付　属　資　料

1. Minutes of Meetings

2. 協議結果

1. Minutes of Meetings

MINUTES OF MEETINGS
BETWEEN
THE JAPANESE PROJECT CONSULTATION TEAM
AND
THE AUTHORITIES CONCERNED OF
THE GOVERNMENT OF THE REPUBLIC OF ZAMBIA
ON JAPANESE TECHNICAL COOPERATION FOR
THE HIV/AIDS AND TUBERCULOSIS CONTROL PROJECT

The Japanese Project Consultation Team (hereinafter referred to as "the Team"), organized by the Japan International Cooperation Agency and headed by Prof. Naoki Yamamoto, visited the Republic of Zambia from 17 January, 2002 to 24 January, 2002 for the purpose of making the study on the details of the technical cooperation program concerning the HIV/AIDS and Tuberculosis Control Project (hereinafter referred to as "the Project") based on the Record of Discussions (hereinafter referred to as "R/D") signed on 20 March, 2001.

During its stay in the Republic of Zambia, the Team exchanged views and had a series of discussions about activities and implementation of the Project with the authorities concerned of the government of Zambia (hereinafter referred to as "the Zambian Authorities")

As a result of the discussions, the Team and the Zambian authorities agreed upon the matters referred to in the document attached hereto.

Lusaka, Zambia,
23 January, 2002

山本直樹

Prof. Naoki Yamamoto
Leader,
Project Consultation Team,
Japan International Cooperation Agency,
Japan

Dr. Gavin Silwamba
Permanent Secretary,
Ministry of Health,
The Republic of Zambia

Prof. Mutale W. Chanda
Vice Chancellor,
The University of Zambia

THE ATTACHED DOCUMENT

I. INTRODUCTION

The Project started on 30th March, 2001, with cooperation period of five (5) years. The University Teaching Hospital, University of Zambia implements the Project in cooperation with JICA. The purpose of the Project is to strengthen and effectively utilize laboratory systems for HIV/AIDS and tuberculosis control in the Republic of Zambia.

The Joint Coordinating Committee was held on 23 January, 2002, and both the Team and the Zambian Authorities confirmed the continuous cooperation between the Japanese and Zambian governments for further progress of the Project, based on the common recognition of the present status of the Project.

II. REVIEW OF THE PROJECT ACTIVITIES (until 31st December, 2001)

In accordance with R/D, JICA has dispatched eight (8) Japanese experts to Zambia as listed in Annex 1 to facilitate the implementation of the Project.

In accordance with R/D, the Zambian Authorities have taken measures described below to facilitate the implementation of the Project;

1. to appoint the Zambian counterpart personnel as listed in Annex 2.
2. to provide facilities in University Teaching Hospital for Japanese experts.

III. AMENDMENT OF RECORD OF DISCUSSIONS (R/D)

1. PROJECT TITLE

The project title, which used to be the Strengthening of Laboratory Systems for HIV/AIDS and Tuberculosis Control Project defined in R/D, was changed to the HIV/AIDS and Tuberculosis Control Project.

2. MEASURES TO BE TAKEN BY THE GOVERNMENT OF JAPAN

The following paragraph has been added to the article II "MEASURES TO BE TAKEN BY THE GOVERNMENT OF JAPAN" of R/D.

(5) SPECIAL MEASURES FOR THE PHISICAL INFRASTRUCTURE

To ensure the smooth implementation of the Project, the Government of Japan will take, in accordance with the laws and regulations in force in Japan, special measures through JICA for the purpose of supplementing a portion of the local cost expenditures necessary for the execution of the physical infrastructure.

3. MASTER PLAN

Master Plan, which was defined as Annex I in R/D, was modified as described in Annex 3 reflecting the revision of Project Design Matrix, which is mentioned in Article IV below.

4. JOINT COORDINATING COMMITTEE

Director General or his representative of the National HIV/AIDS/STD/TB Council and Secretariat, and representatives of Technical Working Groups (VCT, MTCT, HIV Vaccine/Treatment, and TB) join as members to the Joint Coordinating Committee of the

Project. In addition, the Joint Coordinating Committee will have a representative of the Planned Parenthood Association of Zambia (hereinafter referred to as "PPAZ") as a member. The Composition of the Joint Coordinating Committee is described as Annex 4.

IV. PROJECT DESIGN MATRIX

Project Design Matrix (hereinafter referred to as "PDM") has been revised as Annex 5 in accordance with Article 1 of Minutes of Meeting (hereinafter referred to as "M/M") signed on 20th March, 2001. The Team and the Zambian Authorities confirmed the content and agreed the followings;

(1) The existing health systems and health problems are accurately reflected on PDM.
(2) In order to manage the Project efficiently, the Project should be periodically monitored and evaluated based on PDM.
(3) The Joint Coordinating Committee defined in R/D might request for some modifications of PDM based on the results of periodical monitoring by JICA and the Zambian Authorities.

V. PLAN OF OPERATION

The Team and the Zambian Authorities have modified and agreed the Plan of Operation (hereinafter referred to as "PO") attached here as Annex 6, in accordance with Article 2 of M/M signed on 20th March, 2001. This PO has been formulated on condition that the necessary budget will be allocated for the implementation of the Project by both sides.
The PO is subject to change within the scope of R/D when necessity arises in the course of implementation of the Project.

VI. PROJECT DOCUMENT

The Team and the Zambian Authorities have modified and agreed the Project Document attached here as Annex 7, which was originally elaborated by the Japanese Preparatory Study Team dispatched to Zambia in November 2000. This Study Team was dispatched for rationalization of the plan and justification of the project implementation.

VII. COLLABORATION WITH THE OTHER ORGANIZATIONS

The Team and the Zambian Authorities have agreed that close collaborations with the other organizations, such as National HIV/AIDS/STD/TB Council and Secretariat, should be established and maintained in order to disseminate fruits of the Project.
It was also agreed between the Team and the Zambian Authorities that the collaboration of the Project with PPAZ should be maintained.

Annex 1: List of Japanese experts dispatched to Zambia
Annex 2: List of Zambian counterpart personnel
Annex 3: Master Plan
Annex 4: Composition of the Joint Coordinating Committee
Annex 5: Project Design Matrix
Annex 6: Plan of Operation
Annex 7: Project Document

Annex 1: List of Japanese experts dispatched to Zambia

1 SUMMARY TABLE

Field of Experts	Long-term	short-term
Chief Advisor	1	
Project Coordinator	1	
HIV/AIDS	1	
HIV Virology & Immunology	1	
Immunology		1
HIV/AIDS (MTCT)		1
HIV/AIDS (VCT)		1
Tuberculosis	1	
Total	5	3

2 LIST OF EXPERT

		*1	*2	
Chief Advisor	Prof. Kotaro Oizumi	L/T	2001.05.15 - 2003.05.14	
Project Coordinator	Mr. Kenji Yokoi	L/T	2001.04.22 - 2003.04.21	
HIV/AIDS	Dr. Koji Ichiyama	L/T	2001.03.30 - 2002.05.27	*3
HIV Virology & Immunology	Dr. Tomoyuki Yokota	L/T	2001.08.27 - 2003.08.26	
Immunology	Dr. Hiroshi Terumuna	S/T	2001.07.21 - 2001.08.18	
HIV/AIDS MTCT	Dr. Naomi Wakasugi	S/T	2001.07.21 - 2001.08.17	
HIV/AIDS VCT	Ms. Kiyoko Ikegami	S/T	2001.07.29 - 2001.08.17	
Tuberculosis	Dr. Satoshi Mitarai	L/T	2001.03.30 - 2001.05.31	*4

Notes;

*1 L/T denotes Long-term expert (more than one year term) and S/T denotes Short-term expert

*2 Date indicate those of departure from and arrival in Japan

*3/4 Status switched from Individual expert to Project expert when this project started.

Annex 2: List of Zambian counterpart personnel

PROJECT DIRECTOR

Dr. Elwyn Chomba	Managing Director of the University Teaching Hospital (UTH)

PROJECT CO-DIRECTOR

Prof. Lupando Munkonge	Dean of the School of Medicine, The University of Zambia

DEPUTY PROJECT DIRECTOR

Dr. Victor Mudenda	Director of the Laboratory Services, The UTH

PROJECT MANAGER

Dr. Francis Chisaka Kasolo	Head of the Virology Laboratory, The UTH

VIROLOGY LABORATORY STAFF

1	Dr. Francis Chisaka Kasolo	Consultant Virologist/Head of Virology Laboratory
2	Dr. Mwaka Monze	Senior Register Virology (In Japan at present)
3	Dr. Lishomwa Ndlobvu	Medical Officer Immunology (In Japan at present)
4	Dr. Jubra Muyanga	Medical Officer Virology (In USA at present)
5	Mr. Ray Handma	Lecturer Virologist (In Japan at present)
6	Mrs. Gina Mulundu	Immunologist/Lecturer (In Japan at present)
7	Mrs. Ida Ndumba	Laboratory Scientist
8	Mrs. Maziyanga Liwewe	Laboratory Scientist (In Japan at present)
9	Mr. Saul Phiri	Laboratory Scientist (In USA at present)
10	Miss. Mwansa Mukanta	Laboratory Scientist (In Japan at present)
11	Mr. Humphrey Bima	Laboratory Scientist
12	Mr. Andros Them	Laboratory Scientist
13	Mr. Brighden Kakonkanya	Laboratory Technologist
14	Miss. Julia Simwaka	Laboratory Technologist
15	Mr. Patrick Munjunga	Laboratory Technologist
16	Mr. Clement Mulenga	Computer Technologist
17	Mr. Joseph Banda	Computer Technologist
18	Mr. Eliya Banda	Laboratory Assistant
19	Mr. Benson Musonda	Laboratory Assistant
20	Mr. Nalishebo Mubiana	Laboratory Assistant

TB LABORATORY STAFF

1	Dr. Lyndon Mwape Kafwabulula	Head of TB Laboratory
2	Mrs. Charity Habeenzu	Principal Technologist, Laboratory in charge
3	Mr. David Lubasi	Senior Laboratory Technologist
4	Mr. Patrick Katemangwe	Laboratory Scientist
5	Mrs. Florence Chuulu	Laboratory Technician
6	Miss. Kunda Kasakwa	Laboratory Technician
7	Mr. Lewis Chikambwe	Laboratory Technician
8	Miss. Veronica Langa	Laboratory Assistant
9	Mr. Chrispin Mwanza	Clerk

OTHER UNIVERSITY TEACHING HOSPITAL STAFF

1	Mr. Elias Luhana	Medical Equipment Engineering
2	Mr. Bristol Chembo	ZVCTS National Coordinator

Annex 3

MASTER PLAN

OVERALL GOAL

Status of HIV/AIDS and TB in the Republic of Zambia is improved.

PROJECT PURPOSE

Laboratory Systems are strengthened and are effectively utilized for HIV/AIDS and TB control in the Republic of Zambia.

OUTPUTS OF THE PROJECT

(1) Performance of laboratory techniques, data management and overall laboratory management are improved.

(2) Performance and quality of peripheral labs for HIV/AIDS and TB testing and surveillance are improved.

(3) Utilization of laboratory services by health workers (private, public and NGOs) is improved.

(4) Information on HIV/AIDS and TB generated by the project is utilized widely by majority of stakeholders in planning and implementing programmes (i.e. GRZ, other donors, health workers, NGOs, schools, youth and communities).

(5) Collaboration with HIV/AIDS and TB Working Groups is institutionalized.

ACTIVITIES OF THE PROJECT

(1) a. To train counterparts on surveillance and diagnostic techniques /methods at the central laboratories.

b. To train lab staff locally to acquire preventive maintenance skills of lab equipment.

c. To establish or improve the following technologies in the central laboratories on monitoring, surveillance and diagnosis.

Provide technical support for monitoring Anti-retro viral (ARV) drug treatment
Anti-HIV drug assay and ARV drug resistance
HIV strain surveillance and sero-sentinel surveillance
HIV immunological response
TB drug resistance surveillance and Anti-TB drug susceptibility (improvement)
Diagnostic value of TB (improvement)

d. To make recommendation in reviewing SOPs for HIV/AIDS and TB labs to CBoH as part of Technical Working Group.

e. To improve data management, information and overall management of Virology and TB laboratories.

(2) a. To conduct training of trainer workshops for health workers in HIV/AIDS and TB diagnosis in collaboration with Technical Working Group.

b. To conduct laboratory training for health workers to support VCT, MTCT, and TB control programmes

c. To participate in development of training manuals for HIV/AIDS and TB for staff of peripheral laboratories.

d. To support planning, distribution and monitoring of activities of VCT and MTCT sites.

e. To ensure quality assurance for HIV/AIDS and TB testings

To ensure quality assurance of HIV testing at all VCT and MTCT sites.

To ensure quality assurance of TB diagnostic sites in Lusaka Province.

(3) a. To sensitize health workers on the importance of lab diagnosis for HIV/AIDS and distribution of project newsletters.

b. To update and distribute laboratory handbook for health workers.

c. To provide results of HIV/AIDS and TB lab tests timely to UTH clinicians.

(4) a. To produce and distribute technical information and materials on HIV/AIDS and TB to stakeholders.

b. To produce project homepage on the internet.

c. To hold dissemination meetings with MOH/CBoH on the activities of project at least twice a year.

d. To organize sensitizing meetings for youth in community on VCT programme.

(5) Project staff both Japanese and Zambian get officially appointed and actively involved in various Technical Working Groups. (VCT, MTCT, TB and HIV Vaccine/Treatment)

Note: In case the Master Plan should be changed due to the situation of the Project, both Governments will confirm the changes by exchanging Minutes of Meetings.

Annex 4

COMPOSITION OF THE JOINT COORDINATING COMMITTEE

(1) Chairperson : Permanent Secretary or his representative of Ministry of Health

(2) Members

Zambian side:

(a) Project Director

(b) Deputy Project Director

(c) Project Manager

(d) Technical counterpart personnel to the Japanese experts

(e) Director General or his representative of the Central Board of Health

(f) Director General or his representative of the National HIV/AIDS/STD/TB Council and Secretariat

(g) Representatives of Technical Working Groups (VCT, MTCT, HIV Vaccine/Treatment, and TB)

(h) Representative of the Planned Parenthood Association of Zambia (PPAZ)

(i) Other personnel mutually agreed upon as necessary

Japanese side:

(a) Chief Advisor

(b) Coordinator

(c) Experts

(d) Resident Representative of JICA Zambia Office

(e) Other personnel to be dispatched by JICA

Note: Representative(s) of the Embassy of Japan in the Republic of Zambia may attend the Joint Coordinating Committee meetings as observer(s).

