Internal Ex-Post Evaluation for Technical Cooperation Project

conducted by Indonesia Office: April, 2016

Country Name	**Tuberculosis Control Project**
Republic of Indonesia	

I. Project Outline

Background	Indonesia ranked 3rd on the list of high-burden tuberculosis (TB) countries in the world according to the World Health Organization's (WHO) report in 2006. Directly Observed Treatment, (DOTS, Short course chemotherapy) strategy was adopted in early 1990s and in 2007, DOTS coverage reached 100 percent in Indonesia. However, there remained challenges in providing quality DOTS in the country. With the expansion of the DOTS coverage, it had been recognized that the diagnostic system for TB case detection should be improved. In order to improve the TB case detection, quality of laboratory services needed to be strengthened. The government had also established a concept of the Laboratory Network, which consists of four levels: the Regional Reference Laboratory, the Provincial Laboratory, the Intermediate Laboratory, and the Health Center Laboratory in Indonesia, and requested the Government of Japan a project to support this laboratory network.
Objectives of the Project	By (i) establishing a nationwide cascade training system, (ii) developing a new external quality assurance (EQA) model (Development of SOP and training system and setting up the EQA Data management unit) in West Java province; and (iii) strengthening of quality assurance, recording and reporting of intermediate laboratories and health centers through supervision and meeting, the project aimed at improving accuracy level of examinations and diagnosis of TB patients conducted at laboratory network in West Java province (Project purpose level) and (through expansion to other provinces) thereby quality National Tuberculosis Program (NTP) is sustainably managed. (Overall goal level). The project objectives set forth are as follows: 1. Overall Goal: Quality National Tuberculosis Program (NTP) is sustainably managed. 2. Project Purpose : Quality laboratory service for TB is assured through strengthening of laboratory network at the Project site for nationwide expansion.
Activities of the Project	1. Project site: East Java Province (where Airlangga University/Dr.Soetomo Hospital are located which carries out nationwide activities mentioned below) and West Java Province (as a model province) 2. Main activities: (Nationwide) - The project develops a cascade training system and provides training to the personnel in each level of the cascade (core group, master trainers, Wasors (Wakil supervisor; TB supervisor), and laboratory technicians) - The project and the core group develop training curriculum and materials (West Java province) - The project develops a standard operations procedure (SOP) for EQA with Lot Quality Assurance System (LQAS). - The project delivers training on EQA practice for laboratory technicians and Wasors. - The project introduces EQA practice to the Provincial TB Reference Laboratory, intermediate laboratories, and health center laboratories in the province - The project and the Provincial TB Reference Laboratory provide technical guidance through supervision and meetings for intensifying quality assurance, recording/reporting system on TB microscopy at health center laboratories, intermediate laboratories and district level laboratories, 3. Inputs (to carry out above activities) Japanese Side 1. Experts: 6 persons 2. Training in Japan: 5 persons, Third country training: 6 persons 3. Facilities and equipment: Co2 incubators, microscopes, clean bench and others Indonesian Side 1. Staff allocated: 26 persons 2. Land and facilities: project offices and necessary equipment at Airlangga University and in Provincial Health Office in West Java 3. Local cost: expenses for training, regular meeting and supervision and others

Ex-Ante Evaluation	2008	Project Period	October 2008-October 2011	Project Cost	308 million yen
Implementing Agency	National Tuberculosis Program, Ministry of Health (NTP, MOH), Airlangga University/Dr.Soetomo Hospital, West Java Provincial Health Office				
Cooperation Agency in Japan	Japan Anti-Tuberculosis Association				

II. Result of the Evaluation

1 Relevance

<Consistency with the Development Policy of Indonesia at the time of ex-ante and project completion>

The project was consistent with development policy of Indonesia as policy document such as National TB Program (2006-2010) and TB Control National Strategy in Indonesia 2010-2014 addressed the needs for strengthening laboratory services for the improvement of the diagnostic system for TB case detection and expansion of quality DOTS as a major strategy for TB control, and the needs for strengthening diagnosis using a smear examination and EQA of smear examination as well as the needs for human resource development.

