD carries out pre-operation checkup (one hour before the start of the operation) and periodic checkup and exchanges spare parts. However, some equipment items have deteriorated because of high temperature, dust, humidity, shock made by the bad road condition when the equipment is used outside and overuse. As a result, nine digital recorders and four field recording cameras for news production was malfunctioned at the time ex-post evaluation.

Thus, as there are problems in institutional, technical, financial aspects as well as the current status of O&M, sustainability of the project effect is low.

5 Summary of the Evaluation

This project has somewhat achieved its objectives “to enable RTD to continue broadcasting and to produce more awareness raising programs by renewing the existing equipment and by efficient TV production through digitization” as the number of produced/broadcasted awareness raising programs has increased and there is no interruption on broadcasting. As for impacts, extension of broadcasting hours, news broadcasting in multi languages, diversification of programs and enhancement of image quality have been observed. In the meantime, there are problems on the use of some equipment items. As for sustainability, problems are found on the number of staff, capacity for repair, financial conditions of RTD and the current status of O&M.

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

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[4] Four cameras were observed to be malfunctioned at the time of ex-post evaluation. RTD bought small cameras to use them as alternative field cameras.

[5] There was an interruption due to a problem in the system server of the news studio, however, the system was restored promptly.

III. Recommendations & Lessons Learned

Recommendations to implementing agency:
Malfunctioned equipment items are within the expected lifetime at the time of ex-post evaluation and therefore, it is anticipated that they can be repaired and used again. The implementing agency is recommended to request manufactures to send technical experts to repair the malfunctioned items. At the same time, the implementing agency is also recommended to strengthen the O&M institutional structure to enable RTD to use equipment for the long time. In order to do so, the implementing agency needs to take necessary measure so that their technical staff to be trained on the repair techniques.

Lessons learned for JICA:
Some digital recorders and field recording cameras procured under the project have been malfunctioned. While RTD, the implementing agency, is basically responsible for the repair and its cost, the required repair techniques and cost exceed the levels anticipated at the time of ex-ante evaluation, and therefore the malfunctioned equipment items have been unrepaired. When JICA implements a similar project in the future, situations such as severe damages which cannot be repaired by the anticipated technical level or contract out cannot be possible due to sever financial conditions should be taken into a consideration. In that case, in order to secure sustainability, an operation plan which includes technical transfer of repair skills to an implementing agency in addition to the initial operation guidance when equipments are installed should be considered. For instance, conclusion of agreement on regular maintenance services with the manufacturer and incorporate daily maintenance activity into the project plan so that the implementing agency would not fail to conduct daily maintenance.

A camera used at a production studio

An editing work which uses the procured equipment items

Internal Ex-Post Evaluation for Grant Aid Project

conducted by Philippine Office: August 2014

Country Name	The Project for the Bridge Construction for Expanded Agrarian Reform Communities Development
Republic of the Philippines	

I. Project Outline

Background	The Philippine government set forth the Comprehensive Agrarian Reform Program (CARP) in 1987 as an effective measure to achieve rural development. Recognizing that the land distribution target had been substantially attained in 2003, the Department of Agrarian Reform (DAR), the lead agency for agrarian reform, shifted its priority to support Agrarian Reform Beneficiaries (ARBs) in the distributed land by providing services including agricultural support, potable water, infrastructure, and agricultural credit assistance. The Agrarian Reform Infrastructure Support Project (ARISP), with financial assistance from Japan's ODA loan, had been implemented for some 220 Agrarian Reform Communities (ARC) nationwide. On the other hand, DAR identified 34 bridges nationwide necessary to be constructed in order to improve access and connectivity of ARCs to improve their living and marketing conditions. The support for the outside areas of ARCs, however, was out of the coverage of ARISP. In this context, a grant aid project was requested to construct two bridges[1] in Barangay Bazal and Barangay Umiray to improve poor access condition, which was a main hindering factor for rural development.				
Objectives of the Project	To ensure year-round traffic in the Bazal bridge area and to improve access in expanded ARCs by constructing Bazal Bridge				
Outputs of the Project	1. Project Site: Barangay Bazal and Barangay Malasin, Maria Aurora Municipality, Aurora Province 2. Japanese side: Construction of Bazal Bridge (110 meters) and approach road (393.5m, Plan was 424m) 3. Philippine Side: (1) social preparation and community consultations, (2) acquisition of land for construction, (3) securing of land required for the construction works (Site office, stock-piling yard, working yard), (4) developing an access road necessary for construction, (5) relocation of utility poles and pipes, and others				
Ex-Ante Evaluation	2008	E/N Date	20 May 2009	Completion Date	15 November 2010
Project Cost	E/N Grant Limit: 610 million yen, Actual Grant Amount: 530 million yen				
Implementing Agency	Department of Agrarian Reform (DAR)				
Contracted Agencies	CTI Engineering International Co., Ltd. and Toyo Construction Co., Ltd.				

II. Result of the Evaluation

1 Relevance

This project has been highly relevant with the Philippines' development policies at both ex-ante and ex-post evaluations: priority has been given to rural development and sustainable agricultural development under the Medium-term National Development Plan (2004-2010), and even up to present as set forth in the Philippine Development Plan (2011-2016). Support for ARBs in terms of land productivity improvement and enhancement of access to market through establishment of physical infrastructure have been regarded as key strategies to rural development under the above mentioned policies. The project has also been highly consistent with development needs of constructing bridges in rural areas outside of ARCs where the lack of access to markets and basic services is a problem at both ex-ante and ex-post evaluations. It was also consistent with Japan's ODA policy to reduce disparity under the Country Assistance Program to the Philippines (2000) at ex-ante evaluation. Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project has largely achieved its objective of. "ensuring year-round traffic in the Bazal Bridge area and to improve access in expanded ARCs." Indicators of quantitative effects, such as the annual number of days of access disruption and average time to cross the river have shown great improvement at both target year and at the time of ex-post evaluation in comparison with the time before the project. Bazal River has become passable all year round without disruption, and traffic time between Barangay Bazal and Maria Aurora town proper has been reduced after the construction of the bridge in 2011. In addition, results of the actual traffic count conducted by the ex-post evaluation survey team during peak hours and interviews with barangay residents indicated that the Bazal Bridge is being well used by motorists particularly those who operate or own motorcycles and tricycles[2].