Annex 5

PROJECT DESIGN MATRIX (PDM)

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

Project Name : HIV/AIDS AND TUBERCULOSIS CONTROL PROJECT

Version 2 (January 23, 2002)

Target Group : Community (People affected/infected by HIV / TB, Health workers, Educational Institutions, Youth and NGOs)

Duration : March 30, 2001～March 29, 2006

Project Area : Zambia

NARRATIVE SUMMARY	VERIFIABLE INDICATORS	MEANS OF VERIFICATIONS	IMPORTANT ASSUMPTIONS
OVERALL GOAL Status of HIV/AIDS and TB in the Republic of Zambia is improved	• Prevalence of HIV infected people • Newly infected cases of HIV • Cure rate of TB cases • TB case detection rate	• Cure rate of TB cases • Annual TB Report • HIV Population survey reports	• Sufficient human and financial resources for prevention and treatment for HIV/AIDS and TB are provided • HIV/AIDS and TB infection remain priority in Zambia
PROJECT PURPOSE Laboratory systems are strengthened and are effectively utilized for HIV/AIDS and TB control in the Republic of Zambia	• No. and quality of results produced by laboratory systems • No. of laboratory staff trained on HIV/AIDS and TB • Performance of peripheral lab. on quality assurance tests • No of information disseminated to stakeholders	• Performance of peripheral laboratories on yearly HIV/AIDS and TB QA testing • Annual report of UTH, CDL, CBoH, UNAIDS and WHO HIV/AIDS Secretariat • Annual report of Virology and TB Laboratories • Minutes of HIV/AIDS and TB Technical Working Groups	• Overall National Health Policy remains the same • Administrative Structure of UTH remains the same • Communities continue participation in activities of HIV/AIDS and TB
OUTPUTS 1 Performance of laboratory techniques, data management and overall laboratory management are improved 2 Performance and quality of peripheral labs for HIV/AIDS and TB testing and surveillance is improved 3 Utilization of laboratory services by health workers (Private, public and NGOs) is improved 4 Information on HIV/TB generated by the project is utilised widely by majority of stake holders in planning and implementing programmes (i.e.. GRZ, other donors, health workers, NGOs, schools, youth and communities) 5 Collaboration with HIV/AIDS and TB Working Groups is institutionalised	See attached verifiable indicators list	• Annual report of UTH, CDL, CBoH, UNAIDS, WHO and HIV/AIDS Secretariat • Annual report of Virology and TB Laboratories • Minutes of HIV/AIDS and TB Technical Working Groups • Regular quality surveillance report • Pre-and post project evaluation study (KIP) on technician	• The position of UTH HIV/AIDS and TB laboratories in National Programme remain the same MTCT, VCT and TB activities remain stable.
ACTIVITIES 1-1 To train counterparts on surveillance and diagnostic techniques /methods at the central laboratories 1-2 To train lab staff locally to acquire preventive maintenance skills of lab equipment 1-3 To establish or improve the following technologies in the central laboratories on monitoring, surveillance and diagnosis 1-3(a) Provide technical support for monitoring Anti-retro viral (ARV) drug treatment 1-3(b) Anti-HIV drug assay and ARV drug resistance 1-3(c) HIV strain surveillance and sero-sentinel surveillance 1-3(d) HIV immunological response 1-3(e) TB drug resistance surveillance and Anti-TB drug susceptibility (improvement) 1-3(f) Diagnostic value of TB (improvement) 1-4 To make recommendation in reviewing SOPs for HIV/AIDS and TB labs to CBoH as part of Technical Working Group 1-5 To improve data management, information and over all management of Virology and TB laboratories 2-1 To conduct training of trainer workshops for health workers in HIV/AIDS and TB diagnosis in collaboration with Technical Working Group 2-2 To conduct laboratory training for health workers to support VCT, MTCT and TB control programmes 2-3 To participate in development of training manuals for HIV/AIDS and TB for staff of peripheral laboratories 2-4 To support planning, distribution and monitoring of activities of VCT and MTCT sites 2-5 To ensure quality assurance for HIV/AIDS and TB testings 2-5(a) To ensure quality assurance of HIV testing at all VCT and MTCT sites 2-5(b) To ensure quality assurance of TB diagnostic sites in Lusaka Province 3-1 To sensitize health workers on the importance of lab diagnosis for HIV/AIDS and distribution of project newsletters 3-2 To update and distribute laboratory handbook for health workers 3-3 To provide results of HIV/AIDS and TB lab tests timely to UTH clinicians 4-1 To produce and distribute technical information and materials on HIV/AIDS and TB to stakeholders 4-2 To produce project homepage on the internet 4-3 To hold dissemination meetings with MOH/CBoH on the activities of project at least twice a year 4-4 To organise sensitizing meetings for youth in community on VCT program 5 Project staff both Japanese and Zambian get officially appointed and actively involved in various Technical Working Groups (VCT, MTCT, TB and Vaccine and Treatment)	**INPUTS** **Japan** **Expert** Project chief advisor Project Coordinator Long/Short term HIV expert Long/Short term TB expert Long/Short term Public health/Epidemiology Long/Short term Equipment Maintenance Long/Short term Immunology expert **Counterpart training** **Equipment** **Operational cost** **Zambia** **Counterpart (Implementation body)** Project directors Project manager Medical doctors Medical officers Medical technologist in immunology Medical technologist in bacteriology Medical technologist in virology Medical scientist in immunology Medical scientist in bacteriology Medical scientist in virology Medical equipment technicians Data management personnel Epidemiologist Medial equipment engineer **Utility cost and salaries for Zambian staff**	• Trained Health staff continues to work on the project • Economic performance remains stable • Equipment continues work optimally **PRECONDITIONS**

LIST OF VERIFIABLE INDICATORS

OUTPUT	ACTIVITY	INDICATORS
1	1-1	18 Zambian counterparts health workers in various HIV/ TB technologies
	1-2	Identified Laboratory Staff and maintenance engineers trained in preventive maintenance
	1-3(a)	Number of tests
		CD4 CD8 counting, Viral load, PCR and antibody testing established and maintained in the Lab.
	1-3(b)	Drug assay and ARV resistance monitoring system established in the Lab
	1-3(c)	Strain and sentinel surveillance of HIV in Zambia conducted
	1-3(d)	Immunological techniques set up in the lab
	1-3(e)	Improved TB drug surveillance and anti-TB drug susceptibility
	1-3(f)	Improved utilisation of TB laboratory diagnosis
		Improvement of increasing Number of request of Lab tests from UTH and private clinics
	1-4	SOP
		Number of recommendation
		Number of participation
	1-5	Established system of over all data management
		Annual reports
		Number of research project managed
		Record of routine activities
2	2-1	Number of training
	2-2	Number of trainees
		Number of training courses
	2-3	Training manuals of HIV/AIDS and TB
	2-4	Number supplies utilised by reporting inventory system
		Number of persons utilising MTCT/VCT services
	2-5(a)	Quality assurance systems at all sites
	2-5(b)	Quality assurance systems at all sites
3	3-1	Number of workshop and meeting
		Number of participant
		Number of newsletter distributed
	3-2	1000 copies of laboratory hand book are printed and circulated
	3-3	90% of HIV and initial TB microscopy test result return with in 48 hours
4	4-1	Total number of participants receiving HIV/TB information
		A number of request for information
		Feed back from participant
		Establishment of Homepage
	4-2	Number of homepage updated
		Number of person accessing web site
	4-3	Number of participants, minutes produced and project information used in planning National policy
	4-4	Number of participants
		Number of meetings in various area
		% of youth who go through VCT among meeting participant
5	5	Project staff are officially appointed
		Number of meeting attended, minutes, report and minutes form technical working group

Annex 6 **PLAN OF OPERATION (PO) OF HIV/AIDS AND TUBERCULOSIS CONTROL PROJECT**

OVERALL GOAL	**PROJECT PURPOSE**
Status of HIV/AIDS and TB in the Republic of Zambia is improved	Laboratory Systems are strengthened and are effectively utilized for HIV/AIDS and TB control in the Republic of Zambia

OUTPUT 1. Performance of laboratory techniques, data management and overall laboratory management are improved

ACTIVITIES		2001	2002	2003	2004	2005	2006	PERSON INCHARGE	IMPLEME-NTERS	EQUIPMENT/ MATERIALS	EXPECTED RESULTS INDICATORS
1-1	To train counterparts on surveillance and diagnostic techniques / methods at the central laboratories	6 (Project management) (HIV Virology) (HIV Sequencing) (Molecular TB)	2 (HIV Virology) (Tuberculosis)	3 (Molecular Viorology) (Tuberculosis) (Epidemiology Public Health)	3 (Data management Statistic) (HIV Immunology) (Tuberculosis)	3 (Virology) (Tuberculosis) (Molecular Virology)		Project Manager JICA Experts	JICA Headquarter and Local office		17 Zambian counterparts health workers in various HIV/ TB technologies
1-2	To train lab staff locally to acquire preventive maintenance of lab equipment		1 (Centrifuge) (Microscope)	1 (Safety cabinet) (Deep freezer)	1	1		Project Manager	JICA Short/Long term experts Maintenance experts specified yearly	Tools and Spares for identified equipment	Identified Lab. Staff and maintenance engineers trained in preventive maintenance

Annex 6 **PLAN OF OPERATION (PO) OF HIV/AIDS AND TUBERCULOSIS CONTROL PROJECT**

OUTPUT 1. Performance of laboratory techniques, data management and overall laboratory management are improved

ACTIVITIY 1-3 To establish or improve the following technologies in the central laboratories on monitoring, surveillance and diagnosis

ACTIVITIES	2001	2002	2003	2004	2005	2006	PERSON INCHARGE	IMPLEME-NTERS	EQUIPMENT/ MATERIALS	EXPECTED RESULTS INDICATORS
1-3 (a) Provide technical support for monitoring ARV drug treatment	←				→		Project Manager	JICA Experts (HIV Virology) Counterparts (HIV Virology) MTCT & Treatment W.Gs	DNA Sequencer(1) ELISA Reader(1) Class II Safety Cabinet(2) CO2 Incubator(2) FACScan Up-grade(Soft ware/Replace with FACS calibre) Laboratory Bench(2) Air conditioner(10)	Techniqes of PCR, Cellular anti-body, CD4, CD8, Viral load are established
1-3 (b) Anti-HIV drug assay and ARV drug resistance	←				→					Drug assay and ARV resistance monitoring system established in the Lab
	(Drug assay: 10 samples/year)									
	←				→					
	(ARV drug resistance: 120 MTCT samples/year)									
	Phenotyping assay Genotyping assay Diagnosis of children									
1-3 (c) HIV strain surveillance and sero-sentinel surveillance		Lusaka	North	West	East	South	CBoH	UTH Viro. Lab TDRC JICA CDC V. Dev. & Treat. W.G.	Deep Freezer-80(1)-40(1)-4(2) Reagents(PCR, Sequencing, FACSCan and HIV culture) Glass and Plastic wares	Strain and sentinel surveillance of HIV in Zambia conducted
		←	→	←	→	←				
		(Strain: 100 samples/year)								
		←	→		←	→				
		(Sentinel: 500 samples/site x 23 sites)								
1-3 (d) HIV immunological response		←						JICA Experts (Immunology) Counterparts (Immunology) V. Dev. & Treat. W.G.		Immunological techniques set up in the lab
		Up-grade of FACScan								
			←			→				
			(100 samples/year)							

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Annex 6 **PLAN OF OPERATION (PO) OF HIV/AIDS AND TUBERCULOSIS CONTROL PROJECT**

OUTPUT 1. Performance of laboratory techniques, data management and overall laboratory management are improved

ACTIVITIY 1-3 To establish or improve the following technologies in the central laboratories on monitoring, surveillance & diagnosis

ACTIVITIES		2001	2002	2003	2004	2005	2006	PERSON INCHARGE	IMPLEME-NTERS	EQUIPMENT/ MATERIALS	EXPECTED RESULTS INDICATORS
1-3 (e)	TB drug resistance surveillance and Anti-TB drug susceptibility (improvement)	MGIT utilization ← Establish and evaluation system 500tests/year →		8,000tests/year →				Project Manager	UTH TB Lab (Head) CDL (Technologist in-charge) JICA experts (TB)	MGIT system(1) Class II Safety Cabinet(1) CO2 Incubator(1) Florescence Microscope(2) Light Microscope(1) Laboratory Bench(2)	Improved TB drug surveillance and anti-TB drug susceptibility
1-3 (f)	Diagnostic value of TB (improvement)		← Base line survey →	Evaluation →				Project Manager	UTH TB Lab (Head) CDL (Technologist in-charge) JICA experts (TB) Clinics (Medical officer in-charge, Director of DHMT) UTH wards (Director of Clinical Services)	Air conditioner(3) Autoclave(2) Water Distiller(1) Coagulator(1) Dry oven(1) Reagents(TB culture, Microscopy and PCR) Glass and Plastic wares	Improved utilisation of TB laboratory diagnosis Improvement of increasing No. of request of Lab tests from UTH and private clinics

Annex 6 **PLAN OF OPERATION (PO) OF HIV/AIDS AND TUBERCULOSIS CONTROL PROJECT**

OUTPUT 1. Performance of laboratory techniques, data management and overall laboratory management are improved

ACTIVITIES		2001	2002	2003	2004	2005	2006	PERSON INCHARGE	IMPLEME-NTERS	EQUIPMENT/ MATERIALS	EXPECTED RESULTS INDICATORS
1-4	To make recommendation in reviewing SOPs for HIV/AIDS and TB laboratories to CBoH as part of Technical Working Group			SOP preparation		Publishment		Project Manager	JICA Experts (HIV/TB) Counterparts (Head of Virology & TB Lab.) CBoH Tech. W.G.		SOP No. of recommendation No. of participation
1-5	To improve data management, information and over all management of Virology and TB laboratories							Project Manager	JICA Experts (Chief Advisor, Data manag., Epidemiology & Public Health) Counterparts (Head, Admin clerk) UTH manage. CDC	Computer, Soft ware and accessories(3) Photo copy machine(1) General filing system	System of over all data management is established Annual reports No. of research project managed Record of routine activities

Annex 6 **PLAN OF OPERATION (PO) OF HIV/AIDS AND TUBERCULOSIS CONTROL PROJECT**

OUTPUT 2. Performance and quality of peripheral labs for HIV/AIDS and TB test is improved

