

**EVALUATION REPORT**  
**ON JAPANESE TECHNICAL COOPERATION**  
**FOR**  
**THE MAJOR INFECTIOUS DISEASES CONTROL PROJECT**  
**IN MYANMAR**  
**[TUBERCULOSIS]**

**15 June 2007**

**JAPAN INTERNATIONAL COOPERATION AGENCY, JAPAN**

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## **1. Background**

The first draft Project Design Matrix (PDM) of the tuberculosis control component of the Major Infectious Disease Control Project (the Project) was drafted in March 2002. It was revised and finalized in March 2004, when Yangon and Mandalay Divisions were selected as the Project sites. Based on the PDM, technical cooperation was provided for nearly two years prior to the official commencement of the Project in January 2005. This project review, as a part of the mid-term evaluation mission of the Project, was carried out to assess the progress and constraints, and make constructive recommendations for the better implementation of the Project for the remaining period of cooperation.

## **2. Evaluation members**

Dr. Katsunori Osuga	Research Institute of Tuberculosis, JATA
Ms. Tomomi Ibi	Human Development Department, JICA HQ
Mr. Shinsuke Tsuruta	Consultant, RPI
Dr. Aye Htun	JICA MIDC Project
Dr. Thandar Hmun	National Tuberculosis Program, Myanmar

## **3. Evaluation process**

Report and record review, interviews, discussions, meetings, and field visits

## **4. Evaluation of the Project**

### **4.1. Evaluation of Overall Goal:**

*"TB is no longer a public health problem in Project sites in Myanmar"*

TB was the 8<sup>th</sup> leading cause of morbidity, and 4<sup>th</sup> leading cause of mortality in Myanmar in 2004, and is considered as the 2<sup>nd</sup> priority disease in the National Health Plan 2001-2006. Continuous and concerted effort is required before the Project Goal is reached.

### **4.2. Evaluation of Project Purpose:**

*"TB control in Yangon and Mandalay Divisions improves"*

The DOTS strategy was introduced in Myanmar in 1997. The anti-TB drugs through the GDF were made available in 2001, and 100% geographical coverage by DOTS was achieved in 2003. According to the TB national statistics, the NTP has made a significant improvement in epidemiological indicators in the past few years. The case detection rates for new smear positive pulmonary TB cases (CDR) have been: 73% (2003), 83%(2004), and 95%(2005). Their cure rates (CR): 72%(2002), 72%(2003), and 75%(2004), and treatment success rates (TSR): 82%(2002), 81%(2003), and 84%(2004).

Yangon and Mandalay Divisions, where a third of the total TB patients reside, have been following the same trend. In 2005, at the beginning of the Project, the CDR of Yangon and Mandalay Divisions were 158% and 67% respectively, while CR and TSR of 2004 cohort were 73%/82%(Yangon), and 77%/87%(Mandalay).

Neither Yangon nor Mandalay Division has reached the indicators of the Project Purpose (CR>85%) yet, though Mandalay has always scored higher CR, while Yangon has always

reported higher CDR. Although CDR of Yangon has always been higher than that of Mandalay's, the recent prevalence survey result suggests TB burden might have been underestimated. At the time of the review, the Project Purpose has not been achieved yet.

#### **4-3 Evaluation of Outputs**

The Project has been evaluated through assessing the status of each Output.

##### Output 1: Capacity for program management and epidemiological data management for TB control strengthened.

###### *Progress*

- NTP office facility in Yangon was improved. Throughout the two years prior to the official commencement of the Project in January 2005, office furniture such as conference tables and chairs were provided, and improvement of the NTP building structures was made to upgrade the NTP working environment for better program management.
- TB epidemiological assessment (Prevalence survey) was carried out. Through the joint effort with partners such as WHO, Japan Anti-Tuberculosis Association (JATA), the GFATM, and the Project, the prevalence survey was conducted in Yangon and Mandalay. The survey result is expected to provide important epidemiological information on the status of TB situation in the country. The whole process of the investigation has also provided an important opportunity to build up capacity in epidemiological data management. Three training courses on quantitative and qualitative research methodology were also conducted.
- Two Operational researches (Delay analysis in Yangon, Mandalay, and South Shan State, and Comparison of EQA method with the conventional QC method for TB laboratory) were conducted. The papers were presented during the 36<sup>th</sup> and 37<sup>th</sup> international conferences of the IUATLD in Paris.
- TB screening for factory workers was conducted in Yangon and Mandalay. Out of 4,010 factory workers screened in Yangon, there were 4 SS+ (4/4,010 or 100/100,000). In Mandalay, 5 were SS+ among 3,971 factory workers screened (5/3,971 or 126/100,000).

###### *Constraints*

- Since the NTP Office has moved out of Yangon, support for the improvement of the NTP Office in Yangon by the Project in the past may no longer make a direct contribution to the capacity building and the strengthening of the NTP management.
- Nationwide prevalence survey needs to be conducted. Financial support for conducting the survey is currently uncertain.

##### Output 2: TB laboratory services improved.

###### *Progress*

- TB Reference Laboratory (Yangon, Mandalay) was strengthened. In addition to the laboratory equipment provided by the IUATLD, the Project also supported the two reference laboratories through providing generators for power shortages, water distillers, office furniture for meeting and training. Technical assistance was provided to strengthen laboratory management capacity through short-term consultants. Both labs now have the

capacity to conduct the AFB culture exam (the sensitivity test is only available in Yangon), although continuous quality control measures are required for the tests involving culture technique.

- 40 microscopes (30 in 2005 and 10 in 2006) were provided. This has contributed to the increase of the CDR.
- Although quality control measures for sputum smear microscopy exam existed before in Myanmar, it was not always functional, nor met the international standard. The External Quality Assurance (EQA) model was established in 12 microscope centers in Yangon and in Mandalay respectively.
- Based on the experiences obtained through the EQA model established in Yangon and Mandalay, the EQA manual was developed.
- Twelve laboratory trainings on smear microscopy exam were conducted (2 times/year, total trained were 120).

#### *Constraints*

- Both manpower and financial resources are limited for TB laboratory supervision. To expand the EQA system beyond the 24 model centers, external resources need to be secured to make supervisory visits to the low-performing labs based on the EQA results.

#### Output 3: Monitoring and supervisory capability for TB control strengthened.

##### *Progress*

- Supervisory visits were made to 6 of the 17 low-DOTS performance townships in Yangon. Most of the 6 supervisory visits to the DOTS low-performing townships were made together with the monthly EQA monitoring activities. Half-yearly DOTS assessment meetings were actually conducted once a year.

##### *Constraints*

- No supervisory visits were made to 8 low-DOTS performance township in Mandalay with the Project support. Difficulties in accessing the financial support from the Project for supervision in the Project sites (Yangon and Mandalay) have resulted in this.

#### Output 4: Community participation for TB control promoted.

##### *Progress*

- Coordinated with NTP and MMA, Public Private Partnership (PPP) was started in 2 townships (North Okkalapa in Yangon and Pyin Oo Lwin in Mandalay). Educational and supporting materials produced by the Project were utilized to facilitate the partnership. The patients referral register, the referral forms for the private doctor, and the feedback forms from the public health side are all in use. At the time of this review, 159 patients were referred from the private doctors to the township DOTS clinic in North Okkalapa in the past 6 months. In Pyin Oo Lwin, 111 patients were referred. In both pilot townships, 30-40% of those referred were diagnosed as TB. In North Okkalapa, 29 patients (18% of those referred) did not reach the township DOTS clinic.
- The PPP Coordinators were recruited in Yangon and Mandalay for the data collection and regular reporting on patient referral from private to public sector. Without the recruited PPP

Coordinators, the above data could not have been obtained. During the review, the PPP Coordinator in Yangon conducted a follow-up on the 29 patients who were lost. The result was as follows: 8 were unable to find, 8 have gone to other township clinics, 1 did not visit the public health side, and 12 have improved without any intervention. This can be an interesting operational study, providing useful information on patients and doctors behavior.

#### *Constraints*

- Monitoring of the PPP activities, such as referral of TB suspects from private doctors to the public health side, has been limited.

#### Output 5: Communication and advocacy for TB control promoted.

#### *Progress*

- IEC materials (2,000 posters and 30,000 pamphlets for awareness raising) were developed and distributed during the World TB Day and other occasions. Over 1,000 pamphlets were produced for the private doctors for PPP.
- 3 kinds of educational videos on TB were produced (1 jointly with PSI), and used during the World TB Day.
- TB Patients Care Booklet (40,000 copies), and TB Knowledge Book (50,000 copies) were produced and distributed to TB patients on DOTS.

#### **5. Recommendations**

Based on the assessment of the 5 Outputs in the PDM, following recommendations have been made:

#### *(To the MOH, Myanmar)*

- (1) Ensure lab supervision for the expansion of External Quality Assurance (EQA) system beyond the model area of Project sites.**

The EQA model established in the Project sites (12 townships in Yangon, and 12 townships in Mandalay), are functional because of the on-going close monitoring and supervision. It is crucial to ensure this supervision if the EQA system is to expand in the areas beyond the Project support. Human as well as external financial resources to enable this regular supervision, especially during the expansion period, need to be secured.

- (2) Develop suitable mechanism (human and financial resources) to facilitate supervisory visits in the Project sites.**

Additional manpower needs to be provided to strengthen the supervisory capacity for DOTS implementation in the Upper Myanmar TB Center in Mandalay. To provide financial support for the supervisory visits to those DOTS low-performing townships in Yangon and Mandalay Divisions, appropriate mechanism to facilitate easy access to the supervisory funds from the Project needs to be established. Both Myanmar and JICA sides should

coordinate for this.

**(3) Revise PDM accordingly to reflect the above.**

See Annex 9.

*(To JICA)*

**(1) Under the management of the NTP, the Project office (TB) will stay in the present location, providing support to the NTP.**

JICA having invested on the improvement of the current NTP office facility in Yangon, the Project office should remain at the present location. The Project will continue to provide necessary technical assistance, within the PDM and its budget, to the NTP, Yangon Division, and Mandalay Division.

**(2) Technical support should be provided to carry out nationwide prevalence survey (partnership approach).**

For the planned national TB prevalence survey, technical support should be provided within the Project budget. As experienced during the survey in Yangon, coordination among partners, such as 3-DF, WHO, JICA, and JATA, should be well considered.