<Consistency with the Development Needs of Indonesia at the time of ex-ante and project completion>

The project was consistent with the needs for TB control in Indonesia both at the time of ex-ante evaluation and project completion. Indonesia was one of the high-burden TB countries in the world. In addition, as microscopy TB was used to diagnose TB in DOTS strategy, the quality laboratory was a mandatory for the standard of diagnostic of TB through microscopy TB.

<Consistency with Japan's ODA Policy at the time of ex-ante evaluation>

The project was consistent with Japan's ODA policy, as poverty reduction including "improvement of health and medicine" was one of the prioritized areas of the Country Assistance Program for Indonesia (November 2004). The Country Assistance Program stated that Japan would focus its assistance on i) improving basic health and medical services and ii) measures to combat infectious diseases in light of the high infant mortality rate, maternal mortality rate and malaria and tuberculosis infection rates.

<Evaluation Result> In light of the above, the relevance of the project is high.

2 Effectiveness/Impact

<Status of Achievement for Project Purpose at the time of Project Completion>

The project purpose was achieved by the time of project completion, as the following indicators set to measure the project purpose was mostly attained: (i) More than 70% of the laboratories of diagnostic centers (Diagnostic centers refer to health centers and other medical facilities who cooperate with NTP)[1] participate in the EQA under the SOP for EQA with LQAS sampling method including monitoring /supervision in West Java province (as a model province) and (ii) More than 70% of above mentioned laboratories report no major error.

<Continuation Status of Project Effects at the time of Ex-post Evaluation>

After the project completion, the implementation of EQA with LQAS in West Java has expanded and continuation of achievement of project purpose was confirmed. The laboratories of diagnostic centers who reported to implemented EQA with LQAS method is more than 70%, though the number has fluctuated. The number varies because some districts consistently participate in EQA while others do not. The number drops in 2014 mainly due to human resource and management factors. Wasors's workload both on programs and administration is heavy as there are many programs to be implemented at province and districts. There are districts which do not participate in the EQA because of lack of laboratory facilities, financial sources, technical capacity and others.

As to the training system developed by the project, the personnel trained under the project mainly by Airlangga University (Training Center for TB Microscopy of the University), whose enhanced capacity under the project were utilized by NTP for training to Wasor and laboratory staff until 2012. Moreover, the training system of NTP uses and adopts the curriculum and material produced by the project with some updating. However, currently the Training Center for TB Microscopy of Airlangga University is not utilized for national training as the training to health staff is managed by Ministry of Health (MOH), and because of heavy additional burden for Airlangga University for implementing training. Nevertheless, with special permit from MOH, Training Center for TB Microscopy at Airlangga University was chosen by East Java Provincial Health Office as provincial human resources unit for 2012-2015 to respond to the needs of qualified human resource..

<Status of Achievement for Overall Goal at the time of Ex-post Evaluation>

The overall goal was achieved at the time of ex-post evaluation. Treatment success rate (TSR), Case detection rate (CDR) and Case notification rate (CNR)[2] shows satisfactory performance in relative to the targets. The new EQA contributed to the accuracy of test and good treatment. After the project completion, having acknowledged the success of pilot project in West Java and the benefits of applying EQA with LQAS, the Government of Indonesia (GOI) has expanded the EQA with LQAS. Starting with the pilot project in three provinces in 2011, the method was introduced to all thirty three provinces from 2012 to 2014. In the early expansion in 2011 to early 2012, it was supported with training system, training materials, as well as SOPs that have been developed during the project. After the project completion, some adjustments have been put based on the needs while the project books were utilized as the reference book nationwide. Now, the SOP of new EQA system developed by the project is being reference for national guidance and all provinces use the methods for EQA developed by the project. However, the laboratory basis, the number of laboratories which practice EQA is still limited[3].

<Other Impacts at the time of Ex-post evaluation>

The positive impact was observed as the capacity enhanced and the equipment provided by the project is utilized effectively at Airlangga university. The standard competency of TB microscopy became degree requirement of medical students under the tropical disease. In 2011 and 2012, about 250 medical students of Airlangga university was exposed with deep knowledge and strong skill of Clinical Microbiology TB.

No negative impacts on natural environment as an output of the project were observed. No land acquisition and resettlement occurred under this project.