ACTIVITIES		2001	2002	2003	2004	2005	2006	PERSON INCHARGE	IMPLEME-NTERS	EQUIPMENT/ MATERIALS	EXPECTED RESULTS INDICATORS
2-1	To conduct training of trainer workshops for health workers in HIV/AIDS and TB	x	x	x	x	x	x	Project Manager	Counterparts (Heads of Labs) JICA Experts (HIV/TB) CBoH CDL/CDC Tech. W.G.s	Printed materials Reagents (HIV TB diagnosis) Transport(Microbus) Audio-visual(LCD, OHP, Laptop computer, screen)	100 healths worker(trainer) are trained No. of training No. of trainees
		HIV/AIDS, MTCT, VCT, TB 20 participant/ workshop									
2-2	To conduct laboratory training for health workers to support VCT, MTCT and TB control programmes	←					→				No. of training No. of trainees
2-3	To participate in development of training manuals for HIV/AIDS and TB for staff of peripheral laboratories	↔ Review		↔ Complete				Project Manager	Counterparts (Heads of Labs) JICA Experts (HIV/TB) CBoH Tech. W.G.		Training manuals of HIV/AIDS and TB are developed and circulated
2-4	To support planning, distribution and monitoring of activities of VCT and MTCT sites		↔					Project Manager	JICA Experts (MTCT/VCT Short term) Counterparts (MTCT/VCT coordinator in Lab.) CBoH Tech. W.G.s	Transport(4WD) Storage facilities Communication equipment ie..Fax/phone(3) Interphone system	No. supplies utilised by reporting inventory system No. of persons utilising MTCT/VCT services

2002.1.23

Annex 6 **PLAN OF OPERATION (PO) OF HIV/AIDS AND TUBERCULOSIS CONTROL PROJECT**

OUTPUT 2. Performance and quality of peripheral labs for HIV/AIDS and TB test is improved

ACTIVITIY 2-5 To ensure quality assurance for HIV/AIDS and TB testings

ACTIVITIES		2001	2002	2003	2004	2005	2006	PERSON INCHARGE	IMPLEME-NTERS	EQUIPMENT/ MATERIALS	EXPECTED RESULTS INDICATORS
2-5 (a)	To ensure quality assurance of HIV testing at all VCT and MTCT sites		←	—	—	→		Project Manager	JICA Experts (HIV) Counterparts (HIV) CBoH VCT/MTCT TDRC Tech. W.G.	Reagents (HIV serology) Printed materials	QA systems established at all sites
2-5 (b)	To ensure quality assurance of TB diagnostic sites in Lusaka Province			←	—	→		Head of TB Lab	JICA Experts (TB) Counterparts (TB) CBoH CDL/CDC Tech. W.G.	Reagents (TB microscopy) Printed materials	QA systems established at all sites

2002.1.23

Annex 6 **PLAN OF OPERATION (PO) OF HIV/AIDS AND TUBERCULOSIS CONTROL PROJECT**

OUTPUT 3. Utilization of laboratory services by health workers (Private, public and NGO) is improved

ACTIVITIES		2001	2002	2003	2004	2005	2006	PERSON INCHARGE	IMPLEME-NTERS	EQUIPMENT/ MATERIALS	EXPECTED RESULTS INDICATORS
3-1	To sensitize health workers and clinicians on the importance of lab diagnosis for HIV/AIDS and TB through meeting, workshops and distribution of project newsletters	X Meeting , Workshop	X X X X	X X X X Newsletters	X X X X	X X X X	X X	Head of Virology & TB Lab	JICA Experts (HIV/TB) Counterparts (HIV/TB) UTH personnel	Printed materials	No. of request from clinical sites to Laboratory No. of workshop and meeting No. of participant No. of newsletter distributed
3-2	To update and distribute laboratory handbook for clinicians		←→ Review	←→ Complete				Project Manager	JICA Experts (HIV/TB) Counterparts (HIV/TB) UTH Lab Director	Printed materials	1000 copies of laboratory hand book are printed and circulated
3-3	To provide results of HIV/AIDS and TB lab tests timely to UTH clinicians		←→ Situation study	← Improvement	→	→	→	Project Manager	JICA Experts (HIV/TB) Counterparts (HIV/TB) UTH courier system	Computer software referred to 1-6 Reagents and Florescence Microscope referred to 1-3(b)	90% of HIV and initial TB microscopy test result return with in 48 hours

Annex 6 **PLAN OF OPERATION (PO) OF HIV/AIDS AND TUBERCULOSIS CONTROL PROJECT**

OUTPUT 4. Information on HIV/TB generated by the project is utilised widely by majority of stake holders in planning and implementing programmes (i.e.. GRZ, other donors, health workers, NGO s , schools, youth and communities)

ACTIVITIES		2001	2002	2003	2004	2005	2006	PERSON INCHARGE	IMPLEME-NTERS	EQUIPMENT/ MATERIALS	EXPECTED RESULTS INDICATORS
4-1	To produce and distribute technical information and materials on HIV/AIDS and TB to stakeholders		←	—	—	→		Project Manager	JICA Experts Counterparts	Printed materials Travel allowance	Total number of participants receiving HIV/TB information A number of request for information Feed back from participant
4-2	To produce project homepage on the Internet		← → Establishment					Project Manager	JICA Experts (Administrator/ Coordinator) Counterparts (Computer Clerk)	Computer Software referred to 1-6 Maintain charge	Establishment of Homepage Number of homepage updated, No. of person accessing web site
				← Improvement	—	→					

2002.1.23

Annex 6 **PLAN OF OPERATION (PO) OF HIV/AIDS AND TUBERCULOSIS CONTROL PROJECT**

OUTPUT 4. Information on HIV/TB generated by the project is utilised widely by majority of stake holders in planning and implementing programmes (i.e.. other donors, health workers, NGO s , schools, youth and communities)

ACTIVITIES		2001	2002	2003	2004	2005	2006	PERSON INCHARGE	IMPLEME-NTERS	EQUIPMENT/ MATERIALS	EXPECTED RESULTS INDICATORS
4-3	To hold dissemination meetings with MOH/CBoH on the activities of project at least twice a year	x	x x	x x	x x	x x	x	Project Manager	JICA Experts Counterparts CBoH MOH	Audio-visual equipment referred to 2-1	Number of participants, minutes produced and project information used in planning National policy
4-4	To organise sensitizing meetings for youth in community on VCT programme		Lusaka		Expantion			Project Manager	JICA Experts Counterparts PPAZ Boys scouts Girls scouts	Audio-visual equipment referred to 2-1	No. of participants No. of meetings in various area % of youth who go through VCT among meeting participant

2002.1.23

Annex 6 **PLAN OF OPERATION (PO) OF HIV/AIDS AND TUBERCULOSIS CONTROL PROJECT**

OUTPUT 5. Collaboration with HIV/AIDS and TB Working Groups is institutionalised

ACTIVITIES		2001	2002	2003	2004	2005	2006	PERSON INCHARGE	IMPLEME-NTERS	EQUIPMENT/ MATERIALS	EXPECTED RESULTS INDICATORS
5	Project staff both Japanese and Zambian get officially appointed and actively involved in various Technical working groups (VCT, MTCT, TB and Vaccine and treatment)	←	—	—	—	—	→	Project Manager	JICA Experts Counterparts Tech. W.G.		Project staff are officially appointed Number of meeting attended, minutes, report and minutes form technical working group

HIV/AIDS and Tuberculosis Control Project

Project Document

January 2002

Ministry of Health / University Teaching Hospital / JICA

Table of Contents

List of Acronyms

ANC	Antenatal Care
AZT	Azidothymidine/Zidovudine
BTS	Blood Transfusion Service
CBoH	Central Board of Health
CDC	Centers for Disease Control and Prevention (United States)
DOTS	Directly Observed Treatment, Short-course
CDL	Chest Diseases Laboratory
ELISA	Enzyme Linked Immunosorbent Assay
DHS	Demographic and Health Survey
HAART	Highly Active Anti-retroviral Therapy
IMR	Infant Mortality Rate
MTCT	Mother to Child Transmission (of HIV)
NVP	Nevirapine
HIPC	Heavily Indebted Poor Countries
PCM	Project Cycle Management
NORAD	Norwegian Aid Development Agency
PCR	Polymelase Chain Reaction
PDM	Project Design Matrix
PO	Plan of Operation
SOPs	Standard Operating Procedures
STD/STI	Sexually Transmitted Disease/Infection
TB	Tuberculosis
TDRC	Tropical Disease Research Center
U5MR	Under Five Mortality Rate
UNZA	University of Zambia
UTH	University Teaching Hospital
VCT	Voluntary Counseling and Testing (of HIV)
ZAMBART	Zambia AIDS Related Tuberculosis

1. Introduction

The Republic of Zambia is a country located in the southern part of African continent, with a population of approximately 10 million. It is one of the countries hardest hit by HIV pandemic. It is estimated that one in five adults in Zambia are currently infected with HIV. Annual new TB case notification rate is increasing with the spread of HIV and reaching 500 per 100,000 population.

JICA has been supporting Zambia's effort in controlling major infectious diseases including HIV/AIDS and TB through investment in the UTH laboratories and other forms of support. It is of best interest to both Zambian and Japanese parties involved to enhance the role of the UTH laboratories in national HIV/AIDS and TB control programs.

Based on the request from the Government of the Republic of Zambia (GRZ), JICA dispatched a Project Preparatory Study Team in November, 2000. The team conducted a situation analysis and organized a participatory planning workshop in order to specify the framework for the next GRZ-JICA technical cooperation project.

In March 2001, the Implementation Study Team was dispatched by JICA and the Record of Discussions was signed to commence the Project. Then, the project has started from 30th March 2001 with period of five years.

In January 2002, JICA dispatched the Project Consultation Team in order to revise the Project Design Matrix, Plan of Operation and Project Document.

This project document is a product of the collaborative project preparation work. It contains some of the information which provide for background to the project, as well as the second version of the Project Design Matrix (PDM) and Plan of Operations (PO) which define framework of the project.

The information contained in the document is as of January 2002. It is necessary that the document, including PDM and PO, to be reviewed and modified according to the changes in the environment and the advancement of the project.

2. Background

2-1 Socio-economic Context

Republic of Zambia is a country located in the southern Africa with a population of approximately 10 million. The population growth rate is quite high and exceeds 2%. The latest population census was conducted in 2000 but the results are yet to be released. Educational attainment is relatively high by African context with an adult literacy rate at 75.1% and gross primary school enrollment at 72.4%. There is a growing issue of malnutrition, however, and more than 40% of children under five are stunted.

Zambia's per capita GNP is now below the average for Sub-Saharan Africa and was at $490 in 1990-96. Data from the Zambia Central Statistics Office indicates that nearly 70 percent of Zambians fell below the poverty line in 1996. Furthermore, Zambia's debt burden remains astronomically high at $6.5 billion (as estimated in 1998).

The debt service in 1998 consumed a significant portion of government expenditures, equaling to 69% of the entire budget for all sectors combined. A recent analysis concluded that Zambia's external public debt would remain high at unsustainable level for at least 5 more years. Therefore, budget reform and restructuring, including the decisions to seek exceptional debt relief under the Heavily Indebted Poor Countries (HIPC) initiative and to explore alternative debt swap mechanisms, are considered essential for the Government's overall ability to mount an effective and sustainable response to the current HIV/AIDS and TB pandemic.

Instability of the major macroeconomic indicators such as inflation, employment/unemployment rate, dollar-kwacha exchange rate would seriously affect the amount of resources available for health sector development, which is already severely constrained. The national health expenditure per capita in Zambia is estimated to be at US$10.5 in 2000. It is not sufficient even to provide the most essential health care package at district level which requires US$11.5 per capita.

The socio-economic context suggests the preponderance of conditions inimical to the effective prevention and control of HIV/AIDS and TB in Zambia. If new resources are not found, the decline in available public resources for HIV/AIDS and TB control may severely

undermine the government's ability to mount a timely and effective response. (Zambia National HIV/AIDS/STDS/TB Council, 1999 p.4)

2-2 Description of the Health Sector

Health sector in Zambia is currently facing a crisis. Mortality rate is quite high with IMR at 109/1,000 and U5MR at 197/1,000 in 1992-96, and they are increasing since the mid 1980s. The burden of diseases is also increasing, while the national resource to combat the problems is shrinking. Annual health spending per capita stands at only US$10.5. It is considered that the promotion of the reform is the only way for the Zambian health sector to revive.

HIV/AIDS pandemic and coincidental TB resurgence are two of the most serious risks which are threatening the health of the Zambian population. As the decentralization of the health service delivery system is being promoted, it is essential that disease control strategy and operation which are effectively integrated with decentralized system to be developed. For that purpose, the roles and functions of central level organizations and local organizations need to be clearly defined, and effective coordination mechanisms among those organizations need to be established.

The capacity of the frontline organizations, i.e., District Health Management Teams, District Hospitals (First Referral Hospitals) and Health Centers, have to be strengthened in order for any disease control activities to produce any health impact on people. At the same time, regulatory and supervisory functions of the central organizations need to be strengthened so that the system performance of the entire health sector could be assured and sustainable.

2-3 Institutional Framework of the Health Sector

The reformed health care system in Zambia is comprised of several structural layers. It is considered that District Hospitals (First Referral Hospitals) and Health Centers with laboratory service will be the focal points in the implementation of the HIV/AIDS and TB control activities.

Health Post: There are currently only a small number of health posts in the country. These are intended to cater for a population of 500 households (3,500 people) in rural areas and 1000 households (7000 people) in the urban setting, or to be set up within 5km radius for

sparsely populated areas.

Health Centres: The two types of health centers in the restructured health care system include:

- The urban health centers which are intended to serve a catchment population of 30-50,000 people; and
- A rural health center, serving a catchment population area of 29km radius, or a population of 10,000.

Only a limited number of the Health Centers have laboratory facilities.

District and First Level Referral Institutions: These are to be found in most, but not all, of the 72 districts. They are intended to serve a population of 80-200,000 with medical, surgical, obstetric and diagnostic services and with all clinical services to support health center (and health post) referrals.

Central Hospitals: These are 2 level institutions at provincial level and are intended to cater for a catchment area of between 200,000-800,000 people, with services in internal medicine, general surgery, pediatrics, services. These hospitals are also intended to act as a referral for the first level institutions, including the provision of technical back up and capacity building services.

Ministry of Health/Central Board of Health: The Ministry of Health is responsibilities for policy guidance and strategic planning. The Central Board of Health, through the Provincial Health Offices and other structures, is responsible for translation and implementation of government health policies.

3. Problems to be addressed, the Current Situation

3-1 The Current Situation of HIV and TB

HIV/AIDS

A very serious HIV/AIDS crisis is threatening Zambian people. UNAIDS reports that 1.2 million Zambians are living with HIV and one in five adults (15 years and older) are infected (UNAIDS 2000). About five sixth of the infected are in ages 20-29. HIV/AIDS has spread in every part of Zambia since 1984 when the first AIDS case was diagnosed, with report of at least one case of AIDS from every 72 districts. People in urban areas are more severely affected with adult HIV prevalence of 29% compared to the rural prevalence of 14%. However, the pandemic is spreading continuously in rural areas, while there is a sign of declining HIV incidence in major urban areas. Data from the 1998 national sentinel surveillance revealed that there is a declining trend in HIV prevalence among young (15-20 years) pregnant women attending antenatal care in major urban areas. This positive trend is attributed to behavior change among urban population, though there are still concerns that such change may not be sustained. The DHS conducted in 1992 and 1996 revealed that knowledge about AIDS is increasing but still not optimal among the population.