**(3) Develop a monitoring method for Public Private Partnership (PPP) activities at the Project sites.**

Although effective, monitoring the patient referral by the PPP Coordinator may not be expandable or sustainable in the long run. Together with the participating public health side and private sector in the township, innovative ideas (including a mechanism without the recruitment of the PPP Coordinators) should be discussed to make this referral system sustainable.

**(4) To assure good performance of TB control in Yangon and Mandalay Divisions, financial support for supervision from Central to Divisions/States with low DOTS and EQA performance, outside of Yangon and Mandalay Divisions, should be considered.**

With the increased mobility of the population toward the urban areas such as Yangon and Mandalay Divisions, TB control status in the Project sites can be negatively affected by the low DOTS and EQA performing States and Divisions. Therefore, in order to maintain good performance of TB control in Yangon and Mandalay, financial support for supervision from Central (NTP) to States/ Divisions with low performance in DOTS and EQA implementation, outside of Yangon and Mandalay Divisions, should be considered.

**(5) Revise PDM accordingly to reflect the above.**

See Annex 9.

## **6. Evaluation by Five Criteria**

### **6.1. Relevance**

#### **(1) General**

Tuberculosis is among the most serious challenges of the government of Myanmar. The Project is, therefore, very relevant to the national need, for it aims to control these diseases.

Tuberculosis control contributes a lot to reducing vulnerability of the poor. The Project is therefore relevant to the human security.

#### **(2) Myanmar's National Policy**

According to "Health in Myanmar 2006", TB is the second priority disease included in the National Health Plan of Myanmar.

The direct target of the cooperation is the National Tuberculosis Program, that is the key organization for tuberculosis control in Myanmar.

The Project has adopted an internationally recognized approach such as DOTS.

#### **(3) Japan's Policy for Cooperation with Myanmar**

Japan's cooperation policy for Myanmar focuses on the basic human needs or humanitarian assistance, so the Project is highly relevant.

The Government of Japan launched the Infectious Disease Initiative in 2000 and the Project was formulated according to the initiative. In addition, the Project utilizes experiences and knowledge accumulated in Japan.

#### **(4) Relevance of Target Areas**

Yangon and Mandalay are two large urban centers in Myanmar and the activities there can be diffused to other Divisions and States.

### **6.2. Effectiveness**

#### **(1) Progress of Outputs and Purpose**

The Project accords with the national programs of the 3 diseases. In addition, the Project approach is based on the world trend of measures to control the disease, namely, DOTS of tuberculosis. Therefore, the effectiveness of the Project toward its outputs and purpose has been generally proven.

#### **(2) Specific Factors Affecting the Project**

Heavy work load of some of the key staff and lack of transport means limit the Project activities in some occasions.

### **6.3. Efficiency**

#### **(1) Overview**

Close collaboration between the Project and other donors such as WHO makes the Project efficient.

#### **(2) Assignment of Experts**

No Japanese long term expert is assigned. Instead, a national consultant is assigned on a full time basis and is utilizing his human network covering tuberculosis control.

Dispatching short-term experts and conducting workshops and/or supervision have been properly



synchronized.

### **(3) Counterpart Training in Japan**

There has been no participation in the counterpart training since the official start of the Project.

### **(4) Equipment**

In many cases, equipment provided by the Project is complementarily used with inputs from other development partners such as JATA, WHO, etc.

No case of underutilization of the equipment has been observed.

### **(5) Operation Budget**

The operation budget has been appropriately handled.

### **(6) Communication and Coordination among Stakeholders**

There are a number of activities of the Project coordinated with other development partners. For example, the TB prevalence survey in Yangon Division was conducted in partnership of NTP, WHO, GFATM, JATA and JICA in 2006. The counseling guidebook developed by the Project will be produced also by the Project for Yangon and Mandalay Divisions, while it is planned to be produced for other divisions and states by WHO. A DOTS related video clip was jointly produced by the Project and INGOs.

## **6.4. Impact**

Various systems developed by the Project are already spreading to some areas in Myanmar, beyond Yangon and Mandalay Divisions toward institutionalization as a national system. IEC materials and the EQA system are such examples.

## **6.5. Sustainability**

### **(1) Institutional sustainability**

The NTP has an established organization and the retention rate of the staff is generally high in the Ministry of Health of Myanmar. Therefore human resources and their systems developed by the Project are likely to be sustained after the termination of the Project.

### **(2) Financial sustainability**

Towards sustained development of the Project's achievement, efforts of all the partners involved in TB control are needed to secure financial sources for anti-TB drugs.

### **(3) Technical sustainability**

In general, key staff of NTP are well qualified, and so the technical sustainability is thought to be high, although the work burden of some of them is heavy.

**Annex 1 Project Design Matrix (PDM) for Tuberculosis, JICA Major Infectious Disease Control Project, Myanmar**

**TB**

Date: 19 January 2005

Target Group: Residents in Yangon & Mandalay Divisions  
Target Area: Yangon & Mandalay Divisions

Narrative Summary		Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<b>Overall goal</b> TB is no longer a public health problem in Project sites in Myanmar.				
<b>Project purpose</b> TB control in Yangon and Mandalay Divisions is improved.		By year 2009, CDR > 70% and Cure Rate > 85% will be sustained in Yangon and Mandalay Divisions.	NTP annual report on cohort analysis	Political commitment for TB control maintained.
<b>Outputs</b> 1. Capacity for program management and epidemiological data management for TB control is strengthened. 2. TB laboratory services are improved. 3. Monitoring and supervisory capability for TB control is strengthened. 4. Community participation for TB control is promoted. 5. Communication and advocacy for TB control is promoted.		1-1. Quality of NTP facility and developed publication. 2-1. Frequency of training. 2-2. Quantity of supplies and equipment. 2-3. No and QC of newly established diagnostic centers. 3-1. No of Divisional meetings and supervisions held. 3-2. NTP performance indicators improved. (CDR, CR&TSR, Defaulter & Transferred-Out Rates) 4-1. No of referrals from GP increased by 30%. 5-1. No. & quality of IEC materials produced and distributed. 5-2. No. & quality of advocacy activities carried out.	1-1. Facility observation 1-2. NTP publication 2-1. Project record 2-2. Project record 2-3. Lab proficiency testing, and QC results 3-1. Project record 3-2. NTP cohort data and Supervision report 4-1. New referral forms 5-1. Project report 5-2. Project report	1. Drug supply maintained. 2. Vaccant laboratory technicians posts filled 3. HIV prevalence remains stable.
<b>Activities</b> 1-1. Improve NTP facilities for program management, training, and data analysis. 1-2. New District TB management modules developed. 1-3. Carry out operational researches. 2-1. Conduct laboratory training. 2-2. Monitor QC of the smear examination for newly established TB laboratories. 3-1. Conduct Divisional TB assessment meeting (DOTS conference) regularly. 3-2. Carry out supervision in the two Divisions. 4-1. Establish Public Private Partnership in the Divisions. 5-1. Develop IEC materials and conduct advocacy events to raise awareness on TB. 5-2. Develop and distribute DOTS handbook for TB patients.		<b>Inputs</b> <Japanese> Long term expert Short term expert Recruitment of the National Consultant Recruitment of an Assistant for the National Consultant Equipment for program management and data analysis (Computers for Information Section of NTP, Divisional, and District TB offices) Supplies and equipment for training Laboratory equipment and supplies Pick-up (e.g. Hilux) for supervision in two Divisions Local cost for data collection and assessment Production cost for training modules, IEC materials Local cost for advocacy events, meeting, and training TA&DA for supervision in two Divisions CP training in Japan (e.g. RIT) Attendance at international conferences on TB (e.g. IUATLD conference)	<b>Inputs</b> <Myanmar> Project office facilities NTP officers Necessary supply	<b>Pre-conditions</b> Agreement between the Government of Myanmar and JICA obtained.

Annex 2 List of Dispatched Experts to the Project

Long Term / Short Term	HIV/TB/Malaria	Field	Name	Dispatched Period	Major Activities
L		Team Leader	Mr. Masahiro KUMOMI	10/04/2005 – 09/07/2007	Overall Project management by representing Japanese expert team
L		Coordinator	Mr. Kenji IKARI	07/04/2003 – 06/08/2005	Coordination for smooth and effective Project implementation
L		Coordinator	Mr. Hidemoto TANAKA	28/07/2005 – 27/07/2007	Coordination for smooth and effective Project implementation
L	IEC	IEC ( Information, education, and communication )	Mr. Kazuaki SUMIDA	30/06/2003 – 29/06/2005	Technical transfer and Project management on IEC field
S	IEC	IEC ( Information, education, and communication )	Dr. Kazuaki SUMIDA	20/11/2005 – 20/03/2006	Technical guidance on IEC development
S	IEC	IEC ( Information, education, and communication )	Mr. Kazuaki Sumida	25/01/2006 – 26/03/2007	Technical guidance on IEC materials for World TB Day ( Poster, TV spot ) and PPP activities
L	HIV/AIDS	Public Health /HIV/AIDS Control	Dr. Hideki MIYAMOTO	19/08/2004 – 18/01/2007	Technical transfer and Project management on HIV/AIDS Control field
S	HIV/AIDS	HIV/AIDS Control/Quality Control on Blood Screening	Dr. Namiko YOSHIHARA	18/10/2005 – 11/11/2005	Technical guidance on HIV/AIDS testing quality control conducted by National Health Laboratory (NHL) and National Blood Center (NBC)
S	HIV/AIDS	Public Health/HIV/AIDS Control	Dr. Katsuyuki TSUKAMOTO	12/02/2006 – 25/02/2006	Technical guidance on the operational research proposals initiated by STD team leaders
S	HIV/AIDS	HIV/AIDS Control/Quality Control of HIV/AIDS Testing	Dr. Namiko YOSHIHARA	29/10/2006 – 19/11/2006	Studied current situation of National External Quality Assurance (NEQAS) for HIV testing, and gave suggestions on it.
L	Malaria	Malaria Control	Mr. Masatoshi NAKAMURA	07/07/2003 – 06/07/2007	Technical transfer and Project management on Malaria Control field
S	Malaria	Malaria Control/Quality Control of Malaria Diagnosis	Dr. Tomoko ONDA	31/03/2005 – 27/06/2005	Technical guidance on quality control of Malaria diagnosis ( situation analysis on present testing quality of Malaria )
S	Malaria	Malaria Control/Monitoring	Dr. Jun AKIYAMA	17/10/2005 – 03/11/2005	Review on the current Malaria control activities as a member of external review mission for Malaria control
S	Malaria	Malaria Control/Case Management of Malaria	Dr. Yasushi SHIMADA	22/01/2006 – 21/02/2006	Technical guidance on case management of Malaria
S	Malaria	Malaria Control/Medical Sociology	Dr. Chihiro SHIRAKAWA	22/01/2006 – 14/02/2006	Technical guidance on operational research with human behavioral and social aspects
S	Malaria	Community Health of Malaria	Ms. Tatsue YAMAZAKI	26/03/2006 – 09/04/2006	Technical guidance on nursing for Malaria control
S	Malaria	Malaria Control/Case Management	Dr. Takeshi UKAI	26/03/2006 – 02/04/2006	Monitoring Malaria control activities
S	Malaria	Malaria Control/Quality Control of Malaria Diagnosis	Dr. Tomoko ONDA	22/01/2006 – 21/04/2006	Technical guidance on effective quality control of Malaria diagnosis
S	Malaria	Malaria Control/Quality Control of Malaria Diagnosis	Dr. Tomoko ONDA	18/02/2007 – 14/04/2007	Technical guidance on quality control of Malaria diagnosis ( development of basic operation manual for Microscopy to be utilized at Rural Health Center level, supervisory field visit to RHCs, analysis of present testing quality )

