

2. 合同評価報告書

**JOINT FINAL EVALUATION REPORT
ON
JAPANESE TECHNICAL COOPERATION
FOR THE TUBERCULOSIS CONTROL PROJECT
IN
THE ISLAMIC REPUBLIC OF PAKISTAN**

November 25, 2008

**Japan International Cooperation Agency, Japan
and
Ministry of Health, the Islamic Republic of Pakistan**

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Abbreviation

AFB	Acid Fast Bacilli
CD	Capacity Development
CDR _{ss+}	Case Detection Rate, Sputum Smear Positive
CIDA	Canadian International Development Agency
CR	Cure Rate
DHQ	District Headquarter
DLS	District Laboratory Supervisor
DOTS	Directory Observed Treatment, Short-course
DR	Dropout Rate
DTC	District Tuberculosis Coordinator
EDO	Executive District Officer
EDOH	Executive District Officer, Health
EQA	External Quality Assurance
GFATM	The Global Fund to Fight AIDS, Tuberculosis and Malaria
HDL	hospital DOTS linkages
HIV	Human Immunodeficiency Virus
IPH	Institute of Public Health
IPH/TBRL	Institute of Public Health/ Tuberculosis Reference Laboratory
JATA	Japan Anti-Tuberculosis Association
JCC	Joint Coordinating Committee
JICA	Japan International Cooperation Agency
LHS	Lady Health Supervisor
LHW	Lady Health Worker
NMC	Nishtar Medical College
NPO	National Program Officer
NTP	National Tuberculosis Control Program
OR	Operational Research
PDM	Project Design Matrix
PRSP	Punjab Rural Support Program
PTBRL	Provincial TB Reference Laboratory
PTP	Provincial Tuberculosis Control Program
Q	Quarter
R/D	Record of Discussions
RIT	The Research Institute of Tuberculosis, Japan Anti-Tuberculosis Association
SLS	Senior Laboratory Supervisor
SOP	Standard Operating Procedures
ss+	sputum smear positive
TB	Tuberculosis
TBDM	TB drug management
TSR	Treatment Success Rate
TWG	technical working group
USAID	United States Agency for International Development
WHO	World Health Organization

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1. Introduction

1.1. Background of the evaluation study

The Final Evaluation Team dispatched by Japan International Cooperation Agency (JICA) visited the Islamic Republic of Pakistan for the purpose of the joint evaluation with Pakistani side on Japanese technical cooperation for the Tuberculosis Control Project in the Islamic Republic of Pakistan (hereinafter referred to as "the Project") at the ending time of the 3-year cooperation period. The Project has been implemented since 1 April 2006 and will terminate on 31 March 2009 based on the Record of Discussions (R/D) signed on 1 April 2006.

1.2. Objective of the evaluation study

The main objectives of the final evaluation are as follows:

- (1) To evaluate the achievement of inputs, activities and implementation process in accordance with the original plan described in the Project Design Matrix (PDM) *
(* For the evaluation purpose, the revised PDM (PDM₁) was used.)
- (2) To evaluate the Project by five criteria, that is, relevance, effectiveness, efficiency, impact and sustainability.
- (3) To recommend the measures to be taken by both Japanese and Pakistani sides.

1.3. Members of the evaluation team (Participants of the evaluation study)

1.3.1. Pakistani side

Name	Position & Organization/Institution
Dr. Noor Ahmad Baloch	National Manager, National TB Control Program
Dr. Shahid Hanif	Deputy Manager, National TB Control Program
Dr. Sabira Tahseen	In-charge, National Program Officer, National Reference Lab.
Dr. Darakshan Badar	Program Manager, PTP Punjab Province
Dr. Muhammad Naeem	Additional Director, PTP Punjab Province
Dr. Zarfishan Tahir	Associate Professor, Institute of Public Health, Lahore
Dr. Nasir Awam	Executive District Officer (Health), District Lahore 24, Lahore
Dr. Muhammad Iqbal Niazi	District TB Coordinator, District Lahore 24, Lahore
Dr. Iftikhar Hussain Qureshi	Executive District Officer (Health), District Multan
Dr. Shahid Nawaz	District TB coordinator, District Multan
Dr. Mohammad Siddique	Executive District Officer (Health), District Faisalabad
Dr. Muhammad Saleem	District TB Coordinator, District Faisalabad
Dr. Muhammad Razaq	Deputy Program Manager, PTP Punjab Province
Mr. Waqas Ahmad	Stenographer, District Lahore 24, Lahore

1.3.2. Japanese side

(1) Final Evaluation Study Team Members

Name	Position & Organization/Institution
Dr. Mitsuo Isono	Leader Visiting Senior Advisor, Human Development Department, JICA
Dr. Tsuneo Masui	TB Control/Public Health Director General, Mental Health and Welfare Center in Aichi Prefecture
Mr. Tomoyuki Odani	Evaluation Planning Programme Officer, Infectious Disease Control Division, Human Development Department, JICA
Ms. Masako Tanaka	Evaluation Analysis TAC International, Ltd.

(2) The Project Experts & JICA Pakistan Office

Name	Position & Organization/Institution
Dr. Seiya Kato	JICA expert (Project Manager), JICA TB Control Project
Dr. Mikio Tsukamoto	JICA expert (Chief Advisor/TB Control), JICA TB Control Project
Mr. Shigeo Kobayashi	JICA expert (Advocacy and Data management), JICA TB Control Project
Mr. Tetsuhiro Sugamoto	JICA expert (TB Laboratory), JICA TB Control Project
Mr. Kenji Kashiwazaki	Representative, JICA Pakistan office
Mr. Sohail Ahmed	Senior Programme Officer, JICA Pakistan office

1.4. Schedule of the study

	Date	Activity
1	2/Nov.	Arriving to Lahore (Ms. Tanaka, Evaluation Analysis Member)
2	3/Nov.	Courtesy Call and Interview with PTP Punjab PTP Office
3	4/Nov.	IPH, RHC Burki
4	5/Nov.	Interview with PTP Move to Faisalabad
5	6/Nov.	Interview with EDO (Health) Faisalabad Interview with DOTS Facilitators, PRSP Staff
6	7/Nov.	Diagnostic Center, Faisalabad Move to Lahore Arriving to Lahore (Mr. Odani, Evaluation Planning Member)
7	8/Nov.	Interview with PTP, IPH
8	9/Nov.	Analysis of collected information
9	10/Nov.	Move to Gujrat Interview with EDO (Health), DTC, LHS, LHW
10	11/Nov.	Rural Health Center Kunjah DHQ Hospital (Aziz Bhatti Shaheed, EQA Center)
11	12/Nov.	District Health Development Center Move to Lahore