Despite a declining trend in HIV seroprevalence observed during the period 1993-1998 among youngest women attending ANC in major urban areas, HIV is increasingly considered a leading cause of morbidity and mortality in Zambia. According to a USAID estimation, HIV/AIDS raised the crude death rate by 92 % during the 1990s and nearly a million died of AIDS-related diseases in 1997, reaching to two million deaths by 2010. Perhaps the most distressing trend is the drop in life expectancy at birth from 54 years in the mid-eighties to an estimated 37 years in 1998.

Zambian Ministry of Health (MOH) enumerates possible causes of the rapid spread of HIV in Zambia as follows: high prevalence of other sexually transmitted infections (STIs), a norm of multiple sex partners, low condom use, cultural beliefs, poverty, poor health status, the low social and economic status of women, dislocation of the population by drought, and the instability of neighboring countries.

There are close links between poverty and HIV, and these exacerbate the relationship between gender inequalities and high rates of HIV. Women carry a much greater burden of

care created by HIV/AIDS, as well as being more vulnerable to infection for both physiological and social reasons. The impact of loss of productive capacity on poor households can push them from acute or seasonal poverty to chronic poverty and food insecurity.

Due in large part to limitations in the health sector, there has been a significant growth in Home-Based Care programmes to support chronically ill people. However, these programmes are still predominantly in urban areas and close to District Hospitals; and, to function effectively, they need support from both the health sector (e.g. medical care, training for volunteers) and others (e.g. welfare support or assistance to establish income generation activities). In a longer term, it is not clear how much of the burden of care can continue to be passed to communities without effective support from outside. (MOH, National Health Strategic Plan 2001-2005 p.20)

Tuberculosis

The TB case notification rate is increasing as the HIV epidemic spreads in Zambia. The number of newly notified cases and the case notification rate dramatically augmented during the period 1985 to 1996. The number of newly notified TB cases increased almost fourfold from 124 in 1985 to 409 per 100,000 population in 1996. The MOH estimates that the number of new TB cases will reach 50,000 per year by 2005.

The rapid increase in TB cases constitutes a significant increase in workload for health staff and a burden of disease for the community and employers. Due to lack of clear policy guidance, training and supervision of health workers, and also to the shortage of TB drugs, implementation of the national TB programme is flawed despite the increasing needs for it. (MOH, National Health Strategic Plan 2001-2005 p.21)

3-2 Host Country Strategy

As part of the Health reforms going on in Zambia since 1991, the TB program was integrated with the AIDS, STI and Leprosy programs in 1993 to form the National AIDS/STI/TB/Leprosy Program. In 1996, all programs were integrated into one comprehensive package of services at the district level in line with the reforms. These changes resulted in a break in the regular flow of information on TB case loads and treatment outcomes. The absence of medium –to- long-term strategy for TB control combined with erratic TB drug supplies and a lack of managerial capacity at the CBoH level

had led to loss of focus on TB control in the country. Recognizing this, the Ministry has since 1999 taken steps to remedy the deteriorating TB situation in the country, including commissioning of the National Review to gather information to inform policy direction for TB control and the development of a Strategic Plan (WHO, 2000).

The latest policy initiative and framework formulated by the Zambian Government for the control of HIV/AIDS and TB is reflected in the following two documents:

- HIV/AIDS/STD/TB Council and Secretariat, Draft as of Nov. 1999, *Zambia National HIV/AIDS/STD/TB Institutional Framework 2001-2003*
- Central Board of Health, August 2000, *National Tuberculosis Care and Control Strategic Plan 2001-2003*

It is also important to note that the guiding principles for the entire health sector development are comprehensively listed in the following document:

- Ministry of Health, draft, *The National Health Strategic Plan 2001-2005*

Strategies and Priority Interventions

Zambia National HIV/AIDS/STD/TB Institutional Framework 2001-2003 defines strategies and priority interventions as follows:

Strategies:

- **Strategy 1:** Identify/define the line ministries, catalytic projects[1], the plans of actions and the stakeholders for each of the priority areas
- **Strategy 2:** Set, confirm, validate, adopt and establish national guides for 'best practices' based on national lessons learned
- **Strategy 3:** Define the main steps of going to scale in each of the priority areas with the involvement of representatives of government, NGOs, CBOs and community representatives including the vulnerable groups
- **Strategy 4:** Formulate policies and actions to overcome the political, social, cultural, institutional, structural and financial obstacles and take advantage of the opportunities in order to ensure the political and financial support to the catalytic projects and the going to scale
- **Strategy 5:** Formulate/establish the management procedures for the implementation, monitoring and evaluation of the going to scale of project and programmes in all the

[1] Catalytic projects are ongoing projects and programmes such as "community sexual and reproductive health project" and "Lusaka peer education projects".

priority areas

Priority Interventions:

- Mobilization of a multi-sectoral response
- Promotion of behavior change: abstinence, mutual faithfulness or condom use
- Increased and improved STD prevention and control
- Reduction of high risk behaviors (e.g. multiple partners, ritual cleansing)
- Destigmatization of HIV/AIDS
- Increased voluntary counseling and testing
- Reduced mother to child transmission of HIV
- Improved Home Based Care and support for people living with HIV/AIDS
- Community based support for orphans and vulnerable children
- Improved drug supply for the treatment of STD, TB and HIV positive clients
- Improved hospital level care

Geographical Priority Areas

Zambia National HIV/AIDS/STD/TB Institutional Framework 2001-2003 defines geographical priority areas as follows:

- Lusaka
- Copperbelt Province
- Districts along the main road trucking routes
- Districts with well defined fishing areas in Luapula Province (Nchelenge) and Southern Province (Monze, Mazabuka and Gwembe Valley including Siavonga, and Kafue and Zambezi)
- Districts of seasonal workers in rural areas (Chiawa, Mazabuka and Mongu)
- Districts with refugee populations
- Towns with frequent cross border traders: Livingstone, Chiroundu, Chipata, Nakonde and Kasumbalesa

Priority Sub-populations

Zambia National HIV/AIDS/STD/TB Institutional Framework 2001-2003 defines priority sub-populations as follows:

- People living with HIV/AIDS
- Orphans
- Youth in and out-of-school
- Commercial sex workers

- Public sector workers
- Private sector workers
- Men

TB Control Strategies

National Tuberculosis Care and Control Strategic Plan 2001-2003 states its vision as " to provide good quality diagnostic and treatment services for tuberculosis as close to the family as possible". The following strategies are listed with some numerical targets.

- To provide quality assured tuberculosis diagnostic and treatment services
- To provide accessible information on tuberculosis control
- To strengthen management capacity
- To provide quality assurance and performance assessment
- To establish partnerships
- To promote research

Some of the planned activities listed in the strategic plan includes development of quality assurance system for sputum microscopy, training in quality assurance methods, yearly multiple drug surveillance, etc., which are highly relevant to this project.

Laboratory Support System Development

The latest draft of *The National Health Strategic Plan 2001-2005* includes a section on laboratory support system, which is considered highly relevant to the project. The objective of the section and related strategies are defined as follows:

Objective:

- To provide Zambians with quality, basic, cost-effective and appropriate laboratory services at health center and hospital level 1, 2 and 3.

Strategies:

- The ministry of health will increase local production of medical laboratory technologist and initiate production of medical laboratory scientists dependent upon the 10 years Health Reform plan.
- The first intake of students at Ndola school of medical laboratory sciences will start training in year 2001.
- Training of trainers will continue to attain the targeted BSc and higher levels. To improve the quality of training.
- The construction of Ndola school of medical laboratory sciences Phase 2 will be

initiated to allow full implementation of the three-year course.

- The funding for medical laboratory supplies will be included in DSF at not less than 20% of the total budget.
- Medical laboratory supplies will become a cost item within the FAMS.
- The CBOH will carry out a feasibility study for the laboratory supplies kit for the health centers.
- The equipment and infrastructure requirements for medical laboratories are an integral part of the Infrastructure Development Plan and by year 2005, 50% of medical laboratories will be minimally equipped. The preventive maintenance training for users will be undertaken to ensure prolonged equipment life span.

3-3 Ongoing or Planned Assistance from Other Donors

<u>The United States Centers for Disease Control and Prevention (CDC)</u>

According to the CDC report (August 1, 2000) of the fact-finding mission to Zambia dispatched in April 17-26, 2000, the CDC will focus on the following strategies for achieving its objectives in line with the Zambia National HIV/HIDS Strategic Framework 2000-2002:

- TB control and prevention (FY2000:$500,000 / FY2001:$600,000)
- Clinical management of STIs (FY2000:$100,000 / FY2001:$250,000)
- Community and home based care and support (FY2000:$85,000 / FY2001:$630,000)
- Strengthening laboratory capacity (FY2000:$300,000 / FY2001:$250,000)
- Technical assistance to the Zambia military and other uniformed services (FY2000:$200,000 / FY2001:$250,000)
- Technical assistance in monitoring and evaluation (FY2000:$50,000 / FY2001:$250,000)
- Technical assistance to evaluate and strengthen existing models of integrated care including linkage to HIV counseling and testing and home and community-based care (FY2000:$0 / FY2001:$150,000 / FY2002:$300,000)

As for the strengthening of laboratory capacity listed above, the CDC proposes following activities.

- Improve capacity of national reference laboratory to support surveillance, diagnosis and management of HIV/STI/TB and other opportunistic infections;
  - Procure equipment, materials, supplies, and reagents as appropriate
  - Assess need and ensure an adequate and uninterrupted supply of materials

and reagents

- Technical assistance to establish quality assurance and conduct performance audits at regional and district levels
- Technical assistance to establish, promote, and disseminate national standards for HIV testing and national guidelines for laboratory quality assurance
- Technical assistance to develop a mechanism to monitor and evaluate laboratory activities

• Strengthen training of laboratory staff;

- Assess training needs and implement training to improve knowledge and skills
- Conduct training workshops (using TOT approach) on basic laboratory diagnostic method for HIV, STI and TB
- Provide resources to support specialized training for laboratory staff at the national reference laboratories

NORAD

NORAD has been supporting different interventions related to HIV/AIDS activities for several years starting from the late 1980s. Mostly, the support has been through the NGOs and Ministry of Health through the CBoH to two programs:

- The National AIDS Control Program (before the Health Reforms Program) up to 1996.
- Voluntary Counseling and Testing pilot project in which UTH virology laboratory provided test quality assurance.

Zambia VCT Pilot Project was started in February 1999. It was introduced in 22 selected urban, peri-urban and rural sites. The GRZ is requesting NORAD to establish voluntary counseling and testing services in approximately 38 additional districts, to hold training sessions for laboratory technicians on use of HIV test kits, and to coordinate counseling and laboratory activities at VCT centers in 2001. NORAD also supports VCT programs implemented by Kara Counseling & Training Trust (NGO). Mother to Child Transmission Pilot Project is being implemented in three districts, i.e., Monze, Lusaka and Mbala.

IRISH AID

Irish Aid has been providing support for the medical laboratory capacity building in Zambia starting in October 1994. Irish Aid proposed a project having two objectives for the period 1999 to 2001:

- The laboratory training school

- To improve the standard of laboratory personnel practice and procedures through support for the upgrading of the laboratory assistants training school in Ndola
- Laboratory policy implementation
  - To assist in the management of the implementation of the laboratory policy through support for the core team and a number of activities related to improvement of laboratories

Anticipated outputs from the program are as follows:

- Health Center Standard Operating Procedure (SOP) training completed
- Standard Operating Procedures for Hospital Level revised
- Delivery and distribution of essential laboratory supplies completed
- Integrated clinical guidelines completed
- Core team supported

UNICEF

In order to prevent Mother to Child Transmission (MTCT), UNICEF provided supports to the UN MTCT initiative, to pilot intervention in 3 sites, and to health worker training and IEC materials in 1999 ($243,034).

The Government of Netherlands

The Government of Netherlands and the Royal Netherlands TB Association (KNCV) supported the National TB and Leprosy program during the period 1992 to 1996.

4. Project Strategy

4-1 Key Organizations for the Expected Project

According to the *Zambia National HIV/AIDS/STD/TB Institutional Framework 2001-2003*, the following organizations are directly related to the implication of the project.

The Committee of Cabinet Ministers

The Committee of Cabinet Ministers is the highest national body with the authority to coordinate all the activities for the control of HIV and TB pandemic.

The National HIV/AIDS/STD/TB Council

The National HIV/AIDS/STD/TB Council (The Council) is the independent body from other ministries, which regulates and implements the activities for the control of HIV and TB pandemic. Ministry of Heath appoints 15 members representing NGOs, private sector, churches, vulnerable groups, and the government organizations. They hold quarterly meeting.

The National HIV/AIDS/STD/TB Secretariat

The staff of the National HIV/AIDS/STD/TB Secretariat (The Secretariat) belongs either to the Preventive Care and Support Unit, Impact Mitigation Unit or to Financial and Administrative Support Unit. The Secretariat provides technical assistance to the National HIV/AIDS/STD/TB Council.

Technical Working Groups

Under the Secretariat, there are several working groups that deal with specific technical issues on HIV/AIDS, STD and TB control. They coordinate different stakeholders in their working fields and act as advisory bodies to the both Council and Secretariat. The names of working groups and their roles are as follows.

Mother to Child Transmission (MTCT) Working Group oversees the

implementation of several initiatives to expand access to voluntary counseling and testing (VCT), antiretroviral drugs and alternatives to breast feeding for HIV positive mothers nation wide.

HIV Vaccine and Treatment Working Group develops framework within which vaccine trials can be conducted in Zambia. The group also reviews efforts to expand access to HIV/AIDS drugs nationwide.

Tuberculosis Working Group reviews efforts to control the current tuberculosis epidemic.

Monitoring and Evaluation Working Group ensure that the Zambia HIV/AIDS monitoring and evaluation frameworks are strengthened and broadened to take into account the multi-sectoral nature of the response.

Home Based Care and Support Working Group consolidate efforts in home based care and ensure that high quality care is provided at household and community levels.

Information Education and Communication (IEC) Working Group is in charge of developing media campaign and educational strategies for reducing sexual transmission of HIV, particularly among the youths.

Resource Mobilization Working Group supports both the Council and the Secretariat in mobilizing resources for the national response to HIV/AIDS, STD and TB.

Orphans and Vulnerable Children Working Group provides technical advice to the Council and Secretariat on issues pertaining to the support and protection of vulnerable social groups.

Sexually Transmitted Diseases Working Group consolidate efforts in the control of sexually transmitted diseases and to ensure that high quality care is provided at the health centers and hospitals.