S	TB	Tuberculosis Control/DOTS Management	Dr. Katsunori OSUGA	26/03/2005 - 06/04/2005	Assessment on DOTS Management conducted by NTP, and suggestion on FY 2006 plan of operation
S	TB	Tuberculosis Control	Dr. Ikushi ONOZAKI	01/09/2005 - 16/09/2005	Orientation on TB prevalence survey ( feasibility study, selection of survey site, field tests, workshop )
S	TB	Tuberculosis Control/DOTS Management	Dr. Katsunori OSUGA	17/10/2005 - 30/10/2005	Assessment on DOTS Management conducted by NTP, and suggestion on FY 2006 plan of operation
S	TB	Tuberculosis Control Assessment	Mr. Yoichi AKIYAMA	01/12/2005 - 16/12/2005	Technical guidance on chest X Ray operation in Prevalence Survey
S	TB	Tuberculosis control/Quality Control for Tuberculosis Diagnosis	Ms. Akiko FUJIKI	14/12/2005 - 07/01/2006	Technical guidance on quality control for tuberculosis diagnosis ( operation manual on AFB microscopy, supervisory visit )
S	TB	Tuberculosis Control/Prevalence Survey	Dr. Ikushi ONOZAKI	12/07/2006 - 22/07/2006	Technical guidance on overall management for prevalence survey
S	TB	Tuberculosis Control/Epidemiology	Dr. Norio YAMADA	12/07/2006 - 23/07/2006	Technical guidance on epidemiological analysis for prevalence survey
S	TB	Tuberculosis control/Quality Control of TB testing	Ms. Akiko FUJIKI	07/12/2006 - 26/12/2006	Technical guidance on establishment of External Quality Assurance ( operation manual, supervisory field visit, and workshop )
S	TB	Tuberculosis Control Program	Dr. Katsunori OSUGA	21/01/2007 - 03/02/2007	1. Monitored the current activities conducted by National TB Program as a member of External Review Mission 2. Consultation on Plan of Operation in FY2007

Annex 3 Equipment List Provided by the Project

EP/EX*	JFY	Inspected Date	Distributed to	Name of Equipment	Specifications	Maker	Q'ty	Unit Price (USD)	Amount	Remarks
EP	2005	2006/6/30	DOH	4WD Double Cab Vehicle	Hi-Lux Double-Cab Pick-up Truck, KUN25L-PRMDH	Toyota, Thailand	1	30,837	30,837	
EP	2005	2005/12/6	NAP	Video LCD Projector	Multi media Projector LV-S3	CANON	1	1,240	1,240	
EP	2005	2006/6/30	NAP	4WD Double Cab Vehicle	Hi-Lux Double-Cab Pick-up Truck, KUN25L-PRMDH	Toyota, Thailand	1	30,837	30,837	
EP	2006	2007/3/1	NAP	HIV 1/2 Test Kit	Determine-HIV 1/2 Test Kit -100 test/kit	Bangkok Inter Products, Thailand	300	299	89,587	
EP	2006	2007/5/9	NAP	HIV 1/2 Test Kit	Serodia-HIV 1/2 Test Kit - 220 test /kit	Fujirebio, Japan	150	322	48,300	
EP	2006	2006/12/19	NBC	Elizer Reader	ELZA Reader, MULTIS CAN EX	Human GmbH, Germany	2	5,180	10,360	
EP	2006	2006/12/19	NBC	Elizer Washer	ELZA Washer, Well Wash 4 MK2	Human GmbH, Germany	2	4,100	8,200	
EP	2005	2006/3/18	NHL	Safety Cabinet	ESC-AC2-4E1	ESCO, Singapore	1	5,940	5,940	
EP	2005	2006/3/18	NHL	Orbital mixer and shaker	SEL-30000435	SELECTA, Spain	1	3,600	3,600	
EP	2005	2006/3/18	NHL	Auto clave	SEL-4047725	SELECTA, Spain	1	4,330	4,330	
EP	2005	2006/3/24	NHL	Micro Pipette	Size 5-50ul, CE,TUV,ISO9001:2000 Certified	Intech, India	60	56	3,360	
EP	2005	2006/3/24	NHL	Micro Pipette Tip	500pc/pkt, CE,TUV,ISO9001:2000 Certified	Diapette, India	60	7.36	442	
EP	2006	2006/12/22	NHL	Medical Freezzer	LS-381	Patterson Scientific, UK	1	5,001	5,001	
EP	2006	2006/12/22	NHL	Pharmaceutical Refrigerator	BXY 190	Kenxin, HK	1	1,900	1,900	
EP	2006	2006/12/22	NHL	Refrigerated Centrifuge with Rotor & Buck for 15ml & 50ml		Andreas Hettich GmbH & Co., Germany	1	6,250	6,250	
EP	2006	2006/12/22	NHL	Digital Water bath with lid	Humaqua-5	Human GmbH, Germany	1	908	908	
EX	2006	2006/10/6	NHL	Micropipette & Tips	Adjustable 2-20 µL (3pcs), 100-1000 µL (3pcs), Pipette Controller (2pcs), Tips (2160pcs)	Octagon	1	606,000	606,000	

EP	2005	2005/12/6	NTP	Video LCD Projector	Multi media Projector LV-S3	CANON	1	1,240	1,240
EP	2005	2006/2/10	NTP	Binocular Microscope	YS 100 Basic Set	NIKON, Japan	30	990	29,700
EP	2005	2006/6/30	NTP	4WD Double Cab Vehicle	H-Lux Double-Cab Pick-up Truck, KUN25L-PRMDH	Toyota, Thailand	1	30,837	30,837
EX	2005	2006/2/20	NTP	Portable X-Ray Unit with carrying case	PX-20HF	Adore Medical Corporation(Fujimoto Photo Industrial Co.Ltd)	1	13,800	13,800
EX	2005	2006/2/20	NTP	Stationary stand for portable system	PS-1-111	Adore Medical Corporation (Fujimoto Photo Industrial Co.Ltd)	1	2,770	2,770
EX	2005	2006/2/20	NTP	Automatic X-ray film processor	ECOMAT21	ELK Corp.,Japan	1	5,940	5,940
EX	2005	2006/2/20	NTP	Portable Generator	EU28A . 3.6KVA, 6.5HP	HONDA, Japan	1	2,000	2,000
EX	2005	2006/2/20	NTP	Compact Dark Room	DR-1	MAEDA Co.,Japan	1	1,220	1,220
EX	2005	2006/2/20	NTP	X-Ray Protective Accordion Screen	PS-1	HOSHINA, Japan	1	1,910	1,910
EX	2005	2006/2/20	NTP	Fixer for X ray processing	RPX-OMAT (for extensively slow film)	Kodak	200	59	11,800
EX	2005	2006/2/20	NTP	Developer for X ray processing	RPX-OMAT-LO (for extensively slow film)	Kodak	200	34	6,800
EX	2005	2006/2/20	NTP	Radiographic Stand	NH-2T-A	ELK Corp.,Japan	1	490	490
EX	2005	2006/2/20	NTP	X Ray Film Viewer	LH-1K	Miryama, Japan	1	345	345
EX	2005	2006/2/20	NTP	X Ray Film Cassette	PL-BK-CF & HS	Okamoto, Japan	10	635	6,350
EX	2005	2006/2/20	NTP	Microfine Grid	MS, 80 lines /cm	ELK Corp.,Japan	2	1,420	2,840
EX	2005	2006/2/20	NTP	X Ray Protective Apron	FLO Pb 0.25mm	Hoshina	1	455	455

EX	2005	2006/2/27	NTP	Liquid for Fixer	RPX-OMAT LO 4x 4 L	KODAK	200	43	8,600
EX	2005	2006/2/27	NTP	Liquid for Developer	RPX-OMAT 1Box ( 16L )	KODAK	200	72	14,400
EX	2005	2006/2/27	NTP	Radiographic Stand	NH-27A	ELK Corpt	1	760	760
EX	2005	2006/2/27	NTP	X-Ray Film Viewer	LH-1k 14" x 14"	Moriyama	1	370	370
EX	2005	2006/2/27	NTP	X-Ray film Cassette	PL-BK-CF	Okamoto Co.	10	640	6,400
EX	2005	2006/2/27	NTP	Microfine Grid for X-Ray	Model : MS	ELK Corpt	2	1,810	3,620
EX	2005	2006/2/27	NTP	X-Ray Protective Apron	FLO	Hoshina	1	500	500
EX	2005	2006/2/27	NTP	Film Mark Set	Model : NH-23 B	ELK Corpt	1	134	134
EX	2005	2006/2/27	NTP	X-Ray film Storage Cabinet	Model : NH-43	ELK Corpt	1	572	572
EP	2006	2007/1/17	NTP	Binocular Microscope	YS-100 Basic Set	NIKON, Japan	10	990	9,900
EP	2006	2007/1/18	NTP	Fuchin basic	25ml	UK	110	69	7,560
EP	2006	2007/1/18	NTP	Sulphuric Acid	Conc. 2.5L		100	41	4,100
EP	2006	2007/1/18	NTP	Xylene 1I	2.5 L		1	34	34
EP	2006	2007/1/18	NTP	Sodium Hydroxide	500gm		1	10	10
EP	2006	2007/1/18	NTP	Slide Holding Boxes	25' size		200	2.5	500
EP	2006	2007/1/18	NTP	Diamond Pen		Assistant, Germany	50	31	1,550
EX	2006	2006/10/26	NTP	Books	Pictorial Textbook for AFB Microscopy	JATA	50	2	100