12	13/Nov.	PTP Office Move to Multan
13	14/Nov.	EDO (Health) Multan, DTC, EQA Center <i>Arriving to Islamabad (Dr.Masui, TB Control/Public Health)</i>
14	15/Nov.	Nishtar Medical Collage Qadurpur Rawan Rural Health Center Civil Hospital Multan Move to Islamabad
15	16/Nov.	Internal Meeting, Analysis of collected information
16	17/Nov	Internal Meeting, Analysis of collected information <i>Arriving to Islamabad (Dr.Isono, Leader)</i>
17	18/Nov.	JICA Pakistan Office Meeting with EAD, Ministry of Health Interview with NTP Manager, JICA Experts
18	19/Nov.	Interview with NTP, Project Office Meeting with USAID
19	20/Nov.	Move to Lahore Joint Session of Evaluation Mission organized by PTP Punjab Internal Meeting
20	21/Nov.	Meeting with Secretary of Health, Punjab Gulab Devi Hospital Move to Islamabad
21	22/Nov.	Discussion Meeting for the Minutes
22	23/Nov.	Drafting of Minutes
23	24/Nov.	Discussion Meeting for the Minutes
24	25/Nov.	Joint Coordination Committee, Signing of Minutes
25	26/Nov.	Reporting to the Embassy of Japan, JICA Pakistan Office, EAD Departing from Islamabad
26	27/Nov.	Arriving to Japan

2. Outline of the Project

2.1. Background of the Project

After WHO's declaring TB as global emergency in 1993, the Government of Pakistan endorsed the DOTS strategy and revised its national TB control policy in 1994, and in 1995 DOTS pilot Project was launched in five sites. Through decentralization of DOTS implementation in 1998, each province started to take responsibility of DOTS implementation under the federal NTP guideline.

In 2002, according to the Pakistani official request, JICA started to dispatch experts to NTP for effective DOTS implementation in 4 districts of Punjab province (Faisalabad, Gujrat, Lahore and Multan) where DOTS was launched in 2004. Achieving full DOTS coverage in 2005, in front of the challenge which is to assure the DOTS quality, the Government of Pakistan has implemented the "TB Control Project" for three years from 2006 in cooperation with JICA.

In this Project, NTP, PTP Punjab and JICA have been working for the capacity building which aims to develop technical and managerial capacity of NTP and PTP Punjab through strengthening TB program (quality DOTS) in model districts (Faisalabad, Gujrat, Lahore and Multan). The Project disseminates the quality DOTS for all Punjab Province as well as in NTP in the light of the Project Objective "Quality National TB Control Program (NTP) is systematically implemented in close collaboration with provincial and district TB units." Activities of the Project includes training for health workers

and laboratory technicians, capacity development in monitoring and supervision, establishment of EQA system, DOTS implementation in tertiary care hospitals, implementation of operational researches, development of TB Drug Management Guideline, advocacy and social mobilizations, etc. The Project started on April 2006 and will be completed on March 31st, 2009.

2.2. Summary of the Project

The Project has been conducted based on the PDMs (Annex 1) approved in the R/D on the 1st April of 2006 and revised on the 23rd of July 2007. Its main points are as follows:

2.2.1. Overall goal

Mortality, morbidity and transmission of the tuberculosis are reduced.

2.2.2. Project purpose

Quality National TB Control Program (NTP) is systematically implemented in close collaboration with provincial and district TB units.

2.2.3. Output

Output 1: Technical and managerial capacity of Punjab Provincial TB Control Program (PTP) unit is strengthened.

Output 2: Technical and managerial capacity of National TB Control Program (NTP) unit and National Reference Laboratory is strengthened.

2.2.4. Target areas and institutions

NTP unit in Islamabad, PTP unit of Punjab Province in Lahore and 4 model districts of Punjab Province, namely Faisalabad, Gujrat, Lahore and Multan districts.

3. Methodology of the evaluation

As mentioned in "2.1 Background of the Project" JICA started its technical cooperation to NTP, Pakistan in 2002 and this technical cooperation had carried on till the Project started. Although TB control activities were already implemented during this period and the Project formulated based on these technical cooperation, evaluation was conducted focusing on the JICA TB Control Project 2006-2009.

3.1. Evaluation framework

The joint evaluation was conducted based on the PDM₁. The team confirmed the achievement of the Project in terms of the project purpose, outputs, activities and inputs stated in the PDM₁. The team also conducted evaluation on the five criteria, relevance, effectiveness, efficiency, impact and sustainability, which are explained briefly in the next section.



The activities included in the evaluation are report analysis, project site visits, series of discussions and interviews with officers and staff of NTP, PTP Punjab and model districts, JICA experts of the Project, JICA Pakistani office staff and development partners.

3.2. Key criteria of evaluation

3.2.1. Relevance

'Relevance' is to assess the justification and the necessity of the project. This is to evaluate by reviewing whether the effectiveness of the project (project purpose and overall goal) is still in line with policies and priorities of recipients and donors, whether it is appropriate as measure to solve the problems, and whether the project strategy/approach are reasonable or not.

3.2.2. Effectiveness

'Effectiveness' is to assess whether the project has an effect, and evaluate how much the project purpose is achieved or is expected to achieve by the result produced by the project.

3.2.3. Efficiency

'Efficiency' is to assess whether various inputs lead to the output efficiently in the process of the project implementation, and inspect whether there is a better way (such as an alternative way to achieve with less cost, or more productive way to realize higher level of achievement with the same cost) or not.

3.2.4. Impact

'Impact' is to assess the long-term, indirect effect, which was brought by implementing the project. It includes the influence on the project overall goal, direct/indirect effect/change, unexpected effect (positive and negative)/change.

3.2.5. Sustainability

'Sustainability' is to assess the durability of the effect of the project after the completion of JICA's assistance and analyze whether the effect produced by the project continues even after the assistance (or whether there is prospect to continue).

4. Results of evaluation

4.1. Project performance and implementation process

4.1.1. Input

Inputs to the Project from the time of the beginning (1st April 2006) to the time of the final evaluation by both Japanese side and Pakistani sides are as follows. Inputs were generally appropriate in terms of timing, quantity and quality.

Japanese side

(1) Dispatch of experts from Japan

Eleven (11) long-term and short-term experts were dispatched to the Project for technology transfer as shown in Annex 3-1. Their technical fields are TB Control (project manager), TB control (team leader), TB laboratory, TB laboratory management, drug management, advocacy & data management, operational research and hospital DOTS linkage.

(2) Training of counterparts personnel in Japan

Six (6) counterparts were dispatched to Japan for training conducted at RIT/JATA in 2006-2008. The list of the counterparts and training course are shown in Annex 3-2.

(3) Provision of machinery and equipment

Equipment that costs 30,013,000 Yen in total were provided to the PTP Punjab, the Provincial TB Reference Laboratories in IPH and Nishtar Medical College, and the model districts for project activities. The list of the equipment provided by Japanese side is shown in the Annex 3-3.

(4) Local cost

A total amount of local expenditure borne by Japanese side is 322,668,000 Yen (183,220,162 Rp.) including the cost for equipment as shown in Annex 3-4

Pakistani side

(1) Appointment of counterparts

Counterparts have been assigned as shown in Annex 3-5.

(2) Provision of offices

The necessary spaces for project offices have been provided in Islamabad and in Lahore.

(3) Operational cost

A total amount of local expenditure for 2006-2008 borne by Pakistani side is 12,513,367 Rupees as shown in Annex 3-6.

4.1.2. Achievement of the project outputs

(1) Output 1: "Technical and managerial capacity of Punjab Provincial TB Control Program (PTP) unit is strengthened."