The Central Board of Health and District Health Management Teams

The Central Board of Health is the agent that is responsible for the provision of health services including HIV/AIDS and TB control programs through the health delivery system. Along with the Health Sector Reform, **District Health Management Teams** in each district are responsible for the provision of essential health services which include field operations related to infectious disease control with funds from the District Basket Fund.

Key Public Sector Partners

Fourteen Ministries have been identified as key public sector partners in Zambia to challenge the HIV/AIDS, STD and TB pandemic which are coordinated and monitored by the Council and Secretariat. These Ministries are as follows:

- Health
- Education
- Sport, Youth and Child Development
- Community Development and Social services
- Science, Technology and Vocational Training
- Agriculture, Food and Fisheries
- Labor and Social Security
- Commerce, Trade and Industry
- Finance and Economic Development
- Home Affaires
- Defense
- Information and Broadcasting Services
- Local Government and Housing
- Energy and Water Development

UTH and Its Laboratories

The Pathology and Microbiology Department of the University Teaching Hospital is comprised of Support Services and Satellite Laboratories; Microbiology; Chemical Pathology; Virology, Immunology and Molecular Biology; Hematology and Blood Transfusion; and Pathology. Their roles and functions are multi-dimensional. They provide clinical laboratory services, surveillance of infectious diseases, and forensic support to the police and Judiciary. They also act as academic centers for in-service, under and

post graduate studies and carry out research in collaboration with national and international agencies. The *Annual Report 1997* is the latest document available which officially describes the recent activities of the Department.

The Department itself has chronic operational problems such as erratic laboratory supplies and shortage of stationery due to under funding. High staff attrition is another problem caused by resignation, study leave and death.

The facilities of the **Virology, Immunology and Molecular Biology laboratory** are in an isolated block from the Department of Pathology and Microbiology. They were build and expanded by the prior assistance from JICA through Infectious Disease Project (1989.4～1995.3) and Infectious Disease Control Project (1995.4～2000.3). The laboratory is capable of applying basic laboratory techniques to isolate viruses such as HIV, viral diarrhea, poliomyelitis, measles, hepatitis and ARI. Sophisticated immunological and biomedical techniques such as flowcytometry and PCR are also available. The research activities in the previous projects as well as the list of presentations, publications, reports, newsletters, workshops and seminars have been compiled in a document, *Viral Infections and Tuberculosis in Zambia 1989-2000.*

The laboratory is functioning as the national reference center for HIV screening and testing covering over 80 HIV screening centers nation wide. It also provides research and diagnostic services. From February 1992 to February 1993, 5,142 specimens were tested with double ELISA screening. Some other diagnostic test and methods are also applied for research and surveillance purposes.

TB unit of Microbiology Laboratory in the UTH was established on the 19th of June 1997 to offer smear service, culture, drug susceptibility testing and research. The unit has been supported by JICA Infectious Disease Control Project in collaboration with the UTH Board of Management. TB specimens for culture from the UTH had to be sent to CDL before the establishment of the unit. One of the pressing reasons for the establishment of the TB laboratory in the UTH was 90% increase in workload because of AIDS-associated TB. The acting principal medical laboratory technologist was also transferred from CDL for the above purpose

In 1997, total number of specimens tested was 7,334 and 1,448 specimens were reported as positive. 95% of specimens in the TB unit were from UTH, 4% were directly from other

health institutions in Lusaka area, and 1% from outside Lusaka Province.

In 1999, total number of specimens reached 26,476 or 200% increase from the level of workload in 1997 and 4,856 were reported positive. Ninety-nine percent of samples were from Lusaka area.

The annual report described that understaffing and the limited laboratory space are two of the most serious constraints for further development of its functions, other than technical and financial issues.

Chest Disease Laboratory (CDL)

CDL is a National TB/Leprosy Reference Laboratory, which provides routine and research Mycobacteriology services such as smear, culture, drug sensitivity testing, and national quality control services for the smears. It is headed by the Director of Public Health Laboratory, which is under the Central Board of Health. The workload at CDL used to be more than 30,000 TB smears and cultures in the year 1994 and 90% of workload used to be from the UTH. However, after the establishment of TB unit of Microbiology Laboratory in the UTH, the number of specimens went down to around 3,300 per year.

The laboratory, together with microscopic centers countrywide, had been assisted by the Netherlands for 7 years until 1996 with reagents and other supplies. It has been involved in the research activity of ZAMBART project (Zambia AIDS Related Tuberculosis). ZAMBART project supported to attach one of the laboratory staff to Dulwich Hospital's Health Laboratory in London. Also, two staff have completed the group training course of JICA on TB laboratory management, which is supported by the Research Institute for Tuberculosis, Japan.

The CDL faces chronic problems such as lack of reliable transport for operation of activities, aged equipment, and unreliable supplies. As the CDL is located 25km away from the center of Lusaka, there is limited public access to the laboratory.

Despite the difficult situation, the CDL conducted training for TB laboratory management with the development of training module and a training book: *Managing Tuberculosis at Microscopy Centers in Zambia.* The CDL provided this one-week training to all the microscopy centers (laboratories) with the financial support from the Netherlands. The

module covered not only test technique but also staff responsibility on materials, maintenance, specimen collection, reagent preparation, safety caution, reporting and quality control.

Frontline Laboratories in the National Health Service Delivery System

A comprehensive situational analysis of the medical laboratories of various levels based on large scale sampling survey was conducted through the Medlab project supported by Irish Aid. The purpose of the survey was to develop standards, policies and strategies for medical laboratory services in the context of the health reform. The result of the situation analysis was compiled in *The Situation Analysis of Medical Laboratory Services in Zambia* published in 1996. Based on the situation analysis, *National Medical Laboratory Policy* was formulated in accordance with National Health Vision. Its goals are:

- To improve and maintain laboratory services at an optimum standard;
- To provide national technical guidelines for the improvement and provision of laboratory services at each level of health care;
- To fully integrate laboratory standards and systems in the various components of health sector reforms.

The document indicates that the majority of health center and hospital laboratories are failing to meet the requirements of even the most critical elements of the package of the care. Laboratories in lower category, particularly at district hospital level, were the worst affected in terms of quality and quantity of services, staffing and management. Sixty-nine percent of health centers, 82% of hospital (district level), and 30% of provincial level hospitals failed to reach the critical level of laboratory function. Approximately, only 6% of the health centers currently provide laboratory services, as defined by the essential package.

The failure to attain acceptable grades was due to a large extent to the shortage of basic supplies and equipment, qualified staff, and little involvement of quality control and management at the peripherals.

Within the context of laboratory integration to the essential health services at different levels, a workshop was held to produce series of flowchart indicating linkage between laboratory procedures and diagnosis at Health Center level. The result was compiled and distributed to Health Centers as the form of *Guidelines for the Rational Use of Laboratory Tests at*

Health Center Level with support from Irish Aid and DFID. In this guideline, AFB (TB) is the one of four vital tests out of 18 essential and non-essential examinations at Health Centers while HIV test is not listed.

Planned Parenthood Association of Zambia (PPAZ)

PPAZ was established in 1972 at Mindolo Ecunomical Foundation in Kitwe at a seminar organized by Mindolo Ecunomical Foundation and University of Zambia (Department of Social Work). This association was first known as Family Planning Welfare Association of Zambia and was changed to PPAZ in 1979. The aims of PPAZ are;

- To provide knowledge of sexual and reproductive health / family planning
- To provide and practice sexual and reproductive health / family planning so as to aim at responsible sex behaviors
- To sustain programmes of sexual and reproductive health / family planning which are essential and pre-requisites to all other programmes

PPAZ is a full member of International Planned Parenthood Federation where it receives most of the funding. The projects that the association is implementing are as follows;

1.Family health promotion project
2.Women Empowerment
3.Family life education project
4.Community based distribution project
5.Family planning centers/Family health project
6Male involvement in family planning
7.Integarated Project
8.Adolescent Sexual and reproductive health
9.Volunteer Movement

Two of the reproductive centers of PPAZ have been certified as VCT centers, and in collaboration with CBoH, JICA UTH Project, NORAD, and USAID, PPAZ is putting efforts to improve these centers so that the centers should follow VCT guidelines more adequately.

4-2 Structure and Capacity of the Counterpart Organization

It is expected that the Virology, Immunology and Molecular Biology laboratory and TB unit of Microbiology laboratory of the UTH central laboratory will be the main implementing body for the project because of its accumulated management experience and technical capacity

through the prior assistance from JICA. In the past, the laboratory provided training to 225 health care providers and laboratory technicians and produced a number of newsletters, reports and research papers.

Also, the CDL may have to be another focal player for the implementation of TB-related activities. The CDL has already developed training modules for TB microscopy and organized technical training courses for the laboratory technicians in all the TB microscopic centers in the country. Two of the laboratory staff who participated in the group training course on TB laboratory management in Japan have association with JICA's assistance.

Despite that both TB unit of UTH and the CDL engaged in TB tests and research, they have not closely worked together in the field of training and quality control. As they are put in different organizational lines and the role of the UTH laboratory is not clearly defined in the current national TB control program, a coordinating mechanism for the project should be put in place.

Annex 1:Organizational Structure and Project Management Body shows organizational structure of key organizations and expected project management body and the range of the implementing organization.

Counterpart for JICA experts in the project will be the personnel in the UTH laboratories and possibly, CDL. The current staff and their positions in those laboratories are listed in ***Annex 2: Staff list.***

It is suggested that Dr. H.Chomba, Managing Director of the UTH will be the director of the expected project and Dr. F. Kasolo, Head of the Virology Laboratory of the UTH will be the project manager.

4-3 Budget Allocation

It is estimated that 560 million US$ is required for the implementation of the current *Zambia National HIV/AIDS/STD/TB Institutional Framework 2001-2003.* However, non of the itemized budget categories except the condom social marketing meet the requirement as of November of 2000.

While detailed budget allocation of the project is not yet clear, it could partially fill the gaps in

such categories as surveillance, hospital care (through laboratory diagnosis), TB, education (advocacy and in-service training) and operations /research.

The UTH virology, immunology and molecular biology laboratory currently receives 1,500,000US$ in total for HIV/AIDS activities beside salary and consumables under the budget of Pathology and Microbiology Department of the UTH. Breakdown of external supports are as follows.

- NORAD provides 1,000,000 US$ for VCT supplies and coordination.
- Welcome Trust supports 400,000US$ for supplies and personnel coordination on HIV and Measles.
- UNAIDS supports 100,000US$ for the field of epidemiology with necessary supplies.

According to the 1998 track record, 1.5 million US$ were appropriated as the budget for public medical laboratory services as a whole. The CBoH's share of the budget to the laboratory service was approximately 0.5 million while the rest of budget was financed by Irish Aid. CDL accounted for 35,000 US$ (equivalent to 120 million kwacha) out of the budget of public laboratory service.

Annual budget plan needs to be formulated together with the finalization of the Plan of Operation.

4-4 Data, Indicators and Information Recording for Performance Monitoring

Annex 3: Data collection and record shows the list of relevant data and information that are currently collected at the UTH laboratories, CDL and other places. Some of them are compiled and published as annual report but some of them are left in recording books with various reasons. These may serve as potential sources for performance monitoring indicators. During the PCM workshop, some of these records were mentioned as sources for verifiable indicators for PDM, but they are not always the best. In most cases, finding appropriate monitoring and evaluation indicators is a key to success for project management and this effort should be continuously pursued.

4-5 Coordination Arrangements

The CDC's proposal for the capacity building of laboratory overlaps significantly with the

activities of the project. It is necessary for both JICA and GRZ to coordinate the various activities, both ongoing and planned, in the related fields in detail so that any inefficiency could be avoided.

Due to the parallel organizational line for TB laboratory services, it is necessary for the both CDL and UTH TB Unit to discuss about the implementation modalities of the TB-related activities in the project. Clearer vision of approach towards TB activities should be agreed before the commencement or in an early stage of the project through constructive dialogue.

4-6 Sustainability

Financial sustainability will be the most critical element for the project as Zambia's entire health sector is currently operating with annual spending of only US$10.5 per capita. Project resource should be utilized to produce maximum impact and any inefficiency should be avoided in the management of the project. Any new technology should be carefully examined from the aspect of cost implication before the introduction.

5. Project Design

A participatory planning workshop was held to design a new project on HIV/AIDS and TB control at University Teaching Hospital in Lusaka from November 13th to November 16th of the year 2000.

The process of the workshop is summarized in the other report: *Performance Report of the Participatory Planning Workshop for Project Design on the HIV/AIDS and TB Control* which includes Participation Analysis Table, Problem Tree, Objective / Project Selection Tree and Project Design Matrix.

The first version of Project Design Matrix was revised by the short-term experts who were dispatched by JICA in July 2001, in collaboration with Zambian Counterparts. And then, the second version of Project Design Matrix was agreed between the Japanese Project Consultation Team and Authorities concerned in Zambia in January 2002.

The attached PDM is the second version which was mutually agreed by the Minutes of the Meetings between the Japanese Project Consultation Team and the authorities concerned of the Government of the Republic of Zambia, signed on 23rd January, 2002. ***See Annex 4: PDM of 23rd January, 2002.***

5-1 Project Title

HIV/AIDS and Tuberculosis Control Project

5-2 Duration

30th March 2001 – 29th March 2006

5-3 Target Group and Project Area

The project will be implemented targeting the "community". The "community" stand for People affected/infected by HIV/AIDS or TB, Health workers, Educational Institutions, Youth and NGOs.

5-4 Overall Goal

Overall Goal is the prospective positive impact which will be produced as a result of the achievement of the Project Purpose. "Status of HIV/AIDS and TB in the Republic of Zambia is improved." has been identified as the overall goal.

5-5 Project Purpose

Project Purpose was defined through the discussion on the core objective. The Japanese Project Consultation Team and the authorities concerned of the Government of the Republic of Zambia agreed that "Laboratory Systems are strengthened and are effectively utilized for HIV/AIDS and TB control in the Republic of Zambia" is the achievable goal by the end of project.

5-6 Outputs

In order to realize the Project Purpose, the following Outputs are expected to be achieved through the project activities:

1. Performance of laboratory techniques, data management and overall laboratory management are improved.

   While the UTH laboratories are responsible for this activity, some form of coordination between the UTH laboratories and CDL will have to be in place on TB-related activities.

2. Performance and quality of peripheral labs for HIV/AIDS and TB testing and surveillance is improved.

   The peripheral laboratories stand for all the laboratories in the country which provide HIV testing (for the purposes of VCT, MTCT, blood transfusion, serological surveillance and others) and/or TB sputum smear examinations. The primary target may be public facilities but not limited to them. This also requires close coordination between the UTH TB Unit and CDL in the TB-related activities.

3. Utilization of laboratory services by health workers (private, public and NGOs) is improved.

Increased awareness among clinician on the importance of laboratory diagnosis in the control of HIV/AIDS and TB is expected to promote utilization of laboratory service. This will create synergy effect in the realization of the project impact.