[1] The Bazal Bridge was constructed by this project and the Umiray Bridge was constructed by the second phase of the project.

[2] Traffic volume at peak hour (16:30-17:30) increased from 90 vehicles in 2005 to 108 vehicles in 2014. According to barangay residents, the rise is due to the increase in ownership of vehicles (motorcycles and tricycles) within the Barangay Bazal after the bridge was constructed. The number of tricycles owned by barangay residents increased from 7 units in 2010 to 30 units at the time of site visit in 2014 and the number of motorcycles sharply increased during the same period.

As for impact, the construction of the bridge significantly contributed to the improvement of access to basic services for residents in Barangay Bazal and Barangay Malasin. According to school officials and barangay officials, after the bridge was constructed, students can attend schools and patients can be brought to health facilities even when Bazal River is swollen due to heavy rains. In addition, interviews with barangay officials and farmers indicated that after the bridge was constructed, transport of agricultural products from Barangay Bazal to the market centers in Aurora Province has greatly improved as more traders can easily visit Barangay Bazal to buy and haul farmers' products using four-wheeled vehicles. Improved access of traders to Barangay Bazal was also partly due to the concreting of provincial road from the national highway up to the barangay center through the efforts of the Local Government Unit (LGU). Access to microfinance also has increased as the improved access enable agents/personnel of microfinance institutions to visit Barangay Bazal more often. Data showed that the agricultural production in Barangay Bazal has also increased from 2010 to 2013 (See chart 1 below). On the other hand, no income data was available at the time of site survey but farmers interviewed informed that their incomes have improved because of increase in yield and better prices for their produce attained by the improvement of accessibility to the market.

Land acquisition was completed in accordance with domestic law and with full consent of the landowner and there was no resettlement as the site was uninhabited. No dispute has happened before, during and after land acquisition. No negative impacts on natural environment were observed. According to DAR, unexpected positive impacts observed include: 1) increase in eco-tourism activities; 2) acceleration of the concreting of the provincial road between national highway and Barangay Bazal; 3) enhancement of DAR's capability in managing bridge construction projects; and 4) strengthening of partnerships among local governments in O&M of rural infrastructure.

Therefore, effectiveness/impact of this project is high.

Quantitative Effects

Indicators	Year 2008 (before the project) Actual value (Note1)	Year 2011 (target year) Target value	Year 2011 (target year) Actual value	Year 2014 (ex-post evaluation year) Actual value
Indicator 1: Annual number of days of access disruption	36 days/year(Note 2)	0 days/year	0	0
Indicator 2 Average time to cross the river	6.1 minutes (Note 3)	Approximately 16 seconds (Average speed: 25km/hour)	n.a.	16 seconds at an average speed of 25km/hour

Source: For 2008:Basic Design Report (BD report), For 2014: measured during project site visit on 23 and 24 April 2014 and interviews with tricycle operators and barangay residents.

(Note1) People and vehicles crossed the riverbed where the depth of the water is relatively shallow (BD Report P 1-5).

(Note 2) No of days, which people/vehicles could not cross a river due to flooding (BD Report P 3-2),

(Note 3) Average time to cross the river on foot and by tricycles (BD Report P 3-2),

3 Efficiency

The outputs of the project were completed as planned and both the project cost and the project period were within the plan (ratio against the plan: 87%, 63%). Therefore, efficiency of this project is high.

4 Sustainability

The operation and maintenance (O&M) of the bridge has been carried out jointly by Aurora Province, Maria Aurora Municipality, and Barangay Bazal and Barangay Malasin. The institutional set-up for O&M of Bazal Bridge was clearly established and the roles of the provincial, municipal and barangay governments in O&M of bridges along provincial roads are clearly defined under the Local Government Code of 1991, and appropriate number of staff is allocated. Further, a Memorandum of Agreement (MOA) between DAR and LGU was executed in 2009 to signify commitment of the LGU as a co-implementing body for this project. The MOA also included specific roles for both parties during the course of project and O&M roles after the project. The Municipal Engineering Office (MEO) has a total of 13 personnel with 3 staff members directly in-charge of O&M of Bazal Bridge while the barangay governments mobilize 20 volunteers for monthly cleaning which is common practice in barangays.

Technical level of the personnel at the Provincial and Municipal Engineering Office is deemed appropriate to the O&M requirements of Bazal Bridge. No technical difficulties have been encountered, according to the municipal and barangay officials. 3 Civil engineers of MEO are able to update their skills through participation in conferences where new developments in the field of civil engineering are being shared. On the job mentoring or coaching is also being practiced within the MEO.

As for the financial aspect, there is an increasing trend in the O&M budget for provincial roads and bridges at provincial and municipal governments. In addition, a sustainability plan prepared by DAR and LGU (provincial, municipal, and barangay levels) in February 2014 indicated sharing of financial responsibility among the province, municipality and barangays for the implementation of required O&M activities of the bridge from 2014 to 2016.

In general, the bridge was observed to be in good condition and required O&M activities are regularly carried out by the municipal government of Aurora and the barangay governments of Bazal and Malasin. In addition, as mentioned above, the sustainability plan, which includes the riverbank protection, slope protection, painting of bridge railings and wingwalls, maintenance of bridge/traffic signs, tree planting in the watershed and riverbanks and regular bridge inspection was developed. However, long-term mitigation measures are needed to minimize problems such as siltation of riverbed, inundation of riverbank and meandering of river channel, that had already existed even before the construction of the bridge. For these points, construction of riverbed protection and dredging of riverbed are included in sustainability plan but a concrete implementation

plan was not provided at the time of ex-post evaluation.
Thus, as institutional, technical and financial sustainability of this project effect have been secured, and there is no problem of current status of O&M, the sustainability of this project effect is high.