EP	2005	2005/11/18	VBDC	Mefloquine	Anti- Malaria Medicine 250. Tab / Box			50	39	1,950
EP	2005	2005/12/6	VBDC	Video LCD Projector	Multi media Projector LV-S3		CANON	1	1,240	1,240
EP	2005	2005/12/6	VBDC	Insecticide for Mosquito Net.	Supa Tab for Bed Net. (Delta methrin WT)		PSI	20000	0	8,000
EP	2005	2006/3/10	VBDC	Artemether Tablet	Anti- Malaria Tablet 12. Tab / Boc			2000	1	2,360
EP	2005	2006/3/10	VBDC	Artemether Ampul	Anti- Malaria Medicine 6. Ampul / Box			200	5	900
EP	2005	2006/3/10	VBDC	Rapid Diagnostics Test Kit for Malaria	25. Test / Kit for P.Falciparum Malaria		Orchid Biomedical Systems, India	200	28.50	5,700
EP	2005	2006/6/16	VBDC	Mosquito Net	LLINS ( Long Lasting Insecticide Net )		Siamdutch, Thailand	5471	3.29	18,000
EP	2005	2006/6/30	VBDC	4WD Double Cab Vehicle	Hi-Lux Double-Cab Pick-up Truck, KUN25L-PRMDH		Toyota, Thailand	1	30,837	30,837
EP	2006	2006/3/27	VBDC	Artemether	6 ample/box		Kaung Pharmacy Co.Ltd	2750	1.82	5,000
EP	2006	2006/11/20	VBDC	Motor Bike	100cc		Suzuki	2	2,350	4,700
EP	2006	2006/12/1	VBDC	Slide Glass	100pcs/pack			60	10	570
EP	2006	2006/12/1	VBDC	Rancet	200 pcs/box x 60		Assistant, Germany	60	5.5	330
EP	2006	2006/12/1	VBDC	GIMZA Stain	100ml/bottle		MERK, Germany	18	40	720
EP	2006	2007/2/15	VBDC	Mosquito Net	RX11WTB		Siamdatch, Thailand	10000	4.5582	45,582
EP	2006	2007/3/16	VBDC	Mefroquine	250mg X-100 tab/bottle		Siam Nissei, Thailand	1000	5.66	5,660
EP	2006	2007/3/19	VBDC	Sylinge	3mL 23Gx1-1/4"		NIPRO	7200	0.5	3,600
EP	2006	2007/3/19	VBDC	Drip	Infusion Set, Dextrose 5% drp set DW 500 ml			1000	1.5	1,500
EP	2006	2007/3/21	VBDC	Rapid Diagnostics Test Kit for Malaria	25. Test / Kit for P.Falciparum Malaria		Orchid Biomedical Systems, India	1600	25	39,840

\*EP : Equipment Provision, EX : Equipment affiliated with Expert



**Annex 4 Operational Costs Expended by the Project**

\*Remark. Such costs as for long and short term expert dispatch, training in Japan, technical equipment provision are excluded from the following figures.

Unit: US Dollars

Field	Activities	JFY2004 (Jan19-Mar31,2005)		JFY 2005 (Apr1,2005 - Mar31,2006)		JFY 2006 (Apr1,2006 - Mar31,2007)		Total
		Amount	Sub-total	Amount	Sub-total	Amount	Sub-total	
Project Management (DOH)	Overall project management ( local staff, communication, office supplies & consumables, transportation, equipment maintenance, etc )	29,330	29,330	38,763	38,763	40,058	40,058	108,151
TB Control	1. Strengthen capacity for program management and epidemiological data management for TB control	4,433		3,079		6,045		
				16,982		21,547		
			6,184	4,561	2,279			
	2. Improve TB laboratory services	600		6,213		9,801		
	3. Monitoring and supervisory capability for TB control			3,318		2,855		
			1,529	28,693	3,135	64,006	2,005	95,367
	4. Promote community participation for TB control			750		8,118		
	5. Promote communication and advocacy for TB control	5,550		8,760		18,525		
	5-2. Develop and distribute DOTS handbook for TB patients	4,200						
	Project Office Management for TB Control (NTP,YGN)	6,197		17,208		24,192		



Malaria Control	<p>1. Introduce effective community based malaria control program in selected areas</p> <p>2. Improve collaboration between communities and health facilities in selected areas</p> <p>3. Establish system for prevention and management of epidemics</p> <p>4. Improve epidemiological analysis system</p> <p>5. Strengthen regional collaborative activities</p> <p>6. Operational and applied field research effectively contribute for outputs</p> <p>Project Office Management for Malaria control (VBDC, YGN)</p>	1-1. Empower communities for malaria control	210	55,357	103,197	3,009	191,703
		1-2. Develop community friendly technology package for treatment and prevention of malaria	460	14,055	103,197	13,444	
		1-3. Coordinate intersectoral collaboration		4,762	103,197	6,000	
		1-4. Link with other health related activities	3,920		103,197	2,198	
		2-1. Conduct training for health workers in deferent levels		2,507	103,197	9,648	
		2-2. Conduct training of proper referral system to communities		150	103,197		
		3-1. Stratify epidemic prone areas on GIS and investigate dynamics of endemic	5,630	1,427	103,197	4,461	
		3-2. Develop early warning system			103,197		
		4-1. Conduct training for GIS	3,430		103,197		
		4-2. Training of BHS for epidemiological analysis		720	103,197		
		5-1. Share the information in regional meeting. (Mekong RBM)		585	103,197		
		5-2. Conduct collaborative activities with partners			103,197		
		6. Operational and applied field research for out puts	12,222	16,967	103,197	10,506	
		Office supplies, transportation, communication, etc to support above mentioned the activities	2,153	6,667	103,197	11,215	
		Total		102,080	236,880	233,442	

**Annex 5 List of Key Counterparts for the Project**

Name	Designation	Component	Station
Dr. Tin Win Maung	Director General	Whole Project	Nay Pyi Taw
Dr. Kyaw Nyunt Sein	Deputy Director General	Disease Control	Nay Pyi Taw
Dr. Saw Lwin	Director	Disease Control	Nay Pyi Taw
Dr. Min Thwe	Program Manager	National AIDS Program (NAP)	Nay Pyi Taw
Dr. Win Maung	Program Manager	National Tuberculosis Program (NTP)	Nay Pyi Taw
Dr. Than Win	Program Manager	National Malaria Control Program	Nay Pyi Taw
Dr. Ne Win	Director	National Health Laboratory (NHL)	Yangon
Dr. Thida Aung	In charge of NBC	National Blood Center (NBC)	Yangon

### Annex 6 List of Counterpart Training In Japan

JFY	Subject	Name	Designation	Period
2006	Consultative Meeting on Infectious Diseases Control	Dr. Saw Lwin	Director ( Diseases Control ), Department of Health	30/10/2006 – 10/11/2006
2006	Consultative Meeting on Infectious Diseases Control (Malaria)	Dr. Ni Ni Aye	Malariologist, Vector Borne Disease Control Team, Dawei, Department of Health	30/10/2006 – 10/11/2006
2006	Consultative Meeting on Infectious Diseases Control (HIV/AIDS)	Dr. Than Win	Team Leader, AIDS/STD Control Team, Mandalay, Department of Health	30/10/2006 – 10/11/2006

Annex7 List of IEC Materials Produced by the Project

No	Description	Agency	Type	Qty	JFY	Produced Date	Remark(Key Message etc.)
1	Pamphlet Introduction to MIRC Project	DOH	Pamphlet	2,000	2005	Aug-05	Introductory information on MIRC Project
2	Book Photo Book on MIRC achievement	DOH	Photo book	500	2005	Mar-06	
3	Video Sexually Transmitted Diseases	NAP	Video, 2min	1	2003	Nov-03	For HIV/AIDS Exhibition, Yangon
4	Video HIV/AIDS	NAP	Video, 36min	1	2003	Nov-03	For HIV/AIDS Exhibition, Yangon
5	Video HIV/AIDS Exhibition in Yangon	NAP	Video, 9min	1	2003	Nov-03	Documentary Video
6	Video HIV/AIDS Exhibition in Mandalay	NAP	Video, 34min	1	2004	Dec-04	Documentary Video
7	Pamphlet Safe Blood Pamphlet	NBC	Pamphlet	30,000	2004	Apr-04	Blood Transfusion
8	Video Devoted Love	NBC	Video, 38min	1	2004	Apr-04	Drama, Safe Blood Promotion, Window Period
9	Pamphlet Safe Blood Pamphlet	NBC	Pamphlet	5,000	2004	Nov-04	Blood Transfusion
10	Poster with Calendar Blood Safety Calendar	NBC	Poster with calendar (4 pages)	2,000	2005	Dec-05	Blood donor message to the public
11	TV Spot Safe Blood Donor Promotion TV Spot Title: Fill in the blank Actors and address: Ye Lay, Tun Tun and example group, The Zin, Moe Pyi Pyi Maung Script: CHEB (Khin Su Hlaing) Director:	NBC	TV Spot	1	2005	Mar-06	To promote safe blood donors
12	TV Spot Safe Blood Donor Promotion TV Spot Title: You are welcome Actors and address: Night Pyaw Kyaw, Min Htet Kyaw Zin, Nay Htoo Naing, Nay Yan, Moe Yan Zin, Zin Zin Zaw Myint, Nan Su Yat Soe, Thin Zar Wint Kyaw, Dr. Nway Nway Oo Script: CHEB Director: Aung Moe (Paris)	NBC	TV Spot	1	2006	Aug-06	To promote regular safe blood donor. To advocate low risk life behaviour to the targeted group of blood donor of University students.
13	Book How to use Microscope	NHL	Reprinting Book	500	2003	Nov-03	Teaching Printing Material
14	Book Clinical Laboratory Technology	NHL	Reprinting Book	1,000	2003	Nov-03	Teaching Printing Material
15	Video Microscope	NHL	Video, 26min	1	2003	Mar-04	About Microscope. Manual for the training centre
16	Video HIV/AIDS Testing by Different type of Test-Kits	NHL	Video, 37min	1	2004	Mar-05	For Laboratory Technicians, 5 Different Types of Test-Kits
17	Video The Most Beautiful New Day To Be Continued	NHL	Video, 56min	1	2004	Mar-05	Drama, HIV/AIDS Transmission