4. Information on HIV/AIDS and TB generated by the project is utilized widely by majority of stakeholders in planning of future programmes (i.e.. GRZ, other donors, health workers, NGOs, schools, youth and communities).

5. Collaboration with HIV/AIDS and TB working groups is institutionalized.

It is essential for the project to have regular contact with the related national working groups, CDL and other organizations so that its activities follow the national policy guidelines and priorities. Regular meeting will be set up inviting all the major stakeholders.

5-7 Activities

In order to realize the Outputs, the following activities will be undertaken.

1. Performance of laboratory techniques, data management and overall laboratory management are improved.

1-1 To train counterparts on surveillance and diagnostic techniques /methods at the central laboratories.
1-2 To train lab staff locally to acquire preventive maintenance skills of lab equipment.
1-3 To establish or improve the following technologies in the central laboratories on monitoring, surveillance and diagnosis.

1-3 (a) Provide technical support for monitoring Anti-retro viral (ARV) drug treatment
1-3 (b) Anti-HIV drug assay[2] and ARV drug resistance[3]
1-3 (c) HIV strain surveillance[4] and sero-sentinel surveillance

[2] Anti-HIV drug assay is a technique to extract and analyze constituent of local medicine whether it is effective against HIV. The aim of research is to find affordable Anti-HIV drug at local setting.
[3] Anti- HIV drug resistance assay is a technique to analyze the state of virus resistance against HIV-drug currently used in MTCT program. The aim is to monitor and control of Anti-HIV drug use.
[4] HIV 1-2 strain surveillance is basic technique to identify the distribution of HIV strain Ⅰ and Ⅱ by means

1-3 (d) HIV immunological response assay[5]

1-3(e) TB drug resistance surveillance and Anti-TB drug susceptibility (improvement)

1-3 (f) Diagnostic value of TB (improvement)

1-4 To make recommendation in reviewing SOPs for HIV/AIDS and TB labs to CBoH as part of Technical Working Group.

1-5 To improve data management, information and overall management of Virology and TB laboratories.

2. Performance and quality of peripheral labs for HIV/AIDS and TB testing and surveillance is improved.

2-1 To conduct training of trainer workshops for health workers in HIV/AIDS and TB diagnosis in collaboration with Technical Working Group.

2-2 To conduct laboratory training for health workers to support VCT, MTCT and TB control programmes.

2-3 To participate in development of training manuals for HIV/AIDS and TB for staff of peripheral laboratories.

2-4 To support planning, distribution and monitoring of activities to VCT and MTCT sites

2-5 To ensure quality assurance for HIV/AIDS and TB testings.

2-5 (a) To ensure quality assurance of HIV testing at all VCT and MTCT sites.

2-5 (b) To ensure quality assurance of TB diagnostic sites in Lusaka Province.

3. Utilization of laboratory services by health workers (private, public and NGOs) is improved.

3-1 To sensitize health workers on the importance of lab diagnosis for HIV/AIDS and distribution of project newsletters.

3-2 To update and distribute laboratory handbook for health workers.

3-3 To provide results of HIV/AIDS and TB lab tests timely to UTH clinicians.

4. Information on HIV/AIDS and TB generated by the project is utilized widely by majority

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of gene analysis. The aim is to collect and provide useful basic data for the future vaccine development activities.

[5] HIV immunological response assay is a technique to analyze the Zambian immunological response against HIV. The aim is to collect and provide data which could be applied to the future vaccine development activities.

of stakeholders in planning of future programmes (i.e.. GRZ, other donors, health workers, NGOs, schools, youth and communities).

4-1 To produce and distribute technical information on HIV/AIDS and TB generated by the project to stake holders.
4-2 To produce project homepage on the internet.
4-3 To hold dissemination meetings with MOH/CBoH on the activities of project at least twice a year.
4-4 To organize sensitizing meetings for youth in community on VCT programme.

5. Project staff both Japanese and Zambian gets officially appointed and actively involved in various Technical working groups (VCT, MTCT, TB and Vaccine and treatment).

5-8 Inputs

Japan

Japanese experts

- Chief advisor
- Project Coordinator
- Long/Short term HIV expert
- Long/Short term TB expert
- Long/Short term Data management expert
- Long/Short term Public health/Epidemiology
- Long/Short term Equipment Maintenance
- Long/Short term Immunology expert

Counterpart training
Equipment
Operational cost

Zambia

Counterpart

- Project Directors
- Project Manager

- Representative(s) from Ministry of Health
- Representative(s) from Central Board of Health
- Medical doctors
- Medical officers
- Medical technologist in immunology
- Medical technologist in bacteriology
- Medical technologist in virology
- Medical scientist in immunology
- Medical scientist in bacteriology
- Medical scientist in virology
- Medical equipment technicians
- Data management personnel
- Epidemiologist
- Medial equipment engineer

Administrative personnel

Utility Costs and salaries for Zambian staff

Facilities / Equipment / Consumables

5-9 Important Assumptions and Risk Analysis

Important Assumptions are conditions required for the achievement of the objectives which exist outside the control of the project. These may considered as risks to the project.

- To sustain development effect after / during the expected project, it is assumed that "Sufficient human and financial resources for prevention and treatment for HIV/AIDS and TB are provided". This can be monitored through resource allocation and track record of the National HIV/AIDS/STD/TB control strategic framework.

- To achieve the stated Overall Goal, it is assumed that "Overall National Health Policy remains the same", "Administrative Structure of UTH remains the same", and "Communities continue participation in activities of HIV/AIDS and TB".

- To achieve the Project Purpose, it is assumed that "the position of UTH HIV/TB laboratories in national program remain same" and "MTCT, VCT and TB activities remain stable", beside the completion of all Outputs during the project operation. These can be monitored through revised National HIV/AIDS/TB control program or dialogue with technical working groups.

- To produce the Outputs, it is assumed that "Trained Health staff continues to work on the project", "Economic performance remains stable" and "Equipment continues work optimally" during project operation period. These should be monitored through annual inflation and fluctuation rate, annual attrition rate and project monitoring.

Probability of economic instability and attrition rate likely to be higher compared with the other assumptions.

5-10 Prior Obligations and Prerequisites

Pre-conditions were not identified during the workshop.

5-11 Plan of Operation

Based on the second version of PDM, the Japanese Project Consultation Team and the authorities concerned in Zambia have agreed revision of the Plan of Operation (PO) for the project. It is attached to this document as ***Annex 5: the Plan of Operation.***

6. Project justification

6.1 Public Benefit and Equity

Burden of HIV/AIDS/TB pandemic is enormous and multi-dimensional. It affects not only health sector but also family, community, national economy and every corner of the society. Though the planned project scope is limited mainly to the laboratory sub-sector, the potential impact could be extensive provided that the project is integrated effectively with other HIV/TB control activities.

As it is confirmed in the Participation Analysis, the entire country is targeted in the project

design. In that sense, the project is highly equitable. However, due to resource constraints, there may have to be sequencing of geographical coverage and other targeting according to policy priority and other conditions.

6.2 Technical Appropriateness

The technical appropriateness for the project should be analyzed from the two distinctive aspects. The one is new and rather sophisticated technologies and technique which will be introduced to the central laboratories for research and development activities, and the other is fundamental HIV (antibody testing) and TB testing (sputum smear) technologies and technique which need to be standardized and monitored through out the country. The latter has to reflect existing policies and programs including Standard Operating Procedures circulated, with necessary modification. Any new technologies need to be assessed with caution so that they will not negatively affect financial and other sustainability.

6.3 Reasons for Assistance from JICA

The project will be built on the foundations established through JICA's prior assistance to the UTH laboratories. The staff in the UTH laboratories and JICA have established good working relationships and mutual trust. Also, two of the staff at CDL are former participants of JICA's group training course. Therefore, the project is expected to enhance the impact from the past investment.

6.4 Expected Impact of the Project

<u>Policy Impact</u>

From the research and development activities at the central laboratories and HIV/TB test standardization and training activities nationwide, the project could produce results with policy implications such as follows:

- Research on anti-HIV property of locally available plants and other materials could potentially broaden the spectrum of care and support to the people living with HIV/AIDS, which is one of the issues with policy priority.
- Monitoring of preventive effect on vertical transmission and development of drug-resistant HIV from the increased use of antiretrovirals could benefit the ongoing large-scale trial of MTCT prevention project and guide the rational use of anti-

retrovirals.

- Monitoring of drug-resistant TB could provide information on how the TB control activities are effectively implemented and guide the rational use of anti-TB drugs.

However, these information need to be disseminated widely to the health care providers through various media and educational institutions in order for them to be translated into changes in clinical practices and produce impact.

Health Impact

People affected and infected by HIV and TB could benefit from better access to quality HIV/TB diagnosis as a direct result from the project. However, the health impact will be limited unless other aspects of HIV/TB control programs such as treatment, care and support are strengthened at the same time. For that reason, coordination with related activities and other donors will be essential for the success of the project.

Institutional Impact

The project could facilitate better integration of the laboratory sub-sector into the national HIV and TB control programs. Following are some of the examples:

- Better coordination at central level, e.g., between central laboratories and related national working groups or ministries, or between the UTH laboratories and CDL, through periodical project management meetings.
- Better coordination between the central laboratories and peripheral laboratories, through information dissemination, training and regular quality assurance activities.
- Better coordination at peripheral level, e.g., between laboratory staff and clinicians.

Technical Impact

From the research and development activities at the central laboratories, the project may be able to provide opportunities for Zambia to participate in international HIV vaccine development activities.

7. Further Arrangements Necessary for the Project

Implementing Arrangements

As described in discussion and coordination is necessary to adjust the project design with

other related donor such as the CDC, Irish AID and ZAMBART.

Involvement of district management team towards the training and monitoring in the project should be discussed since they are responsible for local setting and arrangements.

Detailed budget allocation plan to each of the project activities should be drawn up in order to ensure efficient use of the project budget.

The plan of Operation should be further developed according to revision of PDM.

This project document also needs to be revised based on change of situation related to the Project.

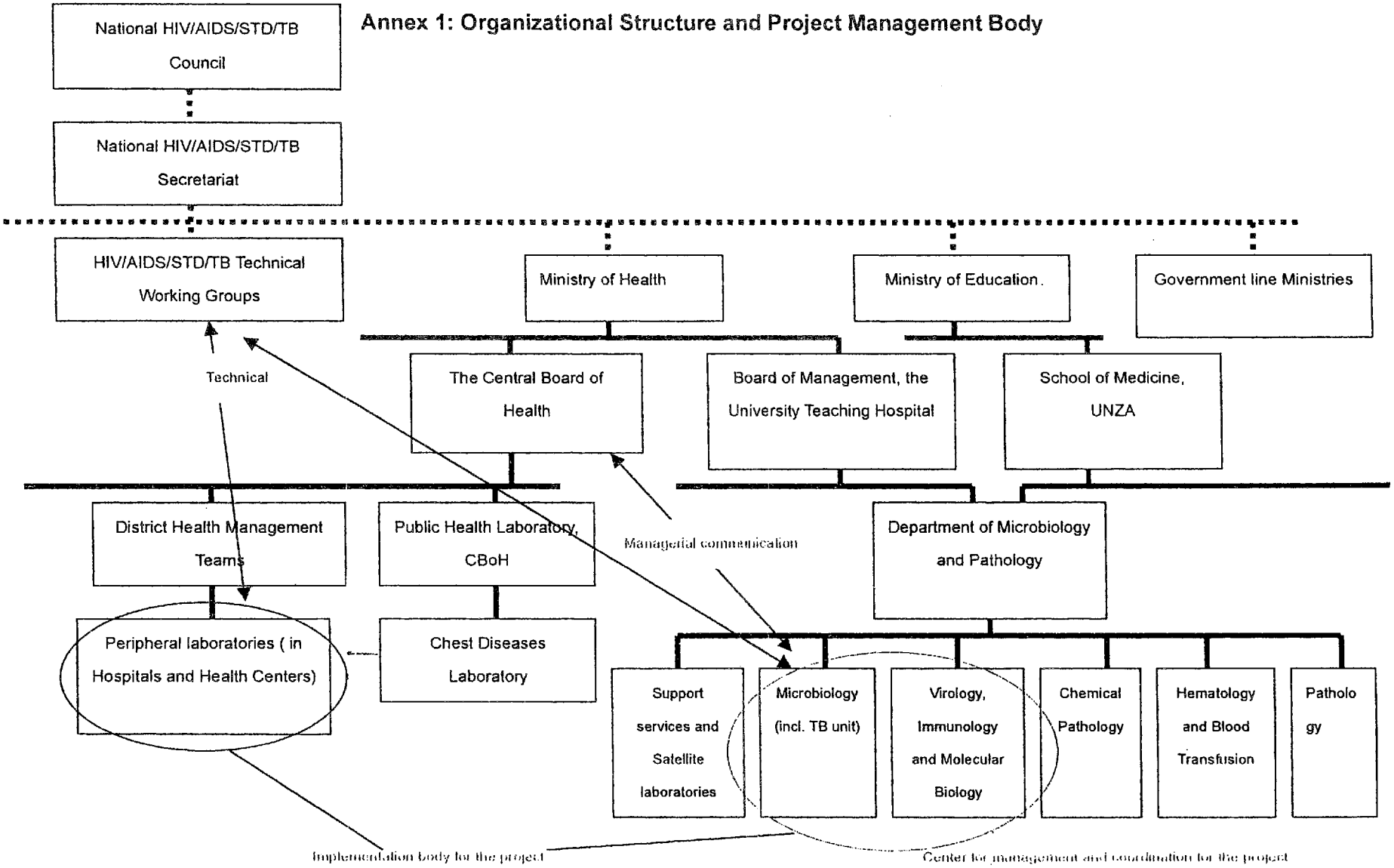
8. Reference

- Zambia National HIV/AIDS Strategic Framework 2000-2002
- 1997 Annual Report for Pathology and Microbiology Department
- 1999 Annual TB laboratory, UTH
- Annual Report 1993, CDL
- Annual Report 1994, CDL
- Annual Report 1995, CDL
- Annual Report 1996, CDL
- Guidelines for the Rational Use of Laboratory Tests at Health Center Level.
- Managing Tuberculosis at Microscopy Centers in Zambia.
- Fourth Annual Report of the Virology Laboratory Jan. 1996 – March 1997
- Training Guide for Acid Fast Bacilli (AFB) Microscopy, 1996, CDL
- Report on the Global HIV/AIDS Epidemic, June 2000, UNAIDS