5 Summary of the Evaluation

The project has largely achieved its objective of" ensuring year-round traffic in the Bazal Bridge area and to improve access in expanded ARCs", as the Bazal River has become passable all year round without disruption and smooth traffic has become possible after the construction of the Bazal Bridge. Positive impacts were also identified such as improved access to the markets and basic services. Therefore, effectiveness/impact of this project is high.
As for sustainability, no problem has been observed in the institutional, technical and financial aspects as well as current status of operation and maintenance
In light of the above, this project is evaluated to be highly satisfactory.

III. Recommendations & Lessons Learned

Recommendations to implementing agency:
1. The local governments of Maria Aurora Municipality and Barangay Bazal and Barangay Malasin are recommended to 1) allocate funds to implement the activities identified under the sustainability plan of Bazal Bridge, and 2) continue the regular O&M activities such as periodic bridge inspection, clearing of approach roads, etc.
2. In order to enhance the effect of the project, the Provincial Government of Aurora is recommended to 1) concrete the unpaved portion of the provincial road, 2) coordinate with the national government for planning and implementation of long-term measures to arrest river siltation and riverbank inundation in Bazal River.
3. DAR Provincial Office is recommended to monitor the implementation of the activities identified under sustainability plan.

Lessons learned for JICA:
1. Impact of bridge construction in rural areas is greatly enhanced by improvement of connecting roads. In this project, reduction in travel time was not only brought by the bridge construction but also by concreting the provincial road which was conducted by LGU. Therefore, it is important to encourage counterparts to make an effort to improve the road condition alongside the project site.
2. Given the significant role of LGUs especially in the O&M of the bridge, the involvement of LGUs at the planning stage of the project enabled not only smooth implementation of the project but also ensuring sustainability after its completion.

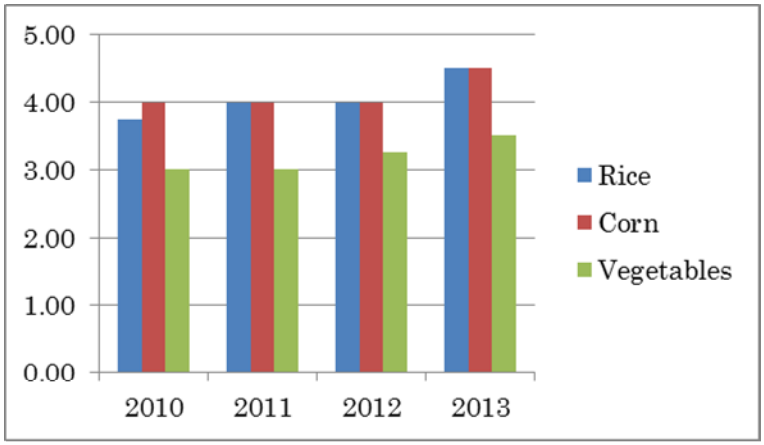


Chart 1 Volume harvested in Barangay Bazal (in tons/ha)
Source: Office of the Municipal Agriculture


Pedestrian and tricycles crossing the Bazal Bridge

Internal Ex-Post Evaluation for Grant Aid Project

conducted by JICA Nicaragua Office: March 2015

Country Name	Project for Capacity Strengthening of Road and Highway Maintenance in the Republic of Nicaragua
Republic of Nicaragua	

I. Project Outline

Background	Roads are the major important means of transport for passengers and freight in the Republic of Nicaragua. However, road construction and improvement were not enough and road extension (per capita and per area) remained at a low level compared with other Central American countries. The pavement ratio of highways was about 10% in 2009. Especially, the bad conditions of roads in the rural poverty areas hindered social and economic development.				
Objectives of the Project	To promote road improvement in the rural areas where road conditions are poor, by procuring necessary equipment for road construction.				
Outputs of the Project	1. Project Site: Nicaragua (whole of country) 2. Japanese side: Procurement of a range of equipment for road improvement: Stabilizers, motor graders, vibrating rollers, hand guide rollers, tire rollers, asphalt tanker, asphalt distributors, etc. 3. Nicaraguan side: Duty exemption for the procured equipment, operation and maintenance of the procured equipment, etc.				
Ex-Ante Evaluation	2009	E/N Date	28 July 2009	Completion Date	25 June 2010
Project Cost	E/N Grant Limit: 655 million yen, Actual Grant Amount: 558 million yen				
Implementing Agency	Corporation of Regional Enterprises of Construction (COERCO), Ministry of Transport and Infrastructure (MTI)				
Contracted Agencies	Ingerosec Corporation, Marubeni Corporation				

II. Result of the Evaluation

1 Relevance

This project has been highly consistent with Nicaragua's development policy at the time of both ex-ante and ex-post evaluation. Improvement of rural roads and infrastructure is specified as one of the priority issues in the "National Plan for Human Development (2009-2011, 2012-2016)" and also in the "National Plan of Transport (2001-2010, 2013-2033)". The project has also been highly consistent with development needs for road improvement for transportation of agricultural products and people's access to public services. Also, this project was consistent with Japan's ODA policy at the time of ex-ante evaluation, which supported the transport sector as one of the priorities in Nicaragua so that economic infrastructure development could promote investment, increase productivity and expand export, as cited in the Country Assistance Program to Nicaragua (2002).

Therefore, relevance of this project is high.

2 Effectiveness/Impact

All of the procured equipment has been utilized until the time of ex-post evaluation, and this project has largely achieved its objective of "promoting road improvement in the rural areas where road conditions are poor." As shown in the following table, a total of 4,893km of roads were improved from 2010 to 2013. It is much greater than the target of 2,865km set by the Road Maintenance Plan because the emergency repair work during the rainy season was more than expected and COERCO accommodated those increased needs. However, the data was not available to confirm the length of road improved exclusively with the equipment procured by the project. Based on the MTI's estimation that 30 % of the total improvement has been conducted by the procured equipment, it can be assumed that 1,468km (30% of 4,893km) of roads were improved by the procured equipment. This length achieved the target (502km) set at the planning stage.