18	Video	Quick Treatment (Actor: Yazar Nay Win)	NTP	Video, 12min	1	2003	Feb-04	Drama, DOTS Promotion (Early Proper Treatment, Free DOTS)
19	Poster	Wall Sheet Poster (Actor: Yazar Nay Win, Actress: Pwint)	NTP	Poster	20,000	2003	Feb-04	DOTS Promotion (Early Proper Treatment, Free DOTS)
20	Book	TB Patient Care Book	NTP	Book	30,000	2004	Nov-04	TB Patient Manual Book
21	Book	TB Knowledge Book	NTP	Book	20,000	2004	Mar-05	About TB, Prevention, Ways of transmission, Proper Treatment
22	Poster	Wall Sheet Poster (Actor: Naing Naing, Actress: Thet Mon Myint)	NTP	Poster	20,000	2004	Mar-05	Frontline TB Care Providers: Heroes in the Fight Against Tuberculosis
23	Poster	Wall Sheet Poster, Actors: Nay Toe, Ye lay, King Kaung, Ahyang Actress: Thazin, Wang Su Khine Thein, Thinzar Wint Kyaw	NTP	Poster	20,000	2005	Mar-06	For World TB Day, 'Action for life. Towards a world free of TB'
24	Book	TB Patient Care Book ( Revision )	NTP	Book	40,000	2005	Mar-06	TB Patient Manual Book. Upgrading the content of the book and reprinting
25	Book	PPP Guide Book	NTP	Book	2,000	2005	Mar-06	For promotion of Public Private Partnership
26	Book	TB Patient Care Book ( 2nd Revision )	NTP	Book	50,000	2006	Mar-07	TB Patient Manual Book.
27	Pamphlet	PPP Pamphlet for General Practitioners	NTP	Pamphlet	10,000	2006	Mar-07	General information on PPP activities to raise participation of GP
28	Book	Guide Book for AFB Microscopy	NTP	Book with photo	500	2006	Mar-07	Operational guide book on AFB Microscopy
29	Poster	Wall Sheet Poster: TB ANYWHERE IS TB EVERYWHERE, ( For World TB Day )	NTP	Poster	30,000	2006	Mar-07	To raise people's awareness of TB
30	TV Spot	TV Spot for World TB Day	NTP	TV Spot	1	2006	Mar-07	To raise people's awareness of TB

31	Video	Community Based Malaria Control	VBDC	Video	1	2005	Aug-05	Drama, Community Based Malaria Control
32	TV Spot	Myang Ya Daw Hma Lywan Myet Yeet Script: Dr. Mya Hnaung Nyio Director: Pan Gyi Soe Moe Actors and actress: Tu Htoo San, May TinZar Oo	VBDC	TV Spot	1	2005	Feb-06	About malaria disease. To take proper treatment for malaria patient. Usage of mosquito net.
33	Book	Malaria Manual Guide Book for General Health Worker	VBDC	Book	2,065	2006	Sep-06	Village lifestyle Prevention and treatment Use of mosquito net
34	Pictorial Charts	Pictorial charts on prevention and treatment of Malaria to be used by BHS	VBDC	Pictorial charts with cartoon	2,000	2006	Nov-06	Teaching material for BHS who disseminate knowledge of Malaria to local settlers



**Annex 8. Progress of the Project for Tuberculosis**

Criteria	Evaluation Items	Information Sources	Results
Target Group	Residents in Yangon and Mandalay Divisions	Project Team	NTP staff, medical staff for TB control, TB patients, and the general public, mainly in Yangon and Mandalay Divisions.
Target Area	Yangon and Mandalay Divisions	Project Team	Mainly in Yangon and Mandalay Divisions. Some activities were conducted outside the Divisions. Some activities in the 2 divisions involved participants from the other areas. Activities like IEC are for the whole nation.

Criteria	Indicators	Information Sources	Results
Overall goal TB is no longer a public health problem in Project sites in Myanmar.		Project Team	The prevalence survey in Yangon and Mandalay Divisions indicated that the magnitude of the TB problem may be more serious than it had been estimated. In order to achieve the goal, continued efforts of the government and the private sector together with the development partners are required.

Criteria	Indicators	Information Sources	Results
Project purpose TB control in Yangon and Mandalay Divisions is improved.	By year 2009, CDR > 70% and Cure Rate > 85% will be sustained in Yangon and Mandalay Divisions.	NTP annual report on cohort analysis	The data are available up to 2005. (NTP Annual Report 2005 (October 2006))
		2005	Yangon Division Mandalay Division
		CDR	158% 67%
		CR	73% 77%

Criteria	Indicators	Information Sources	Results
<p><b>Output 1.</b> Capacity for program management and epidemiological data management for TB control is strengthened.</p>	<p>1-1 Quality of NTP facility and developed publication.</p>	<p>1-1 Facility observation 1-2 NTP publication</p>	<p>- NTP buildings, offices and other facilities were improved and 2 computers were introduced for program management.</p> <p>- 2 computer sets were provided for the information section of the central NTP office in Yangon for epidemiological data management for TB control. Provision of equipment was accompanied by required training or technology transfer for proper utilization. An epidemiological data management system started functioning by using the 2 computer sets.</p> <p>- The final draft of a TB counseling guide book was prepared for medical staff of TB of the whole nation and its training guide book has been drafted. (Production of copies for Yangon and Mandalay Divisions may be financed by the Project.) Some of the results of the operational researches were presented in international conferences.</p> <p>- Capacity of NTP staff for TB control has been strengthened through implementation of TB prevalence surveys, operational researches and training courses.</p>

(1) TB Prevalence survey was successfully conducted as a partnership approach of NTP, WHO, GF, JATA and JICA in Yangon Division and on pilot sites of Mandalay Division in 2006.

S (+): 279/100,000 age 10 or more

76% of S (+) & 91% of S (-) C (+) are unknown new.

The size of the problem is much bigger than previously estimated.

Aggressive approach to community and private sector will be needed.

**TB Prevalence Survey Results**

	Yangon Division	Mandalay Division
Township involved	24	
No. of houses	5,264	1,043
No. of people recorded in census	25,679	5,200
No. to be taken CXR		3,969
No. invited for survey screening	20,792	
No. of screen	(70% from urban, 56 were female): 18,809 (90.5%)	3,762
No. of taken X-Ray	18,659 (99.2%)	3,712
No. not taken CXR		257
No. refuse to take X-Ray	2,133(11.3%)	
No. with abnormal CXR result	3,782(20.1%)	556
No. of absentees	1,983	205
No. requested for sputum examination	4,223 (22.5%)	549
No. of current anti TB treatment	64 (0.3%)	3
No. with previous TB treatment	1,059(5.6%)	101
Response rate		94.8%

(2) EQA Operational Research was started in Yangon (Hlaing Thar Yar & Hnaw Bi), Mandalay (Nyaung Oo & Chan Mya Thar Zi) from April 2004 and completed in Oct 2004, before the start of the Project. The EQA OR poster was presented at 36th IUATLD conference on Oct 2005 as part of the Project.

(3) Delay Analysis Operational Research started in January 2005 in Yangon Division (Bahan, Hlegu), Mandalay Division (Maharaung Myae and Nyaung Oo), South Shan State (Taunggyi, Kalaw) and completed in March 2006. Delay Analysis OR was presented at 37th IUATLD conference in 2006 by Dr.Moe Zaw, Medical Officer, NTP.

**(4) Factory Worker Operational Research**

**TB Screening Results for Factory Workers**

	Hlaing Thar Yar Industry Zone (Yangon Division)	Pyi Gyi Dagon Industry Zone (Mandalay Division)
No. of factories		30
No. of people taken CXR	4,161	3,967
No. of people not taken CXR	21	
No. of people requested for sputum	525	698
Sputum positive	4	5
No. of people interviewed	4,182	4,024
No. of people to need treatment	67	50

Criteria	Indicators	Information Sources	Results															
Output 2. TB laboratory services are improved.	2-1 Frequency of training.	2-1 Project record	5 training courses for TB laboratories were conducted since the start of the Project. (8 courses since 2004) Considerable improvement was observed as shown by the tables below. NTP intends to expand the practical EQC system introduced by the Project. "Quality Smear Preparation for AFB Microscopy Guidebook" was produced and already distributed to technicians.															
	2-2 Quantity of supplies and equipment.	2-2 Project record	Microscopes, cups, slides, reagents, etc were provided for NTP offices that conduct training and EQA centers.															
	2-3 No. and QC of newly established diagnostic centers.	2-3 Lab proficiency testing, and QC results	<table border="1"> <thead> <tr> <th>Microscopes</th> <th>2005</th> <th>2006</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Yangon Division</td> <td>15</td> <td>5</td> <td>20</td> </tr> <tr> <td>Mandalay Division</td> <td>15</td> <td>5</td> <td>20</td> </tr> <tr> <td>Total</td> <td>30</td> <td>10</td> <td>40</td> </tr> </tbody> </table>	Microscopes	2005	2006	Total	Yangon Division	15	5	20	Mandalay Division	15	5	20	Total	30	10
Microscopes	2005	2006	Total															
Yangon Division	15	5	20															
Mandalay Division	15	5	20															
Total	30	10	40															

(Note: For EQA, 3 computer sets are needed, 1 for the central TB laboratory, 1 for Mandalay Office. NTP wants to expand the EQA system to other states and divisions with support of other donors such as the 3 D Fund. The remaining areas in the 2 Divisions need to be supported by the Project.)