Indicator	Status of Achievement
1. The cure rate of 85% is achieved in 4 model districts of Punjab province.	Achieved in Gujrat, but not in Faisalabad, Multan and Lahore. However, TSR of 90% has been achieved in Faisalabad and Multan. In Gujrat the DOTS program launched in Q1 2004 with JICA technical cooperation before the Project, and the cure rate of 85% was achieved in 2005. During the Project period, the cure rate has increased and the high treatment success rate (97% or more than 97%) has been maintained since 2005. [JICA experts conducted assessment of credibility of Q3 2007 reports from Gujrat in December 2007, and the study verified credibility of the reports.]

Indicator	Status of Achievement																																																																																																																																																																																															
	<p>In Faisalabad the cure rate has not reached to 85% yet in Q2 2008, however, the TSR is more than 90% since Q1 2006, and it is 98% in Q3 2008. Although one of the issues in Faisalabad was very low CDR ss+ (33-37% in 2007), it has improved remarkably from 49% in Q1 to 73% in Q3 in 2008.</p> <p>In Multan the cure rate of 85% was achieved in Q2 and Q3 2007, which has not been maintained after that. The cure rate is 83% in Q1 2008, but the TSR is 94% in Q3 2008. Issue in Multan is low CDR (58% in Q1, 63% in Q2 and 51% in Q3 2008).</p> <p>The cure rate of Lahore is still 71% and the TSR is 81% in Q2 2008, which are the second worst in 35 districts. The biggest issue in Lahore is the high defaulter rate due to insufficient TB DOTS implementation in tertiary care hospitals and private sector where about 55% of TB patients are detected.</p>																																																																																																																																																																																															
	<table border="1"> <thead> <tr> <th rowspan="2"></th> <th rowspan="2"></th> <th colspan="5">CR (%)</th> <th colspan="5">TSR (%)</th> </tr> <tr> <th>FB</th> <th>GJ</th> <th>LH</th> <th>MT</th> <th>PJ</th> <th>FB</th> <th>GJ</th> <th>LH</th> <th>MT</th> <th>PJ</th> </tr> </thead> <tbody> <tr> <td rowspan="4">2005</td> <td>Q1</td> <td>---</td> <td>85</td> <td>---</td> <td>46</td> <td>67</td> <td>---</td> <td>98</td> <td>---</td> <td>60</td> <td>81</td> </tr> <tr> <td>Q2</td> <td>23</td> <td>88</td> <td>---</td> <td>36</td> <td>62</td> <td>56</td> <td>97</td> <td>---</td> <td>66</td> <td>78</td> </tr> <tr> <td>Q3</td> <td>59</td> <td>88</td> <td>52</td> <td>45</td> <td>65</td> <td>83</td> <td>99</td> <td>67</td> <td>67</td> <td>82</td> </tr> <tr> <td>Q4</td> <td>40</td> <td>91</td> <td>56</td> <td>43</td> <td>67</td> <td>70</td> <td>97</td> <td>83</td> <td>80</td> <td>85</td> </tr> <tr> <td rowspan="4">2006</td> <td>Q1</td> <td>60</td> <td>94</td> <td>69</td> <td>51</td> <td>67</td> <td>90</td> <td>99</td> <td>79</td> <td>69</td> <td>86</td> </tr> <tr> <td>Q2</td> <td>82</td> <td>93</td> <td>76</td> <td>85</td> <td>73</td> <td>97</td> <td>99</td> <td>85</td> <td>88</td> <td>89</td> </tr> <tr> <td>Q3</td> <td>71</td> <td>91</td> <td>65</td> <td>88</td> <td>77</td> <td>92</td> <td>97</td> <td>81</td> <td>90</td> <td>90</td> </tr> <tr> <td>Q4</td> <td>65</td> <td>94</td> <td>71</td> <td>76</td> <td>75</td> <td>93</td> <td>98</td> <td>81</td> <td>80</td> <td>90</td> </tr> <tr> <td rowspan="4">2007</td> <td>Q1</td> <td>60</td> <td>94</td> <td>69</td> <td>51</td> <td>66</td> <td>90</td> <td>99</td> <td>79</td> <td>69</td> <td>86</td> </tr> <tr> <td>Q2</td> <td>82</td> <td>93</td> <td>76</td> <td>85</td> <td>77</td> <td>92</td> <td>97</td> <td>81</td> <td>88</td> <td>89</td> </tr> <tr> <td>Q3</td> <td>71</td> <td>91</td> <td>65</td> <td>88</td> <td>73</td> <td>92</td> <td>97</td> <td>81</td> <td>90</td> <td>90</td> </tr> <tr> <td>Q4</td> <td>65</td> <td>94</td> <td>71</td> <td>76</td> <td>74</td> <td>93</td> <td>98</td> <td>81</td> <td>80</td> <td>90</td> </tr> <tr> <td rowspan="3">2008</td> <td>Q1</td> <td>79</td> <td>90</td> <td>71</td> <td>83</td> <td>75</td> <td>97</td> <td>97</td> <td>83</td> <td>89</td> <td>90</td> </tr> <tr> <td>Q2</td> <td>60</td> <td>91</td> <td>65</td> <td>87</td> <td>74</td> <td>96</td> <td>99</td> <td>81</td> <td>92</td> <td>92</td> </tr> <tr> <td>Q3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>98</td> <td>98</td> <td>86</td> <td>94</td> <td>93</td> </tr> </tbody> </table> <p>Note: 1. FB:Faisalabad, GJ:Gujrat, LH:Lahore, MT:Multan, PJ:Punjab 2. Indicators above are the ones calculated in the said quarter (Source: NTP and PTP Punjab)</p>			CR (%)					TSR (%)					FB	GJ	LH	MT	PJ	FB	GJ	LH	MT	PJ	2005	Q1	---	85	---	46	67	---	98	---	60	81	Q2	23	88	---	36	62	56	97	---	66	78	Q3	59	88	52	45	65	83	99	67	67	82	Q4	40	91	56	43	67	70	97	83	80	85	2006	Q1	60	94	69	51	67	90	99	79	69	86	Q2	82	93	76	85	73	97	99	85	88	89	Q3	71	91	65	88	77	92	97	81	90	90	Q4	65	94	71	76	75	93	98	81	80	90	2007	Q1	60	94	69	51	66	90	99	79	69	86	Q2	82	93	76	85	77	92	97	81	88	89	Q3	71	91	65	88	73	92	97	81	90	90	Q4	65	94	71	76	74	93	98	81	80	90	2008	Q1	79	90	71	83	75	97	97	83	89	90	Q2	60	91	65	87	74	96	99	81	92	92	Q3						98	98	86	94	93
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Indicator	Status of Achievement
<p>2. Provincial workshops for District TB coordinators (DTC) are held regularly.</p>	<p>Achieved.</p> <p>PTP Punjab organizes quarterly meeting at the provincial level (Inter-district meeting) regularly since 2004. It has been firmly established as a system. In the meeting indicators of quarterly report and activities are checked and reviewed, and all districts make a presentation of their results. The meeting contributes as an opportunity for discussion and sharing information and ideas for DTCs. Activities and initiatives in model districts of the Project and results of the operational research are also reported and shared.</p> <p>JICA experts always attend the meeting and provide technical guidance and advice. They sometimes give lectures on operational research, efficient monitoring and supervision, and so on.</p> <p>NPO meeting (NTP, PTP and all NPOs attend) is held before the inter-district meeting to review and analyze district quarterly reports and prepare the inter-district meeting. JICA experts and the program officers of the Project (national staff of the Project) attend the meeting.</p>
<p>3. 90% of Districts TB Coordinators (DTCs) and EDOs are trained by supervisor's training.</p>	<p>Achieved.</p> <p>All DTCs and EDOHs of the province have been trained as supervisors of DOTS activities. (The training for DTCs was jointly conducted with WHO in Dec. 2006 and in Jan.2007 by using NTP module).</p> <p>Quick turnover of the government staff including DTC and EDOH is one of the issues to maintain quality of TB DOTS activities. However, according to PTP Punjab it organizes the supervisor's training for newly assigned/recruited DTCs and EDOHs when necessary. This training system has been established in Punjab. In the model districts some DTCs and EDOHs have transferred but all the replacements except newly appointed ones in Lahore have been trained.</p>
<p>4. Monitoring and supervision are planned and conducted regularly based on Quarterly Meeting and Quarterly report.</p>	<p>Achieved.</p> <p>DTC conducts monthly monitoring and supervision in each district according to items on a checklist. The checklist was developed as a monitoring and supervision tool.</p> <p>In the model districts DTC conducts monthly visit to all diagnostic centers. JICA experts with DTC (and with PTP deputy managers in Lahore) conduct quarterly visit to all diagnostic centers. In other 31 districts 4 NPOs conduct supervisory visit to districts and provide technical support to DTC. These activities contributed improvement in quality of supervision and monitoring, hence quality of quarterly reports.</p> <p>The mid-term evaluation mission recommended conduct of on-the-job trainings on supervision and monitoring for other 31 districts. Since it is difficult for JICA experts to go round all 31 districts the Project invited neighboring district DTCs to Gujrat and Faisalabad and conducted supervisory visit together. Although DTCs appreciated this, no DTC except one submitted the report. The Project is considering other approach to share JICA's know-how of supervision and monitoring with DTCs.</p>