Quantitative Effects

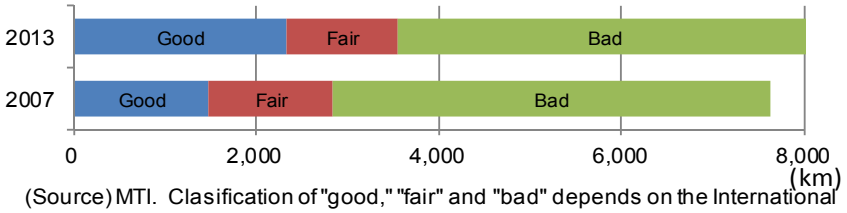
Indicator		Year 2009 (before the project)	Year 2010	Year 2011 (target year)	Year 2012	Year 2013	Total 2010-2013
Length of roads improved by COERCO (km)	Target of the Road Maintenance Plan (Note1)	n.a.	896.51	445.38	657.14	866.60	2,865.63
	Target (by the equipment procured by the project)	0	30.00	130.15	178.74	163.42	502.31
	Actual of the Road Maintenance Plan	n.a.	1,234.98	1,233.28	1,157.28	1,267.96	4,893.50
	Actual (by the equipment procured by the project.)	0	n.a.	n.a.	n.a.	n.a.	n.a.

(Note1) The Road Maintenance Plan provides the target length of the road to be improved by COERCO. It includes the road improved by the equipment procured under the project and the roads improved by the other equipment.

(Source) MTI.

As shown in the figure, the length of paved and unpaved rural roads in "good" condition increased. In 2007 (before the project) rural roads in "good" condition were 1,487km (19% of the total), and it increased to 2,327km (28%) in 2013. Also, among the total rural roads, the length of paved roads has increased in 61% (1,922.22 km in 2007 to 3,104.46km in 2013). Besides the above quantitative effects, the questionnaire survey with COERCO revealed that road improvement work has become more efficient with the procured equipment. The surface of roads which can be paved per day has increased by more than 400% (1,200m^2 per day in 2009 to 4,900m^2 per day in 2013).

Figure: Length of the Rural Roads Clasified by Condition



(Source) MTI. Clasification of "good," "fair" and "bad" depends on the International Roughness Index.

As for impacts, the following positive impacts have been observed as expected at the time of ex-ante evaluation. First, time and cost of transport have decreased in the improved roads. According to the residents living along the improved roads[1], transport time, fuel consumption, and fare of bus and taxi have decreased. However, some residents pointed out that the risk of traffic accident seems to be arising due to the increased speed. Secondly, transport damages of agricultural products such as cattle, milk and coffee have been reduced. Among the interviewed farmers, some have saved post-harvest loss (beans and corns) or have got an easier access to the market to sell surplus products (eggs) in the rainy season due to improved road conditions and others have mitigated transport loss of egg thanks to decreased damaged roads. Thirdly, people have had an easier and safer access to public services, due to decrease of the impassable roads for vehicles. For example, time to the closest health center decreased, which benefited pregnant women and people who live in the area where vehicles had not reach. Another example is that students can go to school safe, without being stuck in the mud in the rainy season.

No other major negative impact has been observed, besides the above-mentioned possible risk of traffic accidents mentioned. There have been no negative impacts on the natural environment either of land acquisition and resettlement.

Therefore, effectiveness/impact of this project is high.

3 Efficiency

The outputs of the project were produced as planned, and both the project cost and time were within the plan (ratio against the plan: 85% and 86%, respectively). Therefore, efficiency of this project is high.

4 Sustainability

The operation and maintenance (O&M) of the procured equipment by the project have been carried out by COERCO and its four affiliated companies, which have conducted road improvement work commissioned by MTI. The implementation structure is sustained in the way which was considered desirable at the time of ex-ante evaluation, with a sufficient number of technical staff being allocated in all of the four companies. The responsibilities and roles are clearly demarcated among MTI, COERCO and four affiliated companies.

The implementing agencies have no problem in the technical aspect. Ninety-five (95) % of the staff, including those who received technical training at the delivery of equipment under the project (48 operators and 4 workshop chiefs), remain working at the companies, and those who joined the companies after the project have training opportunities if necessary. Besides, regular technical training is conducted by COERCO, and manuals for operation and maintenance are kept by the chief of each workshop and accessible when needed.

With regard to the financial aspect, the implementing agencies have some problems from the following reasons. First, some affiliated companies have a slight deficit balance because the execution of works for emergent repair was not entirely reimbursed by MTI; Since the law does not allow MIT to allocate a specific budget for the affiliated companies to cover emergent repair, some affiliated companies had to compensate the cost for emergent repair by their limited budget, and as a result they were likely to delay the implementation of emergent repair.. And they had loan payment for the past projects. Secondly, for the future plan of updating the equipment, COERCO has saved approximately 10% of total budget for replacement fund, which is still insufficient, because the fund is sometimes used to cover emergency reparation works in the rainy season.

So as to the current status of O&M of the equipment, there is no problem. Daily check-up including records of working hours and fuel consumption is conducted at the construction site. One affiliated company (EICMEP) holds quarterly meetings with the attendance of both administrative and technical staff to share the current status of O&M. As a result, all of the procured equipment has been utilized without any problem till now. Since the companies perform preventive maintenance, there have not been major problems with the restock of spare parts. For unexpected damages, COERCO needed to wait 30-180 days until the spare parts were delivered, because some were out of stock in distributers in the country.

The project has some problems in financial aspects; however no problem has been observed in structural and technical aspects and the current status of operation and maintenance. Therefore, sustainability of this project effect is fair.

5 Summary of the Evaluation

This project has largely achieved its objective, "promotion of road improvement in the rural areas," as the roads have been improved more than planned in the target area and the equipment procured by the project has been fully utilized. Besides, several positive impacts have been observed, such as decreased transport time, decreased fuel consumption, reduced damages of agricultural products during transportation, easier and safer access to public services especially in the rainy

[1] Based on the interview survey with 7 residents in "Project Santa Rita Km 49 Masachapa Road" (ECONS-3) on April 2nd 2014; 7 residents interviewed at "Project Regadio – Empalme La Sirena" (EMCOSE) on April 8th 2014; 13 people interviewed at "Project Nueva Guinea - Naciones Unidas" (EICMEP) on April 22nd 2014 and 7 people interviewed at "Project Matagalpa – San Ramón" (ENIC) in April 09th 2014.

seasons, etc. Therefore, effectiveness/impact of this project is high.