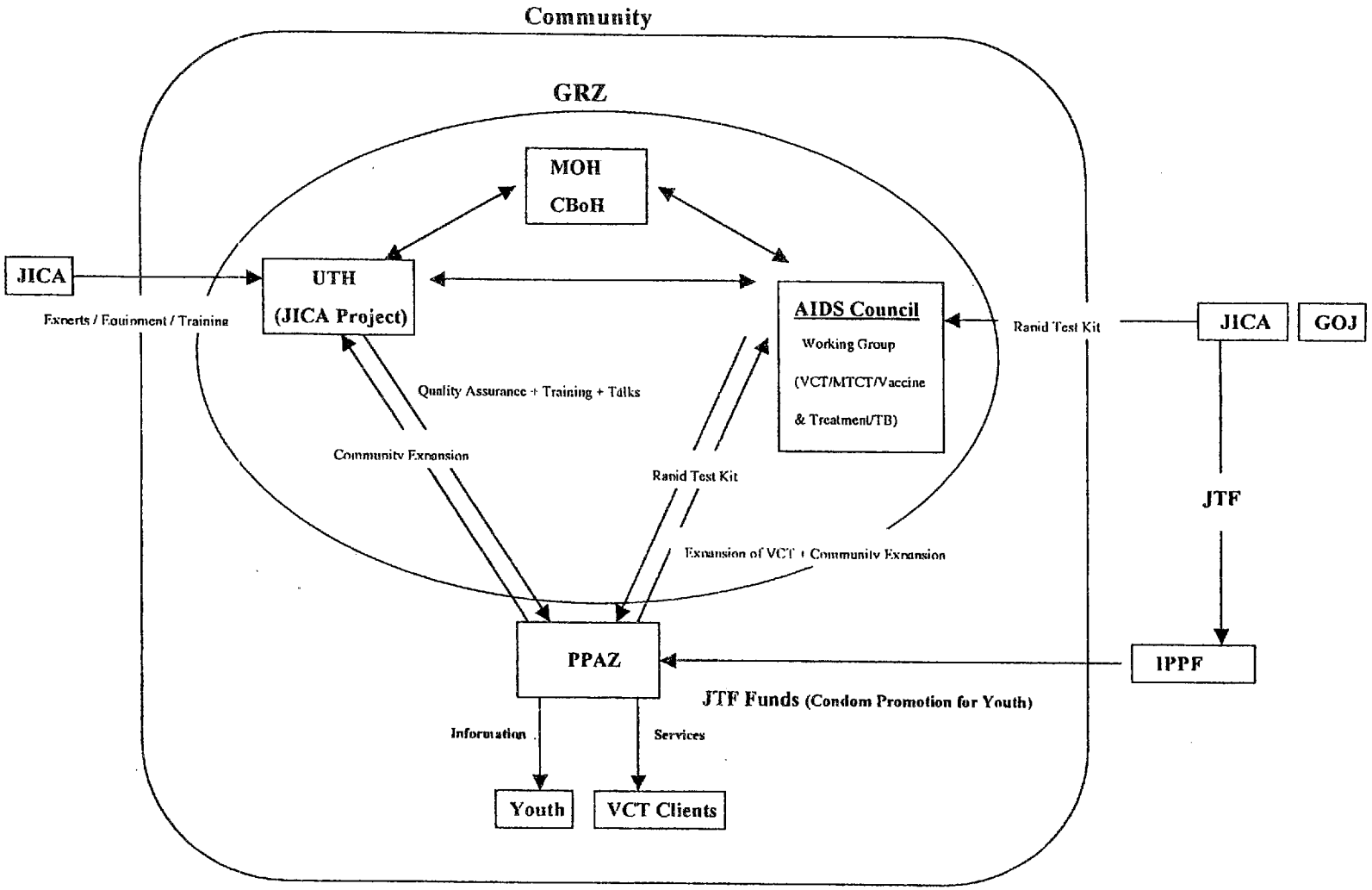
9. Annexes

- Annex 1: Organizational Structure and Project Management Body
- Annex 2: Staff list
- Annex 3: Data collection and record
- Annex 4: PDM of 23rd January, 2002
- Annex 5: the Plan of Operation.

Annex 1: Organizational Structure and Project Management Body



JICA HIV/AIDS and TB Control Project
Organization Structure



Annex 2 Staff List

Manpower in UTH Virology Laboratory

1. Dr. Francis Chisaka Kasolo	Consultant Virologist/Head of Virology Laboratory
2. Dr. Mwaka Monze	Senior Register Virology
3. Dr. Lishomwa Ndlobvu	Medical Officer Immunology
4. Dr. Jubra Muyanga	Medical Officer Virology
5. Mr. Ray Handma	Lecturer Virologist
6. Mrs. Gina Mulundu	Immunologist/Lecturer
7. Mrs. Ida Ndumba	Laboratory Scientist
8. Mrs. Maziyanga Liwewe	Laboratory Scientist
9. Mr. Saul Phiri	Laboratory Scientist
10. Miss. Mwansa Mukanta	Laboratory Scientist
11. Mr. Humphrey Bima	Laboratory Scientist
12. Mr. Andros Them	Laboratory Scientist
13. Mr. Brighden Kakonkanya	Laboratory Technologist
14. Miss. Julia Simwaka	Laboratory Technologist
15. Mr. Patrick Munjunga	Laboratory Technologist
16. Mr. Clement Mulenga	Computer Technologist
17. Mr. Joseph Banda	Computer Technologist
18. Mr. Eliya Banda	Laboratory Assistant
19.Mr. Benson Musonda	Laboratory Assistant
20. Mr. Nalishebo Mubiana	Laboratory Assistant

Manpower in UTH TB Laboratory

1. Dr. Lyndon Mwape Kafwabulula	Head of TB Laboratory
2. Mrs. Charity Habeenzu	Principal Technologist, Laboratory in charge
3. Mr. David Lubasi	Senior Laboratory Technologist
4. Mr. Patrick Katemangwe	Laboratory Scientist
5. Mrs. Florence Chuulu	Laboratory Technician
6. Miss. Kunda Kasakwa	Laboratory Technician
7. Mr. Lewis Chikambwe	Laboratory Technician
8. Miss. Veronica Langa	Laboratory Assistant
9. Mr. Chrispin Mwanza	Clerk

Annex 3 Data Collection and Record

HIV/ AIDS

Data Collection and Recording on HIV/AIDS	UTH lab	CDL	Peri-lab	Others
Request for Laboratory Examination				
• Name	X			
• Age	X			
• Sex	X			
• Ref. No.	X			
• Ward	X			
• Bed	X			
• Nature of Specimen	X			
• Examination Required	X			
• Date Collected	X			
• Time	X			
• Clinical Details	X			
• If Charge, State Why	X			
• Sign of MO	X			
• Lab.Ref.No	X			
• Date Report Sent	X			
Zambia VCT Service – Activity Report Form				
• Province	X			
• Hospital	X			
• Period	X			
• Date	X			
• Sheet No	X			
• Signatory	X			
• Sign	X			
• No. of positive samples	X			
• No. of negative samples	X			
• No. of samples tested in total	X			
• No. of samples to UTHVL for confirmation	X			
• No. of samples to UTHVL for QC	X			
• No. of sample tested from clinic	X			
• No. of samples tested from blood donors	X			
• No. of persons pre-counseled	X			
• No. of persons post counseled	X			
• No. of man-x-days counseling unit	X			
• No. of man-x-days laboratory unit	X			
• No. of man-x-days information unit	X			

• Institutions visited	X			
• Inventory list checked	X			
• Items ordered	X			
• Suggested improvements	X			
Annual Report (up to Fourth one Jan 1996-March 1997)				
▪ Staff list	X			
▪ List of counter part training in the past	X			
▪ Description of relevant research including No.	X			
of samples	X			
▪ List of publications	X			
▪ List of presentations and report	X			
▪ List of newsletters	X			
▪ List of conferences and Symposiums with	X			
brief description	X			
▪ List of workshop with brief description	X			
Newsletter (up to No.15, March 1997)				
▪ Editorial	X			
▪ News	X			
▪ Data	X			
▪ Notice Board	X			

TB

Data Collection and Recording on TB	UTH lab	CDL	Peri-lab	Others
Examination for Tubercle Bacilli (Request form)				
▪ Name		X		ZAMBART
▪ Ward, Hospital		X		ZAMBART
▪ Sex		X		ZAMBART
▪ Age		X		ZAMBART
▪ Date collected		X		ZAMBART
▪ Clinical Diagnosis		X		ZAMBART
▪ If specimen has been examined locally		X		
▪ Any previous treatment		X		
▪ Examination Required (AFB, Culture,		X		ZAMBART
Sensitivity)				
▪ Sign and Name of MO		X		ZAMBART
▪ Nature of Specimen				ZAMBART
Worksheet For Smear Slides Check (QC)		X		
▪ Laboratory		X		
▪ Month		X		

▪ Year		X		
▪ Serial No.		X		
▪ Slide No.		X		
▪ AFB result by		X		
▪ Specimen Quality		X		
▪ Staining		X		
▪ Cleanness		X		
▪ Thickness		X		
▪ Size		X		
▪ Evenness				
Information and Demand Chart (Request Form)				
▪ Hospital		X		
▪ Officer in charge		X		
▪ Date		X		
▪ Total number of smears examined (Jan-June / July-Dec)		X X		
▪ Number of positive smears (Jan-June / July-Dec)		X X		
▪ Leprosy (Jan-June / July-Dec)		X		
▪ Total number of smears examined (Jan-June / July-Dec)		X X		
▪ Number of positive smears (Jan-June / July-Dec)		X X		
▪ Basic Fuchsine (Stock / Required)		X		
▪ Methlene Blue (Stock / Required)		X		
▪ Phenol Crystals (Stock / Required)		X		
▪ HCL (Stock / Required)		X		
▪ Immersion Oil (Stock / Required)		X		
▪ Alcohol (Stock / Required)		X		
▪ Sputum container (Stock / Required)		X		
Identification and Sensitivity (Form)				
▪ Patient's name	X			ZAMBART
▪ Diagnostic Center	X			ZAMBART
▪ Code	X			ZAMBART
▪ Study number	X			ZAMBART
▪ Type of Specimen				ZAMBART
▪ Lab number	X			ZAMBART
▪ Sex	X			ZAMBART
▪ Age	X			ZAMBART
▪ Date of specimen collected	X			ZAMBART

▪ Date of specimen received	X			ZAMBART
▪ AFB microscopy result	X			ZAMBART
▪ Date of Culture reading				ZAMBART
▪ Identification (Growth on LJ, Pyrazinamide, Nicacin, Nitrate, TCH, PNBA, 45℃, 25℃, light)	X			ZAMBART
▪ Sensitivity (Streptomycin, Isnazid, Ethambutol, Rifampicin)	X			ZAMBART
▪ Date recorded	X			ZAMBART
▪ Officer responsible	X			ZAMBART
Annual Report (up to 1996 with CDL, up to 1999 with UTH TB lab)				
▪ Total number of samples received by specimen type	X	X		
▪ Total number of smear positive by specimen type		X		
▪ Total number of culture positive by specimen type		X		
▪ Sample distribution of sex by origin	X	X		
▪ Sample distribution of smear and culture positive by origin		X		
▪ Sample distribution of sample received, smear positive, and culture positive by province		X		
▪ Total number of smear and culture received by project	X	X		
▪ Total number of smear and culture positive by project		X		
▪ Contingency table of smear and culture results		X		
▪ Positive rate by year		X		
▪ Analysis of Lusaka sensitivity results		X		
▪ Staff list		X		
▪ Total number of TB suspects	X			
▪ Total number of smear positive patients	X			
▪ Total number of smear positive samples	X			
▪ Total number of JICA TB project patients	X			
▪ Total number of JICA smear positive patients	X			
▪ Total number of research smear done				

▪ Total number of research cultures done	X			
▪ Total number of research culture positive	X			
▪ Total number of contaminants	X			
▪ Total research TB drug susceptibility testing done	X			
▪ Primary multidrug resistance	X			
▪ Geographical distribution of patients	X			
▪ Brief description of research activities	X			
Visitor record	X	X		

HIV/AIDS/TB

Data Collection and Recording	UTH lab	CDL	Peri-lab	Others
▪ Outpatient attendance at health center			X	HIMS
▪ Deliveries at health center			X	HIMS
▪ Per Capital OPD attendance			X	HIMS
▪ Health center workload			X	HIMS
▪ Malaria Incidence			X	HIMS
▪ First antenatal attendance			X	HIMS
▪ Fully immunized children			X	HIMS
▪ New family planning acceptors			X	HIMS
▪ AIDS/STD –Syphilis in pregnancy			X	HIMS
▪ TB defaulter rate			X	HIMS
▪ Access to safe water			X	HIMS

Transition of HIV prevalence rate (Sentinel Survey on Pregnant Women 1990-98) (%)

Province	Region	1990	1991	1992	1993	1994	1998
Central	Kabwe					29.5	27.2
	Kapiri Mposi					13.0	16.5
Copperbelt	Ndola					27.5	27.5
	Ibenga					11.4	10.1
Eastern	Chipata					30.3	27.3
	Minga			12.9	17.7	9.6	10.3
Luapula	Mansa					23.6	21.1
	Kashikishi			11.4	15.1	14.6	13.0
Lusaka	Chelston			22.6	26.8	24.7	25.9
	Chilenje			27.0	22.0	35.3	27.3
	Kalingalinga				23.5	21.7	26.7
	Matero			29.7	27.1	28.4	29.1
Northern	Kasama					23.8	14.7
	Isoka					10.6	11.7
North-Western	Solwezi				15.0	23.8	20.2
	Mukinge	13.0	7.5		9.7	9.5	8.8
Southern	Livingstone					31.9	31.0
	Macha			7.9	10.0	9.1	8.0
Western	Mongu					28.4	27.3
	Kalabo			5.9	4.9	10.2	12.8

Source : National HIV Sentinel Surveillance Team (1999)

HIV Prevalence Rate by Age Group by regions

(Sentinel Survey on Pregnant Women 1994-98) (%)

Province	Town	year	Age15-19	Age20-24	Age25-29	Age30-39	Age15-39
Copperbelt	Ndola	1998	15.7	32.2	35.3	25.5	27.9
		1994	21.0	30.3	34.6	23.0	27.9
Lusaka	Chelston	1998	15.1	28.4	31.9	29.4	25.9
		1994	21.7	27.2	27.8	20.0	24.6
	Chilenje	1998	16.7	25.3	37.0	31.3	27.3
		1994	29.4	38.0	43.5	29.8	35.6
	Kalingalinga	1998	16.7	28.3	36.0	28.0	27.2
		1994	14.2	24.0	34.3	15.6	22.1
	Matero	1998	10.6	31.6	42.0	34.2	29.2
		1994	24.8	30.6	23.0	36.8	28.5
Southern	Livingstone	1998	19.1	37.0	43.2	26.7	31.6
		1994	23.8	37.2	36.4	28.4	32.3

Source : National HIV Sentinel Surveillance Team (1999)

Annex 4

PROJECT DESIGN MATRIX (PDM)

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

Project Name : HIV/AIDS AND TUBERCULOSIS CONTROL PROJECT

Version 2 (January 23, 2002)