**(1) Established Microscopy Centers in Model EQA Areas**

Yangon Division	Mandalay Division
1. Latha TB Diagnostic Center	1. Channyatharzi H.C
2. Aung San UTL TB Center	2. Chanayetharzan H.C
3. Hlaingtharyar Tsp. Hospital	3. Aungmyaetharzan HC
4. East District TB Team (Bahan)	4. Mahaungmyae HC
5. Okkalapa Health Center	5. Amarapura HC
6. Shwepyithar Township Hospital	6. Pathingyi Tsp. Hospital
7. Dawbon Health Center	7. Mandalay TB Hospital
8. Thaketa Health Center	8. TB Diagnostic Center
9. Thanlyin District Hospital	9. Myitthar Tsp Hospital
10. Botataung Health Center	10. Kyaukse Tsp Hospital
11. Waibagi Hospital	11. Oo Lwin Hospital
12. Mingalardon HC.	12. Monywa TB Center

**(2) Quality of smear preparation in Yangon model area (12 microscopy centers)**

Good smear preparation is evaluated in terms of 6 checkpoints and most of the slides are maintained in good quality preparation. However some improvements are needed particularly in thickness and evenness of smear preparation which are related directly with the skill of technicians through frequent monitoring visits.

**Acceptable smear preparation in Yangon model area**

	1 <sup>st</sup> quarter (Jan-Mar 2006)	2 <sup>nd</sup> quarter (Apr-Jun 2006)	3 <sup>rd</sup> quarter (Jul-Sep 2006)
Slides rechecked	198 (100)	216 (100)	216 (100)
Check points			
1) Specimen quality	195 (98)	214 (99)	216 (100)
2) Staining	178 (90)	206 (95)	202 (94)
3) Cleanliness	193 (97)	204 (94)	216 (100)
4) Thickness	144 (73)	167 (77)	153 (71)
5) Size	167 (84)	204 (94)	195 (90)
6) Evenness	147 (74)	184 (85)	167 (77)

Based on the smear preparation by individual microscopy center, following 8 microscopy centers must be strengthened in smear preparation through frequent monitoring visits. These are Thaketa (TKT), Shwepyithar (SPT), Aung San, UTI (AS), Watbagi (WBG), Dawbon (DB), Latha (LT), North Okkalapa (NOK) and Botahtaung (BIT) microscopy centers.

**(3) Quality of reading in Yangon model area**

Number of major error was 6 cases (3%) at the first quarter when the test started and it has been decreased to 2 cases (0.9%) by the 3<sup>rd</sup> quarter.

**Reading error cases in Yangon model area (1<sup>st</sup> quarter-3<sup>rd</sup> quarter, 2006)**

	1 <sup>st</sup> quarter	2 <sup>nd</sup> quarter	3 <sup>rd</sup> quarter
Slides rechecked	198 (100)	216 (100)	216 (100)
1) Major error	6 (3)	1 (0.5)	2 (0.9)
2) Minor error	4	0	3

Number of laboratories without any errors (both major error and minor error) increased from 4 laboratories to 7 laboratories by the 3<sup>rd</sup> quarter of 2006

**Microscopy centers without reading errors in Yangon model area (1<sup>st</sup> quarter-3<sup>rd</sup> quarter, 2006)**

	1 <sup>st</sup> quarter	2 <sup>nd</sup> quarter	3 <sup>rd</sup> quarter
No. of Mix center	11 (100)	12 (100)	12 (100)
Errors occurred			
1) NIL	4 (36)	11 (92)	7 (58)
2) Major error only	3	1	1
3) Minor error only	3	0	3
4) Both errors	1	0	1

Based on the results in model area, the method is acceptable for improving quality AFB microscopy services. It is found that close monitoring visits are required since improvement seen in 2<sup>nd</sup> quarter due to monthly visits and decrease in 3<sup>rd</sup> quarter because of quarterly visits.

Thus, expansion of this EQA method for the whole country must be considered with specific strategy for each area, since close monitoring visit is also the essential part in EQA implementation.

**(4) Results of Regular Training of AFB Microscopy for Technicians from Hospital Laboratories (August - September 2006)**

	Yangon Division	Mandalay Division
Participants	10	15
Theory Test: Average pre-test mark (%) and average post-test mark (%)	21.6 -> 86.3	62.7 -> 68.0
Practical Test (grading of smears): Average pre-test mark (%) and average post-test mark (%)		45.7 -> 88.4

Criteria	Indicators	Information Sources	Results
Output 3. Monitoring and supervisory capability for TB control is strengthened.	3-1 No. of Divisional meetings and supervisions held.	3-1 Project record	Divisional meetings were held twice, once for each division. The supervisory visits were made combined with EQA supervision. Both divisional meetings and the supervisory visits were insufficient due to limited availability of relevant staff and transport means. (See below)
	3-2 NTP performance indicators improved. (CDR, CR&TSR, Defaulter & Transferred-Out Rates)	3-2 NTP cohort data and Supervision report	

Performance Indicators for Yangon Division

Year	Total Pop. in DOTS Tsps. of S/D	% of DOTS Covered Pop. in S/D	Estimated No. of new sputum (+) cases	No. of new sputum(+) cases detected	CDR %	CR %	TSR %
1996	5187626	100%	3890	1810	46	80	83
1997	5283597	100%	3963	1983	47	61	76
1998	5054365	100%	3791	2005	52	68	81
1999	5233858	100%	3925	2787	70	62	75
2000	5486000	100%	4115	3705	91	66	75
2001	5930716	100%	4448	4981	109	67	74
2002	6049330	100%	4537	5944	131	66	73
2003	6778121	100%	5084	6861	135	66	73
2004	6293724	100%	5185	7354	141	67	75
2005	6419598	100%	4815	7608	158	73	82

Treatment outcomes of TB patients reported to NTP (2003) (Yangon Division)

TB Patients	Total No. evaluated	Cured (%)	Completed (%)	Die (%)	Failure (%)	Defaulter (%)	Transferred out (%)	Total
New SS (+)	6853	4618 (67%)	560 (8%)	293 (4%)	179 (3%)	898 (13%)	305 (4%)	6853
Relapse	1338	800 (60%)	116 (9%)	103 (8%)	66 (5%)	166 (12%)	87 (7%)	1338
Others	386	128 (33%)	51 (13%)	37 (10%)	57 (15%)	89 (23%)	24 (6%)	386
New SS (-)	7086	0%	5635 (80%)	260 (4%)	50 (1%)	848 (12%)	293 (4%)	7086
<b>Total</b>	<b>15663</b>	<b>5546 (35%)</b>	<b>6362 (41%)</b>	<b>693 (4%)</b>	<b>352 (2%)</b>	<b>2001 (13%)</b>	<b>709 (5%)</b>	<b>15663</b>

Treatment outcomes of TB patients reported to NTP (2004) (Yangon Division)

TB Patients	Total No. evaluated	Cured (%)	Completed (%)	Die (%)	Failure (%)	Defaulter (%)	Transferred out (%)	Total
New SS (+)	7383	5425 (73%)	608 (8%)	316 (4%)	224 (3%)	506 (7%)	304 (4%)	7383
Relapse	1267	803 (63%)	121 (10%)	106 (8%)	52 (4%)	118 (9%)	67 (5%)	1267
Others	600	279 (47%)	73 (12%)	60 (10%)	69 (12%)	74 (8%)	45 (8%)	600
New SS (-)	10249	0%	8378 (82%)	449 (4%)	80 (1%)	910 (9%)	432 (4%)	10249
<b>Total</b>	<b>19499</b>	<b>6507 (33%)</b>	<b>9180 (47%)</b>	<b>931 (5%)</b>	<b>425 (2%)</b>	<b>1608 (8%)</b>	<b>848 (4%)</b>	<b>19499</b>

**Performance Indicators for Mandalay Division**

Year	Total pop. in DOTS Tsps.	% of DOTS covered Pop.	Estimated No. of new sputum (+) cases	No. of new sputum (+) cases detected	CDR%	CR%	TSR %
1997	4049397	20/30 tsps	4049	1599	39%	76%	87%
1998	4218528	20/30 tsps	4218	2037	48%	70%	80%
1999	4731530	23/30 tsps	4731	2138	45%	69%	76%
2000	5839757	30/31 tsps	5839	2673	46%	68%	81%
2001	6028886	100%	6028	2451	41%	74%	87%
2002	6246482	100%	4684	2369	51%	84%	88%
2003	7089143	100%	5316	3165	60%	84%	88%
2004	7286448	100%	5466	3537	65%	83%	89%
2005	7,571,010	100%	5678	3801	67%	77%	87%

**Treatment outcomes of TB patients reported to NTP (2003) (Mandalay Division)**

TB Patients	Total No. evaluated	Cured (%)	Completed (%)	Die (%)	Failure (%)	Defaulter (%)	Transferred out (%)	Total
New SS (+)	3165	83%	175	6%	42	1%	46	3165
Relapse	468	338	48	44	11	2%	10	468
Others	7	6	1	0	0	0%	0	7
New SS (-)	2309	0%	2052	135	7	0%	47	2309
<b>Total</b>	<b>5949</b>	<b>2971</b>	<b>2276</b>	<b>380</b>	<b>60</b>	<b>159</b>	<b>103</b>	<b>5949</b>

**Treatment outcomes of TB patients reported to NTP (2004) (Mandalay Division)**

TB Patients	Total No. evaluated	Cured (%)	Completed (%)	Die (%)	Failure (%)	Defaulter (%)	Transferred out (%)	Total
New SS (+)	3535	2736	356	226	30	1%	90	3535
Relapse	236	151	48	17	9	4%	6	236
Others	63	38	11	8	2	3%	0	63
New SS (-)	2523	0%	2216	161	8	0%	66	2523
<b>Total</b>	<b>6357</b>	<b>2925</b>	<b>2631</b>	<b>412</b>	<b>49</b>	<b>178</b>	<b>162</b>	<b>6357</b>



Criteria	Indicators	Information Sources	Results
Output 4. Community participation for TB control is promoted.	4-1 No. of referrals from GP increased by 30%.	4-1 New referral forms	Private practitioners referred 159 TB suspects from November 2006 to April 2007 in North Okkalapa Township, Yangon Division, and 111 TB suspects were referred from January to April 2007 in Pyin Oo Lwin Township, Mandalay Division. In order to promote PPP, new referral forms were developed.