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Indicator	Status of Achievement																																																											
<p>5. Refresher courses are planned and conducted in 35 districts.</p>	<p>Almost achieved.</p> <p>Refresher training for doctors, DOTS facilitators and LHWs were conducted in almost all districts during 2006-2008 by JICA and by PTP.</p> <p>In the model districts, the Project conducted refresher training as follows.</p> <table border="1" data-bbox="550 459 1340 716"> <thead> <tr> <th rowspan="2">District</th> <th rowspan="2">Population</th> <th rowspan="2">No. of DC*</th> <th rowspan="2">No. of TR**</th> <th colspan="5">No. of Trained</th> </tr> <tr> <th>Doctors</th> <th>DOTS facilitator</th> <th>LHS</th> <th>LHW</th> <th>Lab.</th> </tr> </thead> <tbody> <tr> <td>Faisalabad</td> <td>6,702,581</td> <td>22</td> <td>291</td> <td>53</td> <td>35</td> <td>58</td> <td>100</td> <td>0</td> </tr> <tr> <td>Gujrat</td> <td>2,528,257</td> <td>12</td> <td>89</td> <td>49</td> <td>25</td> <td>0</td> <td>710</td> <td>0</td> </tr> <tr> <td>Lahore</td> <td>7,800,724</td> <td>38</td> <td>126</td> <td>41</td> <td>20</td> <td>0</td> <td>100</td> <td>16</td> </tr> <tr> <td>Multan</td> <td>3,848,096</td> <td>11+2</td> <td>104+2</td> <td>70</td> <td>27</td> <td>0</td> <td>185</td> <td>0</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>213</td> <td>107</td> <td>58</td> <td>1,905</td> <td>21</td> </tr> </tbody> </table> <p>Note: DC: Diagnostic center, TR: Treatment center (Source: Project Office)</p>	District	Population	No. of DC*	No. of TR**	No. of Trained					Doctors	DOTS facilitator	LHS	LHW	Lab.	Faisalabad	6,702,581	22	291	53	35	58	100	0	Gujrat	2,528,257	12	89	49	25	0	710	0	Lahore	7,800,724	38	126	41	20	0	100	16	Multan	3,848,096	11+2	104+2	70	27	0	185	0					213	107	58	1,905	21
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<p>6. More than 90% of diagnostic centers submit quarterly reports on case finding and treatment outcomes within one month after deadline.</p>	<p>Achieved.</p> <p>All districts of Punjab province submit quarterly reports on time. Since inter-district meeting is firmly established and quarterly intra-district meeting is also well established, each district prepares and submits the reports for these meetings.</p>																																																											
<p>7. Strategic planning and situation analysis workshop for stakeholders on tertiary care are conducted.*</p>	<p>Achieved.</p> <p>Planning workshop for the operational research (OR) was jointly conducted with ASD by technical assistance of RIT/JATA in August 2007 in Lahore. A draft guideline for strengthening of coordination between tertiary care hospitals and PHC facilities (HDL: hospital DOTS linkages) and a draft form for TB patient referral system was produced by technical assistance of RIT/JATA. Proposal of OR for assessment and establishment of referral system was also submitted to PTP.</p> <p>In March 2008 training workshop for strengthening of coordination between tertiary care hospitals and PHC facilities and establishment of referral system (HDL: hospital DOTS linkages) was conducted. The workshop for refining the draft was also conducted in August 2008.</p> <p>In November 2008 workshop on the HDL guideline and OR for establishment of referral system was held. The OR will be conducted in not only a few districts as originally planned but in all districts from January 2009.</p>																																																											
<p>8. Defaulter tracing operational research (OR) design is developed.*</p>	<p>Achieved.</p> <p>Design of OR of defaulter cases at Gulab Devi Hospital has been developed and review meeting on OR design was conducted in December 2007. The study question of OR is whether health education at initiation of treatment*** can reduce defaulter or not. (***) a flipchart for patient education was developed in June 2006.)</p> <p>The OR was planned to start in January 2008, however, it started in August 2008 due to worsening security situation.</p> <p>(There are 14 tertiary care hospitals in 3 model districts namely Lahore, Faisalabad, Multan, 13 of which are participating in TB DOTS program.)</p>																																																											
<p>9. Result of this OR is presented at Provincial and National workshop. **</p>	<p>Partially achieved.</p> <p>As mentioned in the above start of the OR was postponed to August 2008 due to worsening state of public order during December 2007 to February 2009. Therefore, complete results of the OR will not be obtained by the end of the Project.</p> <p>The interim report will be presented and shared by the end of the Project.</p>																																																											