As for sustainability, the implementing and operating agencies have no problem for the institutional and technical sustainability, with sufficient technical staff being allocated in number and techniques. Preventive maintenance is performed, and all of the procured equipment have been utilized without any problem till now. However, there are a few minor concerns in terms of the slight deficit balance in the expenditure and the future replacement plan.

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

III. Recommendations & Lessons Learned

Recommendations to implementing agency:

- Some affiliated companies have a slight deficit balance. It is recommended that MTI secure the necessary budget so that these companies could avoid the suspension of repair works and the reduction of replacement fund already established.
- Decreased transport time means increased speed of automobiles. Some residents living near the improved roads showed concerns for the increased speed and possible traffic accidents in the future. In case traffic accidents occur frequently, MTI would need to take measures such as putting traffic signs.
- It takes 30-180 days to get some spare parts from local agents (distributers of SAKAI) in Nicaragua. It is recommended to COERCO to coordinate with these local agents so that local agents could manage the inventory and COERCO could purchase necessary spare parts quickly when needed.
- One affiliated company (EICMEP) holds quarterly meetings with the attendance of both administrative and technical staff to share the current status of O&M, and these regular meetings should be conducted also at other three companies. This would help not only promote awareness raising regarding O&M but also develop a replacement plan of the equipment.

Lessons learned for JICA:

- As some spare parts were out of stock in the local distributer, it had to import from the third country and COERCO had to wait for two months. During the waiting period, road improvement work was suspended. For smooth O&M of the procured equipment, it is required for the client/the consultant to confirm the after-sale service system of the supplier carefully when the Purchase Contract is concluded between the client and the supplier.

(Road improvement with the procured equipment)

(Improved road after damages in the rainy season)

Internal Ex-Post Evaluation for Grant Aid Project

conducted by Cambodia Office: January 2015

Country Name	The Project for Rural Drinking Water Supply in Memot District of Kampong Cham Province
Kingdom of Cambodia	

I. Project Outline

Background	In Memot District, Kampong Cham Province, the "Project for Rural Drinking Water Supply in Kampong Cham Province," was carried out with the support of Japan's grant aid and, as a result, the supply rate of safe water in the targeted 96 villages improved significantly from 9.5% to 82% (2009). Meanwhile, out of 52 villages, which were not covered by the above-mentioned project, only 5 villages had a safe water supply system in place and the safe water supply rate of the 52 villages accounted for just 6.5% (2009). This rate was significantly lower than the goal of the country's rural water supply rate of 50%, which was a goal to be achieved by 2015 under Cambodian Millennium Development Goals (CMDGs).				
Objectives of the Project	To ensure and sustain safe and stable water supply by constructing water supply facilities and by strengthening operation and maintenance capacity of village level operation and maintenance organization.				
Outputs of the Project	1. Japanese side (1) Well drilling and facility construction at 135 sites in 55 villages, Mobile Iron Removal Device set in 11 Communes (2) Technical assistance (hereinafter referred to as 'soft-component') for 1) formation of resident organization, 2) hygiene education, and 3) operation and maintenance 2. Cambodia side: land acquisition and development of access roads.				
Ex-Ante Evaluation	2009	E/N Date	30 July, 2009	Completion Date	2 February, 2011
Project Cost	E/N Grant Limit: 369 million yen, Actual Grant: 223 million yen				
Implementing Agency	Department of Rural Water Supply (DRWS), Ministry of Rural Development (MRD)				
Contracted Agencies	Kokusai Kogyo Co., Ltd., Koken Boring Machine Co., Ltd.				

II. Result of the Evaluation

1 Relevance

This project has been highly consistent with Cambodia's development policy such as improvement of rural water supply as set in CMDGs, Rural Development Strategic Plan 2014-2018 and other documents, development needs for safe water in areas where people are relying on dug wells and surface water at the time of both ex-ante and ex-post evaluation. It was also consistent with Japan's ODA policy (Country Assistance Program to Cambodia 2002) which prioritizes Basic Human Needs including support for water supply projects at the time of ex-ante evaluation. Therefore, relevance of this project is high.

2 Effectiveness/Impact

The project has largely achieved its objective "to ensure and sustain safe and stable water supply". According to the implementing agency and other related organizations, all the 135 hand pump wells and 11 mobile iron removal devices constructed by the project are in good condition and functional. The water is supplied to approximately 40,500 people (indicator 1). According to the representatives of Water and Sanitation User Groups (WSUG) interviewed[1], 60 households (approximately 300 people)/site in average use the water facilities constructed by the project. The wells are well used by the people. 84% of WSUG representatives interviewed said they used the water mainly for drinking and cooking purposes which are the intended purposes of the project, and 81 % said they used the water for daily use such as washing. There are few cases that the wells were used only for washing and cleaning due to its taste and type (hard water) while most of the interviewed WSUGs expressed their great contentment with the quality of water. Water quantity is sufficient in both dry and rainy seasons. After the project completion, the burden of women and children of collecting water has reduced because of improved access to safe water source, according to the interviewed WSUG representatives.