<Evaluation Result>

The project achieved its project purpose as the number and percentage of the diagnostic centers which implement new EQA improved, which has continued after the project completion. The overall goal was also achieved with the expansion of new EQA. 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>(Project Purpose)
Quality laboratory service for TB is assured through strengthening of laboratory network at the Project site for nationwide expansion.</td><td>1. More than 70% of the laboratories of diagnostic centers participate in the EQA under the SOP for EQA with LQAS sampling method including monitoring /supervision</td><td><u>Status of achievement: Achieved at the project completion</u>
(Project Completion) 471 diagnostic centers (93%) participated in new EQA.
(Ex-post Evaluation) Number of percentage of diagnostic centers participated in the EQA under the SOP for EQA with LQAS sampling method in West Java province is as follows.
<table>
<tr><th>Indicator</th><th>2011 (4th Quarter)</th><th>2012 (4th Quarter)</th><th>2013 (4th Quarter)</th><th>2014 (3rd Quarter)*</th></tr>
<tr><td>No. of participating diagnostic centers</td><td>490</td><td>494</td><td>521</td><td>476</td></tr>
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[1] Diagnostic center is wider category than health center. Health center means Puskesmas (sub-district health center in Indonesian health systems), while diagnostic center includes private health facilities.

[2] In Indonesia, CNR with TSR is the main indicator for National TB Control. Meanwhile CDR is applied from sub-district level to provincial level then it will be accumulated into CNR at national level.

[3] The percentage of laboratories that participation in EQA with LQAS in 33 provinces was 29% in 4th Quarter of 2014.

		Total number of diagnostic centers: 571 / 578 / 617 / 614 Percentage of the participation (against total number of diagnostic centers): 85.8% / 85.5% / 84.4% / 77.5%
	2. More than 70% of above mentioned laboratories report no major error	Status of achievement: Achieved at the project completion (Project Completion) The target was almost achieved. Out of 471 diagnostic centers, 324 diagnostic centers (69%) reported no major error as of February 2011. If the denominator is 400 (diagnostic centers that were directly supported by the Project), the rate reached 81%. (Ex-post Evaluation) The number and percentage of diagnostic centers that report no major error in West Java province are as follows:

Indicator	2011 (4th Quarter)	2012 (4th Quarter)	2013 (4th Quarter)	2014 (3rd Quarter)*
No. of participating diagnostic centers	490	494	521	476
No. of diagnostic centers without errors	358	380	406	385
% of diagnostic centers with no error	73%	77%	78%	81%
No. of diagnostic centers with minor error (minor error <3)	45	42	41	26
% of diagnostic centers without major error (Minor error < 3 and no error)	82%	85%	86%	86%

(Overall Goal) Quality National Tuberculosis Program (NTP) is sustainably managed.	1. Treatment Success Rate of 85% or more is sustained.	Status of achievement: Achieved (Ex-post Evaluation) Treatment Success Rate (TSR) of registered case is as follows:

Indicator	2009	2010	2011	2012	2013	2014
TSR (% of registered cases)	91.2	91.3	90.2	90.5	90.1	Not available

	2. Case Detection Rate of 70% or more is sustained as a national average.	Status of achievement: Achieved (Ex-post Evaluation) Case Detection Rate (CDR) and Case Notification Rate (CNR)[2] are as follows:

Indicator	2009	2010	2011	2012	2013	2014
CDR (%)	73	78	83	84	81	77
CNR (new smear positive per 100,000 population)	73	78	83	84	81	77
CNR (all cases per 100,000 population)	127	129	136	138	135	129

Source：JICA internal documents, questionnaire survey, interviews with the counterparts, data on TB in West Java Province and national data on TB.
* The figures of 3rd quarter 2014 are the latest figures for indicators for project purpose

3 Efficiency

The project period was as planned (ratio against the plan: 100%), while the project cost slightly exceeded the plan (ratio against the plan: 110%) . Therefore, efficiency of the project is fair.

4 Sustainability

<Policy Aspect>

GOI has a high commitment to TB control. It is supported by Minister of Health Decree in 2011 No. 1909/MENKES/SK/IX/2011 regarding on National Referral Laboratory for Tuberculosis, National Strategy for TB Control in 2015-2019, National Health Strategy in 2015-2019 and others.