Indicator	Status of Achievement																				
<p>10. EQA system for smear microscopy is implemented in 4 model districts of Punjab.</p>	<p>Achieved.</p> <p>In order to conduct EQA according to a draft SOP developed by the Project, EQA centers were set up in all four districts by provision of standardized equipment and appointment of DLS and cross-checkers and their training (Gujrat in 2006, Multan in 2007, Lahore in 2007, Faisalabad in 2007). However, recruitment of cross-checker for EQA center is difficult due to human resource deficiency: only one cross-checker was newly recruited recently in Faisalabad and no cross-checker in Lahore.</p> <p>EQA system for smear microscopy is implemented in not only 4 model districts but also other 31 districts in Punjab (according to PTBRL/IPH), which is outstanding outcome of the Project.</p> <p>Training for DLS and Cross-checker</p> <table border="1" data-bbox="592 647 1289 815"> <thead> <tr> <th></th> <th>No. of EQA Center</th> <th>No. of DLS trained</th> <th>No. of Cross-checker Trained</th> </tr> </thead> <tbody> <tr> <td>Gujrat</td> <td>1</td> <td>1</td> <td>2</td> </tr> <tr> <td>Multan</td> <td>1</td> <td>1</td> <td>2</td> </tr> <tr> <td>Faisalabad</td> <td>1</td> <td>1</td> <td>1 (newly recruited, untrained)</td> </tr> <tr> <td>Lahore</td> <td>1</td> <td>1</td> <td>0</td> </tr> </tbody> </table> <p>(Source: Project report)</p>		No. of EQA Center	No. of DLS trained	No. of Cross-checker Trained	Gujrat	1	1	2	Multan	1	1	2	Faisalabad	1	1	1 (newly recruited, untrained)	Lahore	1	1	0
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<p>11. Regular training is conducted in Reference Laboratory at Nishtar Medical College (PTBRL/NMC) in Multan.</p>	<p>Will be achieved by the end of the Project.</p> <p>PTBRL/NMC was originally planned to set up in early 2007, however it was opened in June 2008. This caused delay of original plan of EQA network establishment in Punjab.</p> <p>Administratively PTBRL/NMC is directly under the Principle of Nishtar Medical College with 7 staff (focal person in-charge, deputy focal person, SLS, laboratory technician, 2 laboratory assistant and computer assistant). It supervises and maintains EQA in 15 districts in southern Punjab province. As soon as the focal person in-charge who is in Japan for training (Sep.-Nov.2008) returns the laboratory will be full-scale operation and a plan of training will be formulated.</p> <p>Since June 2008, 4 batches of basic training (10 days) and 2 batches of refresher training (3 days) were conducted for 52 laboratory staff of diagnostic centers from different district.</p> <p>The last DLS meeting for the 15 districts was organized by the PTBRL/NMC in Multan. SLS already started supervisory visits to district EQA centers and attending intra-district meeting in 15 districts.</p> <p>Some of the equipment provided by JICA has not been transferred to the PTBRL/NMC from PTP in Lahore, which needs urgent action.</p> <p>The RIT training modules translated by the Project counterpart are not kept in the PTBRL/NMC. The Project should provide the modules and give advice on use of them.</p>																				
<p>12. Laboratory manual and module are published.</p>	<p>Achieved.</p> <p>"AFB microscopy training" (IUATLD) and "Quality smear preparation for AFB" (RIT /developed by RIT) were translated into local language by project counterparts in February 2007. Those were printed and distributed.</p>																				
<p>13. Standardized training manuals for laboratory are utilized.</p>	<p>Achieved.</p> <p>Standardized manual and training module for TB laboratory developed by NTP are utilized. According to PTBRL/IPH "AFB microscopy training" and "Quality smear preparation for AFB" mentioned in the above are used in the refresher training and given to trainees.</p> <p>However, the evaluation team found PTBRL/NMC does not have these copies.</p>																				

Indicator	Status of Achievement
14. Regular supervision is carried out by laboratory supervisors.	<p>Achieved.</p> <p>District Laboratory Supervisor (DLS) of each district was trained and conducts supervisory visit to diagnostic center laboratory. In Multan, although DLS was supposed to go to diagnostic center on monthly base, he visits only selected diagnosis centers with low performance due to the limited budget (for fuel).</p> <p>Supervisory visit from the provincial level to district is conducted by Senior Laboratory Supervisors (SLS) hired by NTP in all districts except model districts. For the model districts the JICA expert with PTBRL/IPH staff carried supervisory visit. According to PTBRL/IPH this supervisory visit by PTBRL/IPH was not carried out in 2008 since the JICA expert left. However, JICA team has been conducted quarterly supervisory visit to all diagnostic centers including supervision of laboratories.</p>
15. Refresher training of laboratory technician is conducted according to the needs identified by PTP. **	<p>Achieved.</p> <p>According to PTBRL/IPH, the refresher training has been carried out based on needs identified in inter-district DLS meeting as well as by checking EQA report. PTBRL/IPH covers 20 districts in north Punjab and PTBRL/NMC covers 15 districts in south Punjab. PTBRL staff and SLS provide refresher training.</p>
16. Result of OR for TB drug management is reported at inter-district meeting, inter-provincial meeting and in international conference. *	<p>Achieved.</p> <p>Operational research for TB drug management (TBDM) was conducted in 5 districts of Punjab in 2006 and the workshop on the results was conducted and an action plan for TB drug management was formulated.</p> <p>The result of the OR was reported to NTP and PTP Punjab, and also presented at the international conference.</p>
17. Training for drug management is conducted.	<p>Expected to be achieved by the end of the Project.</p> <p>A final draft of the national guideline for TBDM has been developed and submitted to NTP. After endorsement by all stakeholders the guideline will be published by NTP and the Project.</p> <p>Holding of TBDM training by the Project will be expected in the 1st quarter of 2009 after publication of the guideline.</p>
18. Indicators on TB drug management in 2007 are improved compared with those of 2006. *	<p>Not achieved.</p> <p>Since it took longer than expected to finalize the draft of NTP guideline for TBDM at the national level, no intervention on TBDM by the Project has been conducted till November 2008, and only training on TBDM is expected to be conducted before the end of the Project.</p>

(Note: * indicators modified at the time of the mid-term evaluation,
** indicators added at the time of the mid-term evaluation)

(2) Output 2: "Technical and managerial capacity of National TB Control Program (NTP) unit and National Reference Laboratory is strengthened."

Indicator	Status of Achievement
1. NTP receives quarterly reports from more than 90% of all districts within one month after deadline.	<p>Achieved.</p> <p>According to the NTP all districts submit their quarterly reports on time except some districts in Balochistan province.</p>

Indicator	Status of Achievement
2. The Japanese side participates in PTP manager meeting regularly and contributes technically.*	Achieved. JICA experts regularly participate in inter-provincial quarterly meeting organized by NTP and provide technical advice on TB DOTS and share information such as results of operational researches conducted in Punjab province.
3. All the quarterly reports are managed and analyzed in computer at provincial and national level.	Achieved by NTP. The Project contributed to this by training of DTCs and district computer operators of Punjab and Sindh provinces. The training was conducted in 2007 and 2008.
4. Regular monitoring and supervision is conducted based on surveillance analysis.	Achieved NTP conducts regular monitoring and supervision through NPOs, DTCs and DLSs based on analysis.
5. Guidelines and training modules are revised with technical assistance of the Project.	Partially achieved. The Project provided technical support to revise the training module for DOTS facilitators. There was no contribution by the Project for guidelines and other training modules. Once NTP was interested in the revision of the national TB guideline, however, according to NTP current priority and urgent matter is development of the strategic plan for TB control.
6. National guideline for TB drug management is developed.*	Achieved. The Project prepared the first draft guideline based on the results of the study on TBDM in Punjab province and presented at the inter-provincial meeting in 2007. The core working group for development of the national guideline for TBDM was set in inter-provincial meeting in December 2007. In November 2008 the 5th draft national guideline has been finalized after several review meetings by the core working group. According to NTP it can be published probably in December 2008 after endorsement of all stakeholders.