**Progress of PPP**

**Township: North Okkalapa Division: Yangon Month: from November, 2006 to April 2007**

S/N	Month & Year	No. of referred clinics	No. of TB suspect referred	Sputum (+)ve TB patient		No. of suspect TB by CXR			Those referred patient no. of who are not TB referred back to PPP	No. of absentees who were referred to primary health center for sputum examination	No. of Referral and Feedback book supplied to GP and PHC		
				Cat I	Cat II	Cat I	Cat II	Cat III			Referral	Feedback	TB Reg
1	November, 2006	15	49	5	1	1	4	31	7	20	2	1	1
2	December, 2006	14	26	6	1	5	1	10	3	2	2		
3	January, 2007	11	21	5	3	3	2	6	5				
4	February, 2007	10	24	3	4	4		11	6	2			
5	March, 2007	9	19	1	2	2	2	9	5	1			
6	April, 2007	9	20	5	5	5		7	3				
Total			159	25	1	20	1	74	29	21	6	1	1

**Township: Pyin Oo Lwin Division: Mandalay Month: from Jan to April 2007**

S/N	Month & Year	No. of referred clinics	No. of TB suspect referred	Sputum (+)ve TB patient		No. of suspect TB by CXR			Those referred patient no. of who are not TB referred back to PPP	No. of absentees who were referred to primary health center for sputum examination	No. of Referral and Feedback book supplied to GP and PHC		
				Cat I	Cat II	Cat I	Cat II	Cat III			Referral	Feedback	TB Reg
1	January, 2007	5	13	1	1	1	3	8	1	20	1	1	1
2	February, 2007	7	39	3	2	3	4	26	1	2	2		
3	March, 2007	6	26	8	2	3	3	10		1	1		
4	April, 2007	8	33	5	1	3	4	20		4	2		
Total			111	17	5	10	14	64	1	27	6	1	1

Criteria	Indicators	Information Sources	Results
<p><b>Output 5.</b> Communication and advocacy for TB control are promoted.</p>	<p>5-1 No. and quality of IEC materials produced and distributed.</p>	<p>5-1 Project report</p>	<p>The final draft of the counseling guide book for TB patients has been produced and now being checked by the working group for comments. (For actual practical training on the counselling, JICA will support the production of the guide book and its training manual for Yangon and Mandalay Divisions. Reproduction of the guide book for the other part of the country will be supported by WHO.)</p>
	<p>5-2 No. and quality of advocacy activities carried out.</p>	<p>5-2 Project report</p>	<p>EQA operational research posters were presented to 36th IUATLD Conference in October 2005. A representative participated in the 37th Conference in 2006. The Project supported the World Stop TB Day.</p>

IEC Materials Produced and Distributed by the Project (Year of production) (Main target)
<ul style="list-style-type: none"> <li>- TB Patient Care Book (2005, 2006, 2007) (Patients)</li> <li>- TB Knowledge Book (2005, 2006, 2007) (Patients)</li> <li>- World TB Day Posters (March 24, 2004, 2005, 2006, 2007) (General public)</li> <li>- Lab Manual (2004) (Laboratory technicians)</li> <li>- EQA Guideline Book (2007) (Laboratory technicians)</li> <li>- AFB Guide Book (2007) (Laboratory technicians)</li> <li>- PPP Guide Book (2006) (Doctors concerned)</li> <li>- Health Education Video (Quick Treatment 2004) ((General public)</li> <li>- DOTS Related Video Clip (2006) (General public)</li> <li>- Health Education Video (2007) (General public)</li> <li>- BHS Manual (2006) (Basic health staff)</li> <li>- PPP Modules (2007) (Doctors concerned)</li> <li>- PPP Register Book (2006) (PPP participants)</li> <li>- PPP Feedback Book (PPP participants)</li> <li>- PPP Referral Book (Doctors)</li> <li>- PPP Pamphlet (2007) (Doctors)</li> <li>- Carbonized Form for EQA System (2006) (Laboratory technicians)</li> </ul>

Criteria	Information Sources	Results												
<b>Activities</b> 1-1 Improve NTP facilities for program management, training, and data analysis.	Project experts NTP	<p>- TB prevalence surveys were conducted in Yangon and Mandalay Divisions, in partnership with NTP, WHO, GFATM, and JATA.</p> <p>- Training for the surveys was conducted with support of JICA experts.</p> <p>- Training on a supplied portable X-ray machine set provided by JICA and 2 X-ray cars donated by JATA.</p> <p>- NTP staff and other TB staff participated in TB training courses.</p> <p><b>Training for TB Team Leaders in Qualitative Research Methodology (March 2007 Yangon)</b></p> <table border="1" data-bbox="464 1088 679 1576"> <tr> <td>No. of resource persons</td> <td>4</td> </tr> <tr> <td>No. of trainers</td> <td>4</td> </tr> <tr> <td>No. of participants</td> <td>22</td> </tr> <tr> <td>Yangon Division</td> <td>10</td> </tr> <tr> <td>Mandalay Division</td> <td>3</td> </tr> <tr> <td>Other Divisions/States</td> <td>9</td> </tr> </table> <p>Note that TB team leaders outside Yangon and Mandalay Divisions also participated.</p>	No. of resource persons	4	No. of trainers	4	No. of participants	22	Yangon Division	10	Mandalay Division	3	Other Divisions/States	9
No. of resource persons	4													
No. of trainers	4													
No. of participants	22													
Yangon Division	10													
Mandalay Division	3													
Other Divisions/States	9													
1-2 Develop new district TB management modules.	Project experts NTP	<p>Modular training on management of TB at the district level was developed by GFATM Fund. However, because of the termination of GFATM, JICA supported Group I training (21.2.06-24.2.06) and group II training (6.3.06-10.3.06) for Mandalay Division.</p>												
1-3 Carry out operational researches.	Project experts NTP	<p>- Operational Researches Workshop.</p> <p>(1) Research Methodology Workshop I (18.1.05-22.1.05)</p> <p>(2) Research Methodology Workshop II (24.1.05-28.1.05)</p> <p>- EQA operational research was conducted in Yangon and Mandalay Divisions in 2004 before the start of the Project. The EQA OR poster was presented at 36th IUATLD conference on Oct 2005 as part of the Project.</p> <p>- Delay analysis operational research was conducted in Yangon and Mandalay Divisions, resulting in participation in 37th IUATLD Conference in October 2006.</p> <p>- TB control activities at work places especially at garment factories were conducted as operational research in Yangon and Mandalay Divisions.</p>												

2-1 Conduct laboratory training.	Project experts NTP	<p>(Three refresher training courses in 2004)</p> <ol style="list-style-type: none"> <li>1. Lab training course for newly appointed tech. (Yangon Division) 23.5.05-3.6.05</li> <li>2. Lab training course for newly appointed tech. (Mandalay Division) 28.6.05 -6.7.05).</li> <li>3. Workshop on improvement of quality assurance system for AFB microscopy: (27.12.05-29.12.05)</li> <li>4. Meeting on Plan to Expand Quality Assurance Centers and Discussion on Draft Guideline on EQA (LQAS) System for Myanmar (20.8.06)</li> <li>5. Training of AFB microscopy for technicians from hospital laboratories (23.8.06 - 28.8.06 Yangon Division)</li> <li>6. Training of AFB microscopy for technicians from hospital laboratories (29.8.06 - 2.9.06 Mandalay Division)</li> <li>7. EQA system implementation at expanded states and divisions (11.10.06)</li> </ol> <p>(EQA-LQAS was implemented according to the recommendations of a short-term expert at a total of 15 sites in 5 Divisions/States other than Yangon and Mandalay Divisions.)</p> <ol style="list-style-type: none"> <li>8. TB Evaluation Meeting and Training on External Quality Assurance for Sputum Microscopy (11.12.06 - 12.12.06)</li> </ol> <p>(Two-day annual evaluation meeting on TB laboratory services and workshop for improvement of EQA of AFB microscopy with 40 participants (Senior TB laboratory supervisors and medical officers and TB team leaders at state/division level))</p> <ol style="list-style-type: none"> <li>9. Workshop on Introduction of Standard Operating Procedures on EQA for AFB Microscopy (21.5.07 - 22.5.07) (followed by monitoring visits to Mon State)</li> <li>10. Training on new recruit technicians (14.3.06-18.3.06 Yangon)</li> </ol>
3-1 Conduct Divisional TB assessment meeting (DOTS conference) regularly.	Project experts NTP	<ol style="list-style-type: none"> <li>(1) Yangon Divisional TB Assessment Meeting. (28.10.05 and 9/1/07)</li> <li>(2) Mandalay Divisional TB Assessment Meeting (21.11.05 and 15/11/06)</li> </ol> <p>The meetings were not held twice a year for each division and the period was not 2 days due to the limited availability of the participants.</p>
3-2 Carry out supervision in the two Divisions.	Project experts NTP	<p>There were 17 low performance townships in Yangon Division. One supervisory visit was made to Thingyangun. Five townships were visited together with EQA supervision.</p> <p>There were 8 low performance townships in Mandalay Division. Supervisory visits were made together with EQA supervision.</p>

4-1 Establish Public Private Partnership in the Divisions.	Project experts NTP	<p>Pilot projects of public private partnership were started in North Okkalapa (Yangon Division) and Pyin Oo Lwin (Mandalay Division) to implement quality DOTS.</p> <p>(1) Advocacy meeting on PPP (DOTS). [25.8.06]/ Training on Private Practitioners from North Okkalapa Tsp. [19.10.06 ~ 20.10.06]</p> <p>(2) Advocacy meeting on PPP (DOTS)/Training on Private Practitioners from Pyin Oo Lwin Tsp. [11.1.2007-12.1.07]</p> <p><b>Advocacy Meetings and Training for Private Practitioners</b></p> <table border="1" data-bbox="359 427 507 1597"> <thead> <tr> <th></th> <th>North Okkalapa (Yangon Division)</th> <th>Pyin Oo Lwin (Mandalay Division)</th> </tr> </thead> <tbody> <tr> <td>No. of participants in Advocacy Meeting</td> <td>118</td> <td>48</td> </tr> <tr> <td>No. of Participants in PPP Training</td> <td>22</td> <td>20</td> </tr> </tbody> </table>		North Okkalapa (Yangon Division)	Pyin Oo Lwin (Mandalay Division)	No. of participants in Advocacy Meeting	118	48	No. of Participants in PPP Training	22	20
	North Okkalapa (Yangon Division)	Pyin Oo Lwin (Mandalay Division)									
No. of participants in Advocacy Meeting	118	48									
No. of Participants in PPP Training	22	20									
5-1 Develop IEC materials and conduct advocacy events to raise awareness on TB.	Project experts NTP	<ul style="list-style-type: none"> <li>- Equipment for IEC was provided in Yangon and Mandalay Divisions.</li> <li>- EQA operational research posters were presented to 36th IUATLD Conference in October 2005.</li> <li>- A representative participated in 37th IUATLD Conference in 2006.</li> <li>- Posters, pamphlets and PPP guidebooks were produced.</li> <li>- TB and TB/HIV knowledge books were produced.</li> <li>- Video and TV clips were produced.</li> <li>- Manuals of DOTS were distributed in Yangon and Mandalay Divisions.</li> <li>- The Project supported the World Stop TB Day (24 March) with posters.</li> <li>- The TB patient care book was reviewed and 50,000 copies were produced.</li> </ul>									
5-2 Develop and distribute DOTS handbook for TB patients.	Project experts NTP	<ul style="list-style-type: none"> <li>- The TB patient care book was reviewed and 50,000 copies were produced.</li> </ul>									