As a result of the soft-component, hygiene behavior of people has improved and operation and maintenance (O&M) capacities of WSUGs have been strengthened. From the interviews with the WSUGs, it was found that the number of households which set the toilet and the number of those who wash hands with soap have increased. 72% of members of WSUGs have built latrines while 4 years ago (i.e. before the project) only 19% of members of WSUGs had access to latrines. Most of women in WSUGs are in charge of regular cleaning of the well platform and they often advice other well users on good hygiene practice. Through the implementation of soft-component, WSUGs were established at all 135 sites and have been functional. The interviewed WSUGs and Provincial Department of Rural Development (PDRD, a provincial office of MRD) informed that WSUGs were trained and are able to do small repair and maintenance accordingly, such as changing of U-Seal (A disc which seals a screw of a piston). As a rule, the total cost of the repairs is borne by WSUGs. At the time of ex-ante evaluation, it was supposed that each WSUG opens a bank account for 200,000 Riel for O&M purposes, which was collected from the water users as one-time advanced fee for O&M. It was also supposed that fee for fixing facilities are paid when necessary (in case of breakdown) as water users have a mutual help spirit. At the time of ex-post evaluation, all WSUGs opened bank accounts, however, not all interviewed WSUGs have maintained the accounts well. Some WSUGs withdrew the balance from the banks and have kept it properly, while others have never updated the bank accounts and the balances have reduced due to the fee

[1] The interviews with 32 WSUGs were conducted under this ex-post-evaluation survey. However, it was hard to gather all WSUG Members all together as most of WSUGs members were at the crop field, not at home.

charged by banks for inactive accounts. However, the interviewed WSUGs confirmed that money will be collected from the water users to purchase spare parts in case further money is necessary. As to the O&M practices, most of the facilities have been properly maintained and cleaned by well caretakers.

As to impacts, statistics record of water borne diseases in Memot District shows that in overall, the number of cases of water related diseases in Memot District have been significantly decreasing since 2010, particularly the cases of diarrhea and typhoid. 78% of the interviewed WSUGs acknowledged reduction of water borne diseases owes to the access to safe water from the wells constructed by the project. Positive impact is observed that the reduced time of fetching water enabled women to use time saved for farm activities. Beneficiaries (WSUGs), local authorities and PDRD are of the opinion that the project has contributed to the significant improvement of their livelihood, health status improvement and cost and time saving in particular. No negative impacts were found in land acquisition/resettlement or natural environment.

Therefore, effectiveness/impact of this project is high.

Quantitative Effects

Indicator	Year 2008 (before the project) Actual value	Year 2015 (target year) Target value	Year 2014 (year of ex-post evaluation) Actual value
Indicator 1: Safe water supplied population in the target sites (Safe water supply rate)*	2,100 (6.5%)	30,660 (92.7%)	Approximately 40,500 **2

*1 The water supply rate is calculated based on an estimate that each deep well with hand pump can supply water to a population of 210.

**2 Since data on the population of target 55 villages in 2014 was not available, actual safe water supply rate in the year cannot be calculated.

Source: WSUGs

3 Efficiency

The outputs of the project were produced mostly as planned (The scope was changed from “136 sites in 52 villages” as set in the Basic Design to “135 sites in 55 villages”)[2], and both the project cost and the project period were within the plan (ratio against the plan: 60%, 83%). Therefore, efficiency of this project is high.

4 Sustainability

The operation and maintenance (O&M) of the facilities constructed by the project has been carried out by WSUGs with the support from Tbong Khmum Provincial Department of Rural Development (PDRD)[3], Memot District Office of Rural Development (DORD) of PDRD, and DRWS. DORD is in charge of establishment of WSUGs and instructing O&M activities, while PDRD supervises and supports DORD. The role and responsibility of Tbong Khmum PDRD has been maintained with clear structure, and the number of staff is sufficiently allocated. There is no change in the roles and responsibilities of the related parties.

DRWS of MRD has confirmed that the technical officials of Tbong Khmum PDRD have enough technical capacity for repairing the wells for all types of defects/damages and in providing technical support to WSUGs for the O& M of the project water facilities.

The annual allocated national budget to PDRD has been increasing annually and Tbong Khmum PDRD has additional budget from Provincial Hall, however, the amount is not sufficient for implementing O&M activities. Although the budget is not sufficient, Tbong Khmum PDRD has made high commitment and given high priority in supporting the rural water supply sector. As mentioned above, in case that repair is necessary, WSUGs confirmed that money will be collected from the water users to purchase spare parts, however, some of WSUGs failed to shoulder the cost in the past as mentioned below.

As to the current status of O&M, according to Tbong Khmum PDRD, 135 pump wells function well. Although 23 wells were mal functioning as of August 2014, they have been repaired by the time of ex-post evaluation with technical support from PDRD and with financial support for spare parts by PDRD as the relevant WSUGs could not afford to repair them. However, there are some problems. First, no fences exist. At the site visit during the ex-post evaluation, no animals were found around the water facilities, and therefore the risk of contamination of water by animals is low for the time being. However, at the time of ex-ante evaluation, fences were scheduled to be built by the Cambodian side to avoid such risks, and building fences is general practice. Second, although PDRD explained a system to follow up the status of wells, according to WSUGs, DORD has not regularly monitored the facilities, and PDRD and DORD visit the wells only when the major repair is needed and informed by the WSUGs[4]. Third, there are some concerns on the procurement of spare parts in the future. Many spare parts provided by the project remain and are in good condition, since most of the wells have never been mal-functional. However, most of the well hand pumps have already reached its usage life and they will need to change spare parts (pistons and U-Seals). WSUGs face problems with spare parts. Spare parts are only available in Phnom Penh and this causes a burden for the WSUGs to procure them on time. Moreover, the locally procured spare parts which are of low quality can be used only for a few months. Sometimes, this repair process last only few days or up to 2-3 months.

As there are some concerns on financial aspect and the current status of O&M, the sustainability of this project effect is fair.

5 Summary of the Evaluation

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[2] The total number of sites reduced because one site was found to have existing well already, and the number of villages increased as a result of unsuccessful drilling.

[3] The Provincial Department of Tbong Khmum is newly established in December, 2013 after the separation from Kampong Cham Province. The number of staff members is not sufficient for implementing O&M activities. However, most of them are ex-technical staffs of PDRD Kampong Cham.

[4] Meetings are organized every three months to discuss and report on the current situation/condition of the rural infrastructures which are under the responsibility of PDRD. Once there is report of well damage, PDRD sends its technical official to check and report the problem. PDRD Kampong Cham (in 2013, before the establishment of Tbong Khmum Province) issued a decision to establish a working group for rural water supply management and maintenance plan. PDRD has its own database of wells and it is updated once a year. The PDRD conducts well repairing activities every year based on the available budget and its annual plan. Annual report on the wells repaired by PDRD is regularly made and submitted to MRD.