(Note: * indicator that modified at the time of the mid-term evaluation.)

4.1.3. Achievement of the project purpose

Indicator	Results																																																												
1. The cure rate of 85% is achieved and maintained in Punjab province.	<p>Achieved in terms of the treatment success rate (TSR).</p> <p>The cure rate (CR) of 85% has not been achieved yet, the treatment success rate (TSR) of 90% is achieved in Q1 2008 and it has been maintained in Q2 and Q3 2008. At the district level, 6 districts have not achieved the CR target yet (Q2 2008).</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2"></th> <th>CR(%)</th> <th>TSR(%)</th> <th colspan="2"></th> <th>CR(%)</th> <th>TSR(%)</th> </tr> </thead> <tbody> <tr> <td rowspan="4">2005</td> <td>Q1</td> <td>67</td> <td>81</td> <td rowspan="4">2007</td> <td>Q1</td> <td>66</td> <td>86</td> </tr> <tr> <td>Q2</td> <td>62</td> <td>78</td> <td>Q2</td> <td>77</td> <td>81</td> </tr> <tr> <td>Q3</td> <td>65</td> <td>82</td> <td>Q3</td> <td>73</td> <td>90</td> </tr> <tr> <td>Q4</td> <td>67</td> <td>85</td> <td>Q4</td> <td>74</td> <td>90</td> </tr> <tr> <td rowspan="4">2006</td> <td>Q1</td> <td>67</td> <td>86</td> <td rowspan="4">2008</td> <td>Q1</td> <td>75</td> <td>90</td> </tr> <tr> <td>Q2</td> <td>73</td> <td>89</td> <td>Q2</td> <td>74</td> <td>92</td> </tr> <tr> <td>Q3</td> <td>77</td> <td>90</td> <td>Q3</td> <td></td> <td>93</td> </tr> <tr> <td>Q4</td> <td>75</td> <td>90</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p style="text-align: center;"><i>Note: Indicators above are the ones calculated in the said quarter</i> (Source: NTP and PTP Punjab)</p>			CR(%)	TSR(%)			CR(%)	TSR(%)	2005	Q1	67	81	2007	Q1	66	86	Q2	62	78	Q2	77	81	Q3	65	82	Q3	73	90	Q4	67	85	Q4	74	90	2006	Q1	67	86	2008	Q1	75	90	Q2	73	89	Q2	74	92	Q3	77	90	Q3		93	Q4	75	90			
		CR(%)	TSR(%)			CR(%)	TSR(%)																																																						
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	Q2	62	78		Q2	77	81																																																						
	Q3	65	82		Q3	73	90																																																						
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	Q4	75	90																																																										

Indicator	Results																																																													
2. The case detection rate (CDR ss+) of 70% is achieved in Punjab province.	<p>Achieved.</p> <p>The CDR was achieved in Q1, 2008 and has been maintained.</p> <p>At the district level, 18 districts have not achieved the target yet, and in 8 districts of them CDR is less than 70%.</p> <table border="1"> <thead> <tr> <th></th> <th></th> <th>CDR ss+ (%)</th> <th>CDR All Type (%)</th> <th></th> <th></th> <th>CDR ss+ (%)</th> <th>CDR All Type (%)</th> </tr> </thead> <tbody> <tr> <td rowspan="4">2005</td> <td>Q1</td> <td>19</td> <td>31</td> <td rowspan="4">2007</td> <td>Q1</td> <td>63</td> <td>83</td> </tr> <tr> <td>Q2</td> <td>25</td> <td>40</td> <td>Q2</td> <td>72</td> <td>93</td> </tr> <tr> <td>Q3</td> <td>27</td> <td>38</td> <td>Q3</td> <td>69</td> <td>83</td> </tr> <tr> <td>Q4</td> <td>22</td> <td>38</td> <td>Q4</td> <td>64</td> <td>74</td> </tr> <tr> <td rowspan="4">2006</td> <td>Q1</td> <td>27</td> <td>47</td> <td rowspan="4">2008</td> <td>Q1</td> <td>80</td> <td>92</td> </tr> <tr> <td>Q2</td> <td>37</td> <td>55</td> <td>Q2</td> <td>83</td> <td>101</td> </tr> <tr> <td>Q3</td> <td>50</td> <td>63</td> <td>Q3</td> <td>80</td> <td>90</td> </tr> <tr> <td>Q4</td> <td>48</td> <td>64</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p><i>Note: Indicators above are the ones calculated in the said quarter</i></p> <p>(Source: NTP and PTP Punjab)</p>			CDR ss+ (%)	CDR All Type (%)			CDR ss+ (%)	CDR All Type (%)	2005	Q1	19	31	2007	Q1	63	83	Q2	25	40	Q2	72	93	Q3	27	38	Q3	69	83	Q4	22	38	Q4	64	74	2006	Q1	27	47	2008	Q1	80	92	Q2	37	55	Q2	83	101	Q3	50	63	Q3	80	90	Q4	48	64				
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	Q4	48	64																																																											

4.1.4. Implementation process

In general, outputs of the Project have been achieved by smooth implementation of planned activities and some additional activities.

The Project has been implemented as follows according to the original project design:

- a. Select 4 model districts* with different geographical and social characters.
 - * Faisalabad as an urban/rural mixed type district model, Lahore as a city district model, Gujrat as a rural district model, Multan as a center district model of southern Punjab
- b. Conduct technical transfer in the model districts to make each district a model of quality DOTS site.
- c. Expand quality DOTS utilizing experiences and lessons learned from model districts to all districts of Punjab province and strengthen managerial capacity of PTP Punjab.
- d. Establish EQA system and laboratory network in Punjab province.
- e. Develop a national guideline for TB drug management at the national level based on the research in Punjab (implementation of the guideline in Punjab province was not conducted due to delay in development of the guideline)

(1) Operational management of the Project

The plan and results of the project activities were discussed and progress of activities were monitored by regular TWG (technical working group) meeting. In the quarterly inter-provincial and inter-district meetings with all counterparts, the results of activities and operational researches were shared with all project counterparts.

(2) JICA consultation mission and mid-term evaluation mission

JICA missions during the project implementation contributed to promotion of activities.

In December 2006 JICA consultation mission visited the Project to discuss with Pakistani counterparts and JICA experts on several issues. The major issues were JICA technical cooperation scheme and role of JICA experts in capacity development, the direction of technical transfer for improvement of quality in monitoring and supervision in model districts, more involvement of laboratory sector in the Project management, and coordination with other development partners.

In July 2007 the JICA mid-term evaluation mission visited and found good progress and achievement level of the Project at that point. The mission made recommendation on several issues to promote project activities, particularly on delayed activities such as development of the national drug guideline and establishment of the second provincial reference laboratory.

(3) Modification of PDM

Minor modification of PDM has done according to discussion at the time of the mid-term evaluation in July 2007.

(4) Delay in implementation of activities

Some activities have delayed due to several reasons, which gave influence on achievement level of outputs.