Criteria	Information Sources	Results
<p><b>Important Assumptions</b> Political commitment for TB control is maintained.</p>	<p>Project experts NTP</p>	<p>According to "Health in Myanmar 2006", tuberculosis is one of the major public health problems in Myanmar and considered as the second priority disease in the National Health Plan (2001 - 2006). The overall goal of the National Tuberculosis Programme (NTP) is to reduce morbidity, mortality and transmission of TB until it is no longer a public health problem. The specific objectives of the NTP are to reach and sustain the 2005 global TB control targets as:</p> <ul style="list-style-type: none"> <li>- to cure at least 85% of detected new cases of sputum smear positive pulmonary TB</li> <li>- to detect at least 70% of new cases of sputum smear positive pulmonary TB cases (MGB indicator 23), and</li> <li>- to sustain implementation of quality DOTS at all levels.</li> </ul> <p>It aims to reach the interim targets of halving TB deaths and prevalence by 2010 (MDG indicator 24) towards achieving the MDG set for 2015.</p> <p>NTP has developed the Five-year National Strategic Plan (2006 - 2010) in June 2005.</p>
<p>Drug supply is maintained.</p>	<p>Project experts NTP</p>	<p>Anti-TB drug supply beyond 2008 is an issue.</p>
<p>Vacant laboratory technician posts are filled.</p>	<p>Project experts NTP</p>	<p>The government's commitment to TB is high but the posts are not yet 100% filled partly due to the limited budget allocation.</p>
<p>HIV prevalence remains stable.</p>	<p>Project experts NTP</p>	<p>The HIV prevalence rate seems to have been stable between 1% and 2% in recent years.</p>

Evaluation by the 5 Criteria

Criteria	Evaluation Items	Confirmation Items	Information Sources	Results
Relevance	Needs for intervention	Prevalence of tuberculosis Need for tuberculosis control Need for strengthening organizations in charge of tuberculosis control Lack of international aid	Project Team NTP	All the 3 infectious diseases are among the most serious issues of the government of Myanmar. The Project is, therefore, very relevant to the national need, for it aims to control these diseases. Tuberculosis control contributes a lot to reducing vulnerability of the poor. The Project is therefore relevant to the human security.
	Consistency between Project goals and Myanmar's national development policy	Priority of the Government policy on tuberculosis control Relevance of counterpart agencies	Myanmar's policy papers Project team	According to "Health in Myanmar 2006", TB is the second priority diseases included in the National Health Plan of Myanmar. The direct target of the cooperation is the National Tuberculosis Program, that is the key organizations for tuberculosis control in Myanmar
	Relevance of the approach	Internationally recognized approach	Project team	The Project's adopts internationally recognized approach such as DOTS and EQAS.
	Consistency with Japan's ODA policy and the MDGs	Consistency with the Japan's ODA policy for Myanmar	MOFA JICA	Japan's cooperation policy for Myanmar focuses on the basic human needs or human security, so the Project highly relevant.
	Utilization of Japan's technology		Project team	The Project utilizes experiences and knowledge accumulated in Japan.
	Relevance of the model sites		Project team	Yangon and Mandalay are two large urban centers in Myanmar and the activities there can be spread to other divisions and states.

Criteria	Evaluation Items	Confirmation Items	Information Sources	Results
Effectiveness	Progress of the outputs and purpose	Indicators of results	Evaluation of the achievement	The Project accords with the national programs of the 3 diseases. In addition, the Project approach also accords with the world trend of measures to control the disease, namely, DOTS (Directly Observed Treatment with Short-course chemotherapy) of tuberculosis. Therefore, the effectiveness of the Project approach has been generally proven.
	Specific factors affecting Project		Project team	The outputs are being produced to achieve the purpose of the Project. Heavy work load of some of the key staff and lack of transport means limit the Project activities in some occasions.
Efficiency	Overview		Project team	Well organized and efficient collaboration between the Project and other donors such as WHO makes the Project efficient.
	Approach of the Sub-Project	Cost-efficient or not?	Project team	The approach is efficient in terms of required costs (internationally recognized appropriate technology)
	Quantity, quality and timing of the inputs (Myanmar and Japanese)	Was the timing to dispatch the long & short-term experts appropriate?	Project team	No Japanese long term expert is assigned. Instead, a national consultant is assigned on a full time basis and is utilizing his human network covering tuberculosis control. Dispatching short-term experts and conducting workshops and/or supervision have been properly synchronized.
	Utilization of the inputs	Counterpart training	Project team	No participation in the counterpart training.
		Equipment and materials	Project team	In many cases, equipment provided by the Project is complementarily used with inputs by other development partners such as JATA, WHO, etc. No case of underutilization of the equipment has been observed.
	Linkage, cooperation or competition with other projects	Operation budget	Project team	The operation budget was appropriately handled.
			Project team	There are a number of activities of the Project coordinated with other development partners. For example, the TB prevalence survey in Yangon Division was conducted in partnership of NTP, WHO, GFAIM, JATA and JICA in 2006. The counseling guidebook developed by the Project will be produced also by the Project for Yangon and Mandalay Divisions, while it is planned to be produced for other divisions and states by WHO. A DOTS related video clip was jointly produced by the Project and INGOs.



Criteria	Evaluation Items	Confirmation Items	Information Sources	Results
<b>Impact</b>	Impacts outside the model area	Effects on other areas	Project team	Various systems developed by the Project are already spreading to various areas in Myanmar, beyond Yangon and Mandalay Divisions, having been integrated in the national system. IEC materials and the EQA system are such examples.
<b>Criteria</b>	<b>Evaluation Items</b>	<b>Confirmation Items</b>	<b>Information Sources</b>	<b>Results</b>
<b>Sustainability</b>	Institutional sustainability	Counterpart organization Staff of counterpart organizations	Project team Project team	The NTP has an established organization. The retention rate of the staff is generally high in the Ministry of Health of Myanmar. Therefore human resources and their systems developed by the Project can be sustained after the termination of the Project.
	Financial sustainability	Trend and prospects of budgets from the government and other sources	Project team	Towards sustained development of the Project's achievement, efforts of all the partners involved in TB control are needed to secure financial sources for anti-TB drugs.
	Technical sustainability	Sustainability of transferred technologies	Project team	Qualified staff are assigned, although the work burden of some of them is very heavy.

Annex 9 Proposed Revision of Project Design Matrix (PDM) for Tuberculosis

	PDM	Suggestions for revision
Target Group	Residents in Yangon & Mandalay Divisions	Unchanged
Target Area	Yangon & Mandalay Divisions	Unchanged
Overall goal	TB is no longer a public health problem in Project sites in Myanmar.	Unchanged
Project purpose	TB control in Yangon and Mandalay Divisions (is) improved.	Unchanged
Indicator	By year 2009, CDR > 70% and Cure Rate > 85% will be sustained in Yangon and Mandalay Divisions.	Unchanged
Output 1	Capacity for program management and epidemiological data management for TB control (is) strengthened.	Unchanged
Indicator	1-1 Quality of NTP facility and developed publication.	Unchanged
Output 2	TB laboratory services (are) improved.	Unchanged
Indicator	2-1 Frequency of training.	Unchanged
Indicator	2-2 Quantity of supplies and equipment.	Unchanged
Indicator	2-3 No. and QC of newly established diagnostic centers.	Unchanged
Output 3	Monitoring and supervisory capability for TB control (is) strengthened.	Unchanged
Indicator	3-1 No. of Divisional meetings and supervisions held.	Unchanged
Indicator	3-2 NTP performance indicators improved. (CDR, CR&TSR, Defaulter & Transferred-Out Rates)	Unchanged
Output 4	Community participation for TB control (is) promoted.	Unchanged
Indicator	4-1 No. of referrals from GP increased by 30%.	<b>Output 4 Public Private Partnership is established in the selected sites.</b>
Output 5	Communication and advocacy for TB control (are) promoted.	<b>4-1 No. of referrals from GP shows an upward trend.</b>
Indicator	5-1 No. and quality of IEC materials produced and distributed.	Unchanged
Indicator	5-2 No. and quality of advocacy activities carried out.	Unchanged
Activities	1-1 Improve NTP facilities for program management, training, and data analysis.	Unchanged
	1-2 Develop new district TB management modules.	Unchanged
	1-3 Carry out operational researches.	Unchanged
	2-1 Conduct laboratory training.	Unchanged
	2-2 Monitor QC of the smear examination for newly established TB laboratories.	Unchanged
	3-1 Conduct Divisional TB assessment meeting (DOTS conference) regularly.	Unchanged
	3-2 Carry out supervision in the two Divisions.	Unchanged
	4-1 Establish Public Private Partnership in the Divisions.	<b>4-1 Train and advocate General Practitioners (GP)</b>
		<b>4-2 Monitor and follow up the GP</b>
	5-1 Develop IEC materials and conduct advocacy events to raise awareness on TB.	Unchanged
	5-2 Develop and distribute DOTS handbook for TB patients.	<b>5-2 Develop and distribute manuals and guidelines for health staff and handbooks for TB patients</b>

Note: Revision will be made after detailed discussions between the Japanese Experts and the Myanmar CP.