The project has largely achieved its objective "of ensuring and sustaining safe and stable water supply" as population to whom the water is supplied has increased as planned, and people are satisfied with quality and quantity of water. As a result of implementing soft-component, hygiene behavior and capacity of local people for O&M of the facilities have improved. Positive impact of reduction in burden of women and children for water collection is observed. As for sustainability, there are some concerns about financial aspect and the current status of O&M . In light of the above, this project is evaluated to be highly satisfactory.

III. Recommendations & Lessons Learned

1. Recommendations to implementing agency:

・The implementing agency should consider taking actions such as providing information about the spare parts availability to the WSUGs or making the spare parts available at the District Office of Rural Development so that the WSUGs can procure them easily, and strengthening technical capacity and ~~a~~ monitoring system for early detection of defects, so that the water supply to rural people will not be suspended.

・MRD should raise awareness of water users so that water users would burden more cost for repairing the pump properly. However, considering the fact that " some of WSUGs failed to shoulder the cost in the past" as confirmed in this Ex-post evaluation report, MRD is recommended to take into account WSUGs situation and assist WSUGs, if necessary .

2. Lessons learned for JICA:

The soft-component to conduct technical training to WSUGs for maintenance and repair of small defects of the wells, contributes significantly to securing the proper and sustainable operation of the well facilities, especially where regular monitoring by the implementing agency is difficult. Therefore, it is important to incorporate technical assistance in a rural water supply project to develop capacity of water user groups which are responsible for O&M of water supply facilities. Further, incorporating strengthening of capacity of organizations which directly support water user group is also necessary.

(Children collecting water from a hand pump well.)

(A man collecting water for drinking and cooking purpose.)

Internal Ex-Post Evaluation for Grant Aid Project

conducted by JICA Bhutan Office: Month 2014

Country Name	Project for Improvement of Machinery and Equipment for Construction of Rural Agricultural Road (Phase 2)
Kingdom of Bhutan	

I. Project Outline

Background	In Bhutan, the majority of the people resided in the rural area and agriculture was a key industry. However, the whole country is located in the mountainous terrain and the agricultural land per farming household is quite small, and thus the agricultural income was limited. Another issue in the rural area was the outflow of the young generation to the urban area, which caused labor shortage and aging in the rural area. Under these circumstances, improving rural roads was very important for efficient agricultural work and shipping of agricultural products to the market, besides increasing productivity through mechanization, in order to increase food self-sufficiency and agricultural earning. Most of the machinery and equipment of the Department of Agriculture was old and insufficient and thus could not meet the needs of request of rural road construction.				
Objectives of the Project	To construct rural agricultural roads, by procuring necessary machinery and equipment for road construction.				
Outputs of the Project	1. Project Site: Bhutan (whole of the country) 2. Japanese side: Provision of grant for procurement of a range of machinery and equipment for road construction: Hydraulic excavators, jack hammers, air compressors, etc. 3. Bhutanese side: Tax exemption, operation cost for the Central Management Unit (CMU), etc.				
Ex-Ante Evaluation	2009	E/N Date	19 January 2010	Completion Date	3 March 2011
Project Cost	E/N Grant Limit: 597 million yen, Actual Grant Amount: 482 million yen				
Implementing Agency	Ministry of Agriculture and Forests (MoAF), Department of Agriculture (DOA)				
Contracted Agencies	Katahira and Engineers International Inc., Toyota Tsusho Corporation				

II. Result of the Evaluation

1 Relevance

This project has been highly consistent with Bhutan's development policy at the time of both ex-ante and ex-post evaluation. Construction of rural roads and infrastructure is specified as one of the priority issues in the 10th Five-year Plan (FYP) (2008-2013) and 11th FYP (2013-2018). The project has also been highly consistent with development needs for construction of rural roads for efficiently transporting farm product to the market at the time of both ex-ante and ex-post evaluation. Also, this project was consistent with JICA's priority programs at the time of ex-ante evaluation, which supported agriculture and rural development in Bhutan. Road construction was considered as one of the programs for economic infrastructure development.

Therefore, relevance of this project is high.

2 Effectiveness/Impact

All of the procured equipment has been utilized to the time of ex-post evaluation, and the project has achieved its objective of "construction of rural agricultural roads." As shown in the following table, a total of 1,555.4 km of rural agricultural roads were constructed during the period of the 10th FYP (2009-2013). Among this achievement, 940.5 km of rural roads were constructed with the equipment procured by the project against the planned length of 625 km, although the achievement was less than the targeted in 10 among the 20 Dzongkhags[1] due to the lack of the fund to pay for CMU machines. The country-level target set in the 10th FYP was achieved, although road construction with the existing equipment including those procured by the project (Phase 1) was not performed as planned[2]. Besides, 2,229km of rural roads were constructed by contracting out to the private sector, which surpasses the target[3].

The project has also contributed to improvement of work efficiency; The average number of the sites where repair was monthly conducted with the procured mobile workshop van increased from 5 in 2008 to 12 in 2013. Therefore, wasting time caused by machinery failure was reduced.

As for impacts, the following positive impacts have been observed as expected at the time of ex-ante evaluation. First, there has been drastic reduction of time for shipping of agricultural products. When there was no road to the main towns in Samtse Dzongkhag in 2009 (before the project), harvested oranges were transported on horse and the harvest, collection, transport and selling of oranges took 2-3 months in total. After the roads were constructed, the above-mentioned time has been reduced to one month. In another Dzongkhag of Zhemgang, it took six days to ship oranges to the town, but it takes just two days at the time of ex-post evaluation. Second, besides the reduction of shipping time, improved access to the main town increased the motivation for cultivating cash crops such as cardamom, ginger, oranges and betel nuts, which were not much cultivated before. The field survey revealed that the farm area and crop types have increased along the improved farm roads. For example, The production of gingers in Samtse Dzongkhag in 2011 was 2,359 ton and it increased to 2,555 ton in 2013. Third, improved roads have brought the rural residents an easier access to public services. The enrollment rate in the rural area at the primary level increased compared to before the project, and improved roads are one of the factors for this, according to

[1] A Dzongkhag is an administrative and judicial district of Bhutan. Bhutan is composed of 20 Dzongkhags. Dzongkhags are divided into Gewogs.