-Delay in setup of a reference laboratory in Nishtar Medical College due to delay in finalization of layout design of the laboratory and budget arrangement in Pakistani side, and political instability in Pakistan as well. Thus, both sides have worked hard after the establishment of the laboratory to minimize the delayed activities to develop EQA system.

-Frequent change of expected JICA experts for TB laboratory was not optimal for seamless consistent assistance, although this problem has finally brought minimum influence on EQA development by the efforts of both sides.

-Delay in start of the operational research on defaulter reduction due to political instability, which is not avoidable. Therefore, the research will not complete within the period of the Project.

-Delay in finalization of a national guideline for TB drug management. Although the national guideline will be expected to be published, implementation of the guideline will not be conducted in the Project period.

4.2. Evaluation under five criteria

4.2.1. Relevance

For the following reasons, the relevance of the Project is still high at the end of the Project. By the mid-term evaluation relevance of the Project was also considered to be high.



- (1) The project overall goal and project purpose have consistency with Pakistani health and development policy and needs in health sector.
- (2) Project purpose is also consistent with the aid policy of the Japanese government for Pakistan.
- (3) The project approach focusing on human resource development, capacity building, monitoring and supervision, establishment of EQA system and improvement of drug management is appropriate for improvement of quality of TB DOTS that was the issues to be solved in Pakistan.
- (4) Punjab province is the most populated province in the country and the half of TB patients are from this province.

However, the following indicators and activities for NTP strengthening on the PDM have been already achieved between formation of PDM and the inception of the Project owing to the preceding JICA activities and effort of NTP and PTP.

Indicator 2.2 National workshops for TB coordinators are held regularly.

Indicator 2.3 All quarterly reports are managed and analyzed in computer at provincial and national level

Activity 2.1.3 Develop computerized reporting system at the national and provincial level.

Also, following activity will be canceled.

Activity 2.1.6 Participate in task group to revise national guideline and modules.

These have resulted in few activities and achievement to develop capacity of NTP. Thus, a design of the Project based on review of previous JICA cooperation and status of TB DOTS implementation including partners' cooperation in Pakistan seems to be necessary.

4.2.2. Effectiveness

The mid-term evaluation mission evaluated effectiveness of the Project was high and it mentioned "NTP and PTP Punjab have achieved steady progress in all aspects of quality TB DOTS expansion since the inception of the Project in April 2006, and the following project outputs contributed to this progress: (a) Conducting initial and refresher trainings for DOTS personnel, including laboratory staffs, (b) Enhancing quality of monitoring and supervision system, (c) Introduction and initiating EQA system, and (d) Developing training modules and materials in several areas.

After the mid-term evaluation NTP and PTP Punjab have also achieved steady progress in all aspects till now, this resulted in achievement of the global targets in Punjab province in the first quarter of 2008.

Although it is difficult to evaluate effectiveness of the Project on this achievement of the global target which is result of technical assistance by various donors, effectiveness of the Project is evaluated to be high from the following outstanding outputs by the Project. However, as the overall evaluation, these contributions by the Project have been mainly for Punjab PTP and there has been limited contribution at NTP level.

(a) Establishment of EQA system in whole Punjab including set up the 2nd provincial referral

laboratory in Nishtar Medical College in Multan.

EQA system is essential to assure the quality of sputum smear microscopy test. JICA experts took initiative to establish this system in 2004 in Gujrat. The Project has continuously been supporting to set up quality EQA centers and establish EQA system and laboratory network in Punjab and in Pakistan. It was started with introduction of EQA concept and raising awareness of importance and necessity of EQA for quality DOTS in NTP and PTP, and district level including DTC and EDOH. A provincial reference laboratory (PTBRL/IPH) was strengthened through training and provision of equipment, and microscopists were trained by PTBRL/IPH. District EQA center was set up according to the SOP for EQA drafted by the Project with standardized equipment and trained human resources (DLS and cross-checkers). Then, the Project initiated quarterly meeting for DLS. The DLS conducts monitoring and supervisory visits to diagnostic centers. The PTBRL/IPH conducts monitoring and supervisory visits to EQA centers and continues refresher training as needed. Then finally, the second provincial reference laboratory (PTBRL/NMC) for southern Punjab was established in June 2008. Thus, EQA system with 2 provincial reference laboratories of Punjab was established though quality improvement is still needed.

- (b) Improvement in quality of TB DOTS and its expansion in model districts, then in Punjab province
- In 4 model districts, the Project supported capacity building through trainings (DOTS training for health personnel, training of monitoring and supervision for DTCs and EDOHs, training of recording and reporting for DTCs and computer operators, training for microscopists, training for DLSs), improvement of quality of monitoring and supervision such as use of on-site feedback slip and submission of feedback report to PTP and district, intra-district meeting, establishment of monthly meeting between diagnostic centers and treatment centers, and so on. The Project also supported some equipment which was necessary for technical transfer.

Experiences and know-how of the Project, particularly of monitoring and supervision were shared in inter-district meeting and other meetings. Based on the analysis of the results of the model districts several OR were conducted or being conducted. This information was also shared with other districts. Capacity building through training such as supervisory training and computer data entry for other districts was also supported by the Project. Through all these activities management capacity of PTP Punjab has been improved. Counterpart training in Japan has also contributed it.

- (c) Development of a national guideline for TB drug management based on the field research

Based on the results of operational research in Punjab, the national guideline for TB drug management has been developed. However, implementation of the guideline in Punjab province which was originally planned will not be conducted in the period of the Project due to delay in finalization of the guideline.

- (d) Development of a guideline for hospital DOTS linkage including development of referral forms

Based on the situation of one of the model district (Lahore) a guideline for tertiary care and PHC linkage has been developed including referral forms for hospital and PHC facilities. The pilot

study will be conducted in all 35 districts in Punjab from January 2009.

4.2.3. Efficiency

The mid-term evaluation also evaluated efficiency was reasonable. Judging from the achievement level of the Project and inputs conducted by both Japanese and Pakistani sides, this mission also evaluate efficiency is reasonable in general, except delay of input for setup of a provincial reference laboratory in Nishtar Medical College. (If it was set up at the time as planned, the achievement level of establishment of EQA system would be much higher).

(a) JICA experts

Expertise and skills, timing of dispatch and the number of JICA experts were appropriate to produce expected outputs. Performance of JICA experts and their technical inputs are appreciated by counterparts. However, the followings are pointed out by both sides (JICA experts and counterparts) as described 4-1-4 (4).

-During 2 months of absence of JICA experts due to delay in dispatch in 2007 most of the project activities were not carried out.

-Frequent changes of JICA expert in the field of TB laboratory caused some confusion and affected efficiency since it takes some time for new one to get the situation.

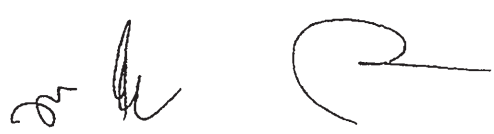
(b) Counterparts

The number of counterparts and their technical field were reasonable in general. Quick turnover of trained staff at the district level have influenced on efficient implementation of activities, hampering continuous quality improvement of DOTS. The mid-term evaluation pointed out that due to initial absence of counterpart at national level in development of the national guideline for TB drug management technical transfer to Pakistani side seemed to be not adequate. This situation has been improved by assignment of a focal person for development of the national guideline for TB drug management.