<Institutional Aspect>

As expected at the time of planning, TB Reference Laboratory in West Java is officially elected as National TB Reference Laboratory (for sputum smear microscopy), with the responsibility to support government to implement EQA with LQAS, and to support lower levels

of the laboratory network. Challenges still remain because of the limited manpower with only 11 laboratory staff members. With the increased burden after the scaling up, the additional 5 technical staff members and 1 administration personnel has been allocated through the Global Fund to fight AIDS, Tuberculosis and Malaria (Global Fund). However, in reality if the financial support from Global Fund is stopped in future, sustainability of this additional staff allocation is not known. The roles and responsibilities among provincial, district, intermediate and health center laboratories on implementing EQA are clear.

<Technical Aspect>

The National TB Reference Laboratory (for sputum smear microscopy) has sufficient skills. Although turnover (of individuals trained under the project) is high because of pension, continuation of the study, rotation and promotion, the challenge of personnel has been responded by NTP. GoI has commitments to allocate sufficient TB personnel and provide training under the established training system. GoI recognizes that roles and skill both Wasor and laboratory technicians are critical to provide technical support, regular supervision and also services.

<Financial Aspect>

TB program of NTP/MOH has been supported by development partners, especially from the Global Fund and local budget. The fund will be diminished gradually since Indonesia has been acknowledged as a lower middle income country. It is expected that through the exit strategy GOI can find another stable sources to replace fund from development partners to support EQA.

<Evaluation Result> Some problems have been observed in terms of institutional and financial aspects to support EQA, and therefore, sustainability of effects of the project is fair.

5 Summary of the Evaluation

The project achieved its project purpose as the number and percentage of the facilities that participate in the new EQA increased at project completion and has continued thereafter. The overall goal was also achieved as the new EQA has expanded nationally and the indicators show that TB test has been performing well. As for sustainability, there are challenges in terms of institutional and financial aspects such as insufficient manpower, and uncertain financial sources, however, the policy and technical aspects support the effects of the project to continue. As for efficiency, the project cost exceeded the plan.

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

III. Recommendations & Lessons Learned

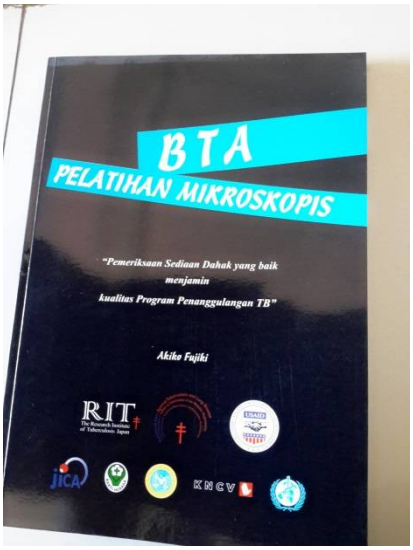
<Recommendations for Implementing Agency>

1. To improve the participation of EQA at the health facilities, Wasor play the main role. However, currently the task of Wasor is not only the program issues but also admin things. It is crucial to reduce the Wasor burden by hiring or contracting staff for administration.
2. To respond the high turnover of staff, the interactive methods with high effective and high efficient TB training (e.g. minimum required training with low budget, as well as refreshment training) should be provided to meet the needs. The way project constructed the cascade training was fair but authentic and time/ budget consuming to rollout to whole nation (especially context of Indonesia where lies vast archipelago). Moreover, the advance innovation for training to catch up the remote areas using a distance learning are highly required.

<Lessons Learned for JICA>

The deep analysis of governmental/ institutional structure related to targeted program during project formulation stage is required to minimize missing components of the structure. For example, in the Project, Airlangga University (UNAIR) is under Ministry of Education, not Ministry of Health, thus in the end the laboratory in UNAIR was not appointed as National Reference Laboratory as initially planned (it is appointed as the provincial reference laboratory only, thanks to high commitment by the head of provincial health office). Also, Directorate General of Health Effort (BUK) of Ministry of Health was not involved in the project, however the administration of laboratories for TB is not under NTP but under BUK. The project did achieve expansion of participating laboratories, but if BUK would be involved, it would bring more ownership thus sustainability in Indonesian side to utilize the result/ output of the project.

Interview with Master of Trainer and East Java Provincial Health Officer



A guideline for the training developed by Ministry of Health and the project are still utilized as a national reference.