[2] Road construction with the existing equipment was not performed as planned in 14 among the 20 Dzongkhags,

[3] Road construction contracted to the private sector was not performed as planned in 4 among the 20 Dzongkhags,

CMU. In Dzongkhags of Bumthang, Paro and Punakha, commuting time to the primary school has been reduced from 1-2 hours to 30 minutes. Also, improved roads and better access to rural areas contributed to accelerating the construction of school facilities. With regard to the access to health services, time for reaching the Basic Health Unit or Hospital has been reduced drastically. In Samste Dzongkhag, time to the hospital was reduced from two days to three hours.

Besides, unexpected positive impacts have been observed. Via improved roads, government officers have come to rural areas more often for monitoring of development activities and meeting with the people. And, infrastructure work including drawing electricity lines has been performed more safely, easily and timely.

There is one slight negative impact. Work of road construction in the mountainous steep area has caused a few small landslide cases which sometimes cause problems of run-off water but no substantial damages to the residents' area. No other negative impact has been observed, including those on the natural environment either of land acquisition and resettlement. On the other hand the land value in rural areas has increased which is considered a positive impact.

Therefore, effectiveness/impact of this project is high.

Quantitative Effects

Indicator		Year 2008 (before the project)	Year 2009-2013 (Target in 10th FYP)	Year 2009-2013 (Actual in 10th FYP)
Length of rural roads constructed by DOA (km)	with the equipment procured by the project	0	625	940.5
	with the existing equipment (including those procured at the phase 1)	n.a.	875	614.9
total		n.a.	1,500	1,555.4
(supplementary information) Length of rural roads constructed by contracting out to the private sector		n.a.	1,764	2,229

(Source) CMU.

3 Efficiency

The outputs of the project were produced as planned, and both the project cost and time were within the plan (ratio against the plan: 80% and 100%, respectively).

Therefore, efficiency of this project is high.

4 Sustainability

The operation and maintenance (O&M) of the procured equipment by the project have been carried out by CMU of DOA. The implementation structure is sustained in the way which was considered desirable at the time of ex-ante evaluation, with a sufficient number of technical staff being allocated. The responsibilities and roles are clearly demarcated among DOA, CMU and Dzongkhag offices. The number of the staff for the Engineering Section of DOA is sufficient. It increased from 16 in 2009 to 23 in 2013, among which one is assigned especially to deal with CMU-related issues. From 2009 to 2013, the total number of CMU staff for O&M increased; Staff at the two regional branches increased (20 to 51), while the central staff decreased (74 to 53). For O&M of the procured equipment, it was planned that 25 operators and 9 drivers be employed and actually 40 operators and 16 drivers have been employed, which is sufficient. However, at the Dzongkhag level, the number of the Engineering Section staff is not sufficient, which, however, does not influence road construction much as that section provides support only for surveying and planning for farm road construction. Farmers were expected to perform minor maintenance of rural roads to the technically and financially possible extent, and major problems such as land slide and road gradation are dealt with Gewogs or Dzongkhags.

Regarding the technical aspect, the training system has been established. Training has been given to the mechanics and operators who newly have joined CMU since 2009. Also, some CMU staff from the workshop section participated in the training in Japan in 2011 to learn trouble-shooting of machine/electrical wiring check-ups and function of hydraulics. Manuals for the procured equipment have been used at CMU. Thus, the technical level of CMU is sufficient, according to the Engineering Division of Trashigang Dzongkhag. The Engineering Section of Dzongkhag offices is responsible for surveying, planning and estimating road construction, and it has kept sufficient techniques.

With regard to the financial aspect, the implementing agency has no problem in covering maintenance costs. CMU has almost doubled its budget and expenditure until the time of ex-post expenditure (Budget: 39 million Nu in FY2007-08 to 72 million Nu in FY2013-14; Expenditure: 39 million Nu in FY2007-08 to 62 million Nu in FY2013-14). While the total expenditure for FY2013-14 decreased from the previous year, more expenditure for the maintenance was assured. Before the project, the necessary cost for construction of 1,500 km in the 10th FYP was estimated 150 million Nu. Referring to the expenditure of the last five years, it can be assumed that CMU has had sufficient expenditure. Each Dzongkhag assures the fund for road construction, depending on its prioritization every year.

So as to the current status of O&M of the equipment, there is no problem. Daily check-up by the operators and minor repair by the mechanics are performed on the construction site. For major repair, mobile workshop vans come to the site. The more rural roads have been constructed, the more extensively the equipment has been utilized. To deal with this, CMU has increased the maintenance frequency. On-site maintenance is usually monitored by CMU regional branches, and on the monthly basis the CMU head quarter monitors the branches regarding equipment management (monitoring and planning for repair/replacement), inventory control of spare parts and compilation of progress reports. CMU's work is supervised by DOA annually. Spare parts are stocked by CMU, and there is no difficulty in purchasing and restocking them. As a result, all of the procured equipment has been utilized without any problem to the time of ex-post evaluation.

No problem has been observed in the structural, technical, financial aspects and the current status of operation and maintenance. Therefore, sustainability of this project effect is high.

5 Summary of the Evaluation

This project has largely achieved its objective of “construction of rural roads,” as more rural roads were constructed than the targeted in the 10th FYP and the procured equipment has been fully utilized to the time of ex-post evaluation. Besides, several positive impacts have been observed, such as increased agricultural products, increased efficiency of agricultural works, easier access to public services, etc., while one minor negative impact of landslide has been reported. Therefore, effectiveness/impact of this project is high.

As for sustainability, the implementing agency has no problem for institutional, technical and financial sustainability and in the current status of O&M.

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

III. Recommendations & Lessons Learned

Recommendations to implementing agency:

- None.

Lessons Learned to JICA:

- None.

Farm road under construction

Farm road construction site