(c) Counterparts training in Japan

The mid-term evaluation assessed counterparts training had contributed to the human resource development for the TB control program in Pakistan. In total 6 counterparts have been trained in Japan during the Project. Since training at RIT has a good reputation in the world and well-organized training course, all except one who is still in Japan highly appreciated the training and the seniors and colleagues as well as JICA experts recognizes their improvement and contribution to the Project. These were also pointed out in the mid-term evaluation. An ex-trainee* in IPH also contributed to the Project.

(*JICA cooperation in TB control started from 2002 and continued to 2006 as mention in the Background of the Project. The ex-trainee was trained in Japan during this period before the Project).



However, in most cases the knowledge obtained in Japan was not shared widely in their organizations. The counterparts trained in Japan are expected to make more effort to disseminate what they learned for their institutional sustainability.

(d) Equipment provided by the Project

Equipment provided for the project activities also highly appreciated by counterparts. The quality and quantity of the equipment were appropriate and well maintained and utilized.

Regarding equipment for the reference laboratory in Multan which had been kept at PTP Punjab some still remain there even after the opening of the laboratory in June 2008. For utilization of computers which have been provided to diagnostic centers in model districts, doctors and operators should develop their skills on data entry.

(e) Budget allocation

Operational cost borne by both sides was appropriate. As mentioned by the mid-term evaluation, establishment of a provincial reference laboratory in Nishtar Medical College for southern Punjab delayed since the budget was not secured on time. This caused significant delay in improvement of EQA quality and laboratory network.

(f) Project offices

The necessary spaces for project offices have been provided in NTP building, Islamabad. In Lahore, an office for a JICA expert for TB laboratory was also provided in IPH.

4.2.4. Impact

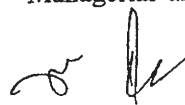
As pointed out by the mid-term evaluation, the Project has given positive impact to control TB in the several areas. Following 3 points were addressed in the mid-term evaluation.

- a) Establishment of EQA system.
- b) Monitoring and supervision
- c) OR on TB drug management

For establishment EQA, the activity of the Project in Punjab has given further impact and NTP started to adapt the EQA system established by the Project to the whole nation. NTP already finished the pilot studies in 40 districts and is planning to extend to other 90 districts.

The followings are other unexpected impacts identified by this final evaluation mission.

- Expansion of study area of Hospital DOTS linkage: The pilot study and operational researches have been aimed to conduct in 4 model districts after the initial study in Lahore. However, due to importance and high quality of this study, PTP Punjab decided to implement this study in all districts simultaneously.
- Managerial and general capacity of counterparts at all levels has been improved through various



activities of the Project. These include, though by subjective observation, organization of meetings, capacity for presentation, active participation to meetings, and well motivated atmosphere for workings, etc.

There is no negative impact or influence due to the Project.

4.2.5. Sustainability

Sustainability is expected to be high if NTP and PTP Punjab continue quality TB DOTS activities by utilizing trained human resources, transferred technology, developed system and equipment provided by the Project.

(a) Strong policy support and sufficient financial resources

TB control is one of the important issues in health and social sectors and also one of the MDG goals as indicated in Pakistani development plan and policy papers. Through the interview by the mission member, it is confirmed that the Government of Pakistan continue provide policy support to TB control.

For the financial sustainability, NTP has succeeded to get enough budgets from GFATM R6 and R8. Thus, financial sustainability seems to be high, though NTP needs to work for proper management of the budget and improve capacity to develop successful proposal for other grants.

(b) Strong leadership of NTP and PTP

The mission member confirmed that both NTP and PTP Punjab have strong leadership and managerial capacity for TB control, resulting in developing capable staffs. Although both NTP and Punjab PTP should continue to develop human resources to cope with staff turnover and new challenges, both have established the functional organizational structure for sustainable development.

(c) Technical transfer has been done in Punjab province and NTP

Although NTP and PTP Punjab needs to develop technical capacity to cope with further challenges, such as MDR-TB or TB/HIV, both already have obtained enough technical capacity to implement basic TB control programme through the Project activities and their own efforts. Thus, it is judged that both NTP and PTP Punjab have sustainability which has been aimed by the scope of this Project.

5. Conclusion

As the conclusion, all five criteria can be reasonably evaluated. This is the results of tremendous efforts by NTP and PTP Punjab and certain contributions by the Project, as the Project, in addition to the preceded JICA activities, made significant achievement according to the PDM.

However, as pointed above, controversies remained for the evaluation, especially for achievement at the national level. As the results, achievement of the Project at the national level is not optimal.

Several factors are attributable to this and decentralized system in Pakistan might have partly

influenced. However, as pointed out, there might have been additional or alternative approaches to bring more achievement at the national level upon utilizing the experiences of preceded technical assistance by JICA.

Also, it has been controversial about the method of capacity building and there has been discrepancy in the concept of capacity building between Pakistan and Japanese sides, as pointed out by the JICA consultation mission and the mid-term evaluation mission. Thereafter, mutual understanding has been promoted thorough series of discussion and efforts by the Project, resulting finally in deepened understanding for capacity building by the Pakistani side and favorable achievement of the Project. For better approaches for capacity buildings, there also might have been alternatives or modification upon mutual understandings for the design of the Project.

6. Recommendations

The team was impressed by the efforts and commitment and ownership by NTP and PTP Punjab in all aspects of the TB control program. Also, the activities of Japanese side were outstanding despite of limited resources. The Team would be very grateful if recommendations described below will eventually bring certain additional development in TB control program in Pakistan.

(1) Review of the project activities

Since the Project has worked in four districts which have various social situations, important lessons will be expected from the review and analyze of the Project activities, resulting in possible adaptation to other districts not only in Punjab , but also in other provinces. Thus, it is recommended that the Project develop the extensive review of the Project activities in four districts to feed back to Punjab PTP and NTP. Punjab PTP and NTP are recommended to disseminate and utilize the review for future management of TB control program in other districts.

(2) Operational researches

It is recommended to finish all on-going researches and the Project and Punjab PTP are encouraged to submit as research articles. Some research will continue after the end of the Project period, thus both Pakistan and Japanese sides are required to allocate necessary human and financial resources to complete researches.

(3) EQA

The Project made certain contribution to develop EQA not only in Punjab, but also in whole Pakistan. Punjab PTP haven been utilizing the SOP for EQA which was developed by the Project for practical use. The contents of the SOP have been incorporated into the National Guideline. Thus, it is recommended that NTP, too, starts practical use of the SOP upon full endorsement as soon as possible to feed back the results to the Project.

For EQA in Punjab, the reference laboratory in Multan still needs to develop its capacity as the



reference laboratory. Thus, the Project should continue full support to develop the capacity in the remaining period.

(4) The National Guideline for Drug Management

The Project made significant contribution to develop this guideline. Thus, it is recommended that NTP should print and publish it upon full authorization as soon as possible.

(5) Continuous utilization of the training courses supported by JICA

Training courses abroad supported by JICA have been effective to develop human resources. Thus it is recommended that NTP and Punjab PTP would continue to utilize those training courses and should take necessary action for this purpose. It is also recommended that NTP and Punjab PTP develop the plan of human resource development to maximize effects of those training courses.