Target Group : Community (People affected/infected by HIV / TB, Health workers, Educational Institutions, Youth and NGOs)

Duration : March 30, 2001～March 29, 2006

Project Area : Zambia

NARRATIVE SUMMARY	VERIFIABLE INDICATORS	MEANS OF VERIFICATIONS	IMPORTANT ASSUMPTIONS
OVERALL GOAL Status of HIV/AIDS and TB in the Republic of Zambia is improved	* Prevalence of HIV infected people * Newly infected cases of HIV * Cure rate of TB cases * TB case detection rate	* Cure rate of TB cases * Annual TB Report * HIV Population survey repoits	* Sufficient human and financial resources for prevention and treatment for HIV/AIDS and TB are provided. * HIV/AIDS and TB infection remain priority in Zambia
PROJECT PURPOSE Laboratory systems are strengthened and are effectively utilized for HIV/AIDS and TB control in the Republic of Zambia	* No. and quality of results produced by laboratory systems * No. of laboratory staff trained on HIV/AIDS and TB * Performance of peripheral lab. on quality assurance tests * No of information disseminated to stakeholders	* Performance of peripheral laboratories on yearly HIV/AIDS and TB QA testing * Annual report of UTH, CDL, CBoH, UNAIDS and WHO HIV/AIDS Secretariat * Annual report of Virology and TB Laboratories * Minutes of HIV/AIDS and TB Technical Working Groups	* Overall National Health Policy remains the same * Administrative Structure of UTH remains the same * Communities continue participation in activities of HIV/AIDS and TB
OUTPUTS 1 Performance of laboratory techniques, data management and overall laboratory management are improved 2 Performance and quality of peripheral labs for HIV/AIDS and TB testing and surveillance is improved 3 Utilization of laboratory services by health workers (Private, public and NGOs) is improved 4 Information on HIV/TB generated by the project is utilised widely by majority of stake holders in planning and implementing programmes (i.e.. GRZ, other donors, health workers, NGOs, schools, youth and communities) 5 Collaboration with HIV/AIDS and TB Working Groups is institutionalised	See attached verifiable indicators list	* Annual report of UTH, CDL, CBoH, UNAIDS, WHO and HIV/AIDS Secretariat * Annual report of Virology and TB Laboratories * Minutes of HIV/AIDS and TB Technical Working Groups * Regular quality surveillance report * Pre-and post project evaluation study (KIP) on technician	* The position of UTH HIV/AIDS and TB laboratories in National Programme remain the same MTCT, VCT and TB activities remain stable.
ACTIVITIES 1-1 To train counterparts on surveillance and diagnostic techniques /methods at the central laboratories 1-2 To train lab staff locally to acquire preventive maintenance skills of lab equipment 1-3 To establish or improve the following technologies in the central laboratories on monitoring, surveillance and diagnosis 1-3(a) Provide technical support for monitoring Anti-retro viral (ARV) drug treatment 1-3(b) Anti-HIV drug assay and ARV drug resistance 1-3(c) HIV strain surveillance and sero-sentinel surveillance 1-3(d) HIV immunological response 1-3(e) TB drug resistance surveillance and Anti-TB drug susceptibility (improvement) 1-3(f) Diagnostic value of TB (improvement) 1-4 To make recommendation in reviewing SOPs for HIV/AIDS and TB labs to CBoH as part of Technical Working Group 1-5 To improve data management, information and over all management of Virology and TB laboratories 2-1 To conduct training of trainer workshops for health workers in HIV/AIDS and TB diagnosis in collaboration with Technical Working Group 2-2 To conduct laboratory training for health workers to support VCT, MTCT and TB control programmes 2-3 To participate in development of training manuals for HIV/AIDS and TB for staff of peripheral laboratories 2-4 To support planning, distribution and monitoring of activities of VCT and MTCT sites 2-5 To ensure quality assurance for HIV/AIDS and TB testings 2-5(a) To ensure quality assurance of HIV testing at all VCT and MTCT sites 2-5(b) To ensure quality assurance of TB diagnostic sites in Lusaka Province 3-1 To sensitize health workers on the importance of lab diagnosis for HIV/AIDS and distribution of project newsletters 3-2 To update and distribute laboratory handbook for health workers 3-3 To provide results of HIV/AIDS and TB lab tests timely to UTH clinicians 4-1 To produce and distribute technical information and materials on HIV/AIDS and TB to stakeholders 4-2 To produce project homepage on the internet 4-3 To hold dissemination meetings with MOH/CBoH on the activities of project at least twice a year 4-4 To organise sensitizing meetings for youth in community on VCT program 5 Project staff both Japanese and Zambian get officially appointed and actively involved in various Technical Working Groups (VCT, MTCT, TB and Vaccine and Treatment)	**INPUTS** **Japan** **Expert** Project chief advisor Project Coordinator Long/Short term HIV expert Long/Short term TB expert Long/Short term Public health/Epidemiology Long/Short term Equipment Maintenance Long/Short term Immunology expert **Counterpart training** **Equipment** **Operational cost** **Zambia** **Counterpart (Implementation body)** Project directors Project manager Medical doctors Medical officers Medical technologist in immunology Medical technologist in bacteriology Medical technologist in virology Medical scientist in immunology Medical scientist in bacteriology Medical scientist in virology Medical equipment technicians Data management personnel Epidemiologist Medial equipment engineer **Utility cost and salaries for Zambian staff**	* Trained Health staff continues to work on the project * Economic performance remains stable * Equipment continues work optimally **PRECONDITIONS**

LIST OF VERIFIABLE INDICATORS

OUTPUT	ACTIVITY	INDICATORS
1	1-1	18 Zambian counterparts health workers in various HIV/ TB technologies
	1-2	Identified Laboratory Staff and maintenance engineers trained in preventive maintenance
	1-3(a)	Number of tests
		CD4 CD8 counting, Viral load, PCR and antibody testing established and maintained in the Lab.
	1-3(b)	Drug assay and ARV resistance monitoring system established in the Lab
	1-3(c)	Strain and sentinel surveillance of HIV in Zambia conducted
	1-3(d)	Immunological techniques set up in the lab
	1-3(e)	Improved TB drug surveillance and anti-TB drug susceptibility
	1-3(f)	Improved utilisation of TB laboratory diagnosis
		Improvement of increasing Number of request of Lab tests from UTH and private clinics
	1-4	SOP
		Number of recommendation
		Number of participation
	1-5	Established system of over all data management
		Annual reports
		Number of research project managed
		Record of routine activities
2	2-1	Number of training
	2-2	Number of trainees
		Number of training courses
	2-3	Training manuals of HIV/AIDS and TB
	2-4	Number supplies utilised by reporting inventory system
		Number of persons utilising MTCT/VCT services
	2-5(a)	Quality assurance systems at all sites
	2-5(b)	Quality assurance systems at all sites
3	3-1	Number of workshop and meeting
		Number of participant
		Number of newsletter distributed
	3-2	1000 copies of laboratory hand book are printed and circulated
	3-3	90% of HIV and initial TB microscopy test result return with in 48 hours
4	4-1	Total number of participants receiving HIV/TB information
		A number of request for information
		Feed back from participant
		Establishment of Homepage
	4-2	Number of homepage updated
		Number of person accessing web site
	4-3	Number of participants, minules produced and project information used in planning National policy
	4-4	Number of participants
		Number of meetings in various area
		% of youth who go through VCT among meeting participant
5	5	Project staff are officially appointed
		Number of meeting attended, minutes, report and minutes form technical working group

Annex 5 **PLAN OF OPERATION (PO) OF HIV/AIDS AND TUBERCULOSIS CONTROL PROJECT**

OVERALL GOAL	**PROJECT PURPOSE**
Status of HIV/AIDS and TB in the Republic of Zambia is improved	Laboratory Systems are strengthened and are effectively utilized for HIV/AIDS and TB control in the Republic of Zambia

OUTPUT 1. Performance of laboratory techniques, data management and overall laboratory management are improved

ACTIVITIES		2001	2002	2003	2004	2005	2006	PERSON INCHARGE	IMPLEME-NTERS	EQUIPMENT/ MATERIALS	EXPECTED RESULTS INDICATORS
1-1	To train counterparts on surveillance and diagnostic techniques / methods at the central laboratories	6 (Project management) (HIV Virology) (HIV Sequencing) (Molecular TB)	2 (HIV Virology) (Tuberculosis)	3 (Molecular Viorology) (Tuberculosis) (Epidemiology Public Health)	3 (Data management Statistic) (HIV Immunology) (Tuberculosis)	3 (Virology) (Tuberculosis) (Molecular Virology)		Project Manager JICA Experts	JICA Headquarter and Local office		17 Zambian counterparts health workers in various HIV/ TB technologies
1-2	To train lab staff locally to acquire preventive maintenance of lab equipment		1 (Centrifuge) (Microscope)	1 (Safety cabinet) (Deep freezer)	1	1		Project Manager	JICA Short/Long term experts Maintenance experts specified yearly	Tools and Spares for identified equipment	Identified Lab. Staff and maintenance engineers trained in preventive maintenance

Annex 5 **PLAN OF OPERATION (PO) OF HIV/AIDS AND TUBERCULOSIS CONTROL PROJECT**

OUTPUT 1. Performance of laboratory techniques, data management and overall laboratory management are improved

ACTIVITIY 1-3 To establish or improve the following technologies in the central laboratories on monitoring, surveillance and diagnosis

ACTIVITIES	2001	2002	2003	2004	2005	2006	PERSON INCHARGE	IMPLEME-NTERS	EQUIPMENT/ MATERIALS	EXPECTED RESULTS INDICATORS
1-3 (a) Provide technical support for monitoring ARV drug treatment	←				→		Project Manager	JICA Experts (HIV Virology) Counterparts (HIV Virology) MTCT & Treatment W.Gs	DNA Sequencer(1) ELISA Reader(1) Class II Safety Cabinet(2) CO2 Incubator(2) FACScan Up-grade(Soft ware/Replace with FACS calibre) Laboratory Bench(2) Air conditioner(10)	Techniqes of PCR, Cellular anti-body, CD4, CD8, Viral load are established
1-3 (b) Anti-HIV drug assay and ARV drug resistance	←				→					Drug assay and ARV resistance monitoring system established in the Lab
	(Drug assay: 10 samples/year)									
	(ARV drug resistance: 120 MTCT samples/year)									
	Phenotyping assay Genotyping assay Diagnosis of children									
1-3 (c) HIV strain surveillance and sero-sentinel surveillance		Lusaka	North	West	East	South	CBoH	UTH Viro. Lab TDRC JICA CDC V. Dev. & Treat. W.G.	Deep Freezer-80(1)-40(1)-4(2) Reagents(PCR, Sequencing, FACSCan and HIV culture) Glass and Plastic wares	Strain and sentinel surveillance of HIV in Zambia conducted
		←	→							
		(Strain: 100 samples/year)								
		←	→		→					
		(Sentinel: 500 samples/site x 23 sites)								
1-3 (d) HIV immunological response	←							JICA Experts (Immunology) Counterparts (Immunology) V. Dev. & Treat. W.G.		Immunological techniques set up in the lab
	Up-grade of FACScan									
			←		→					
			(100 samples/year)							

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Annex 5 **PLAN OF OPERATION (PO) OF HIV/AIDS AND TUBERCULOSIS CONTROL PROJECT**

OUTPUT 1. Performance of laboratory techniques, data management and overall laboratory management are improved

ACTIVITIY 1-3 To establish or improve the following technologies in the central laboratories on monitoring, surveillance & diagnosis

ACTIVITIES		2001	2002	2003	2004	2005	2006	PERSON INCHARGE	IMPLEME-NTERS	EQUIPMENT/ MATERIALS	EXPECTED RESULTS INDICATORS
1-3 (e)	TB drug resistance surveillance and Anti-TB drug susceptibility (improvement)	MGIT utilization ←→ Establish and evaluation system 500tests/year		←→ 8,000tests/year				Project Manager	UTH TB Lab (Head) CDL (Technologist in-charge) JICA experts (TB)	MGIT system(1) Class II Safety Cabinet(1) CO2 Incubator(1) Florescence Microscope(2) Light Microscope(1) Laboratory Bench(2)	Improved TB drug surveillance and anti-TB drug susceptibility
1-3 (f)	Diagnostic value of TB (improvement)		←→ Base line survey		←→ Evaluation			Project Manager	UTH TB Lab (Head) CDL (Technologist in-charge) JICA experts (TB) Clinics (Medical officer in-charge, Director of DHMT) UTH wards (Director of Clinical Services)	Air conditioner(3) Autoclave(2) Water Distiller(1) Coagulator(1) Dry oven(1) Reagents(TB culture, Microscopy and PCR) Glass and Plastic wares	· Improved utilisation of TB laboratory diagnosis Improvement of increasing No. of request of Lab tests from UTH and private clinics

Annex 5 **PLAN OF OPERATION (PO) OF HIV/AIDS AND TUBERCULOSIS CONTROL PROJECT**

OUTPUT 1. Performance of laboratory techniques, data management and overall laboratory management are improved

ACTIVITIES		2001	2002	2003	2004	2005	2006	PERSON INCHARGE	IMPLEME-NTERS	EQUIPMENT/ MATERIALS	EXPECTED RESULTS INDICATORS
1-4	To make recommendation in reviewing SOPs for HIV/AIDS and TB laboratories to CBoH as part of Technical Working Group			SOP preparation		Publishment		Project Manager	JICA Experts (HIV/TB) Counterparts (Head of Virology & TB Lab.) CBoH Tech. W.G.		SOP No. of recommendation No. of participation
1-5	To improve data management, information and over all management of Virology and TB laboratories							Project Manager	JICA Experts (Chief Advisor, Data manag., Epidemiology & Public Health) Counterparts (Head, Admin clerk) UTH manage. CDC	Computer, Soft ware and accessories(3) Photo copy machine(1) General filing system	System of over all data management is established Annual reports No. of research project managed Record of routine activities

Annex 5 **PLAN OF OPERATION (PO) OF HIV/AIDS AND TUBERCULOSIS CONTROL PROJECT**

OUTPUT 2. Performance and quality of peripheral labs for HIV/AIDS and TB test is improved

ACTIVITIES		2001	2002	2003	2004	2005	2006	PERSON INCHARGE	IMPLEME-NTERS	EQUIPMENT/ MATERIALS	EXPECTED RESULTS INDICATORS
2-1	To conduct training of trainer workshops for health workers in HIV/AIDS and TB	x	x	x	x	x	x	Project Manager	Counterparts (Heads of Labs) JICA Experts (HIV/TB) CBoH CDL/CDC Tech. W.G.s	Printed materials Reagents (HIV TB diagnosis) Transport(Microbus) Audio-visual(LCD, OHP, Laptop computer, screen)	100 healths worker(trainer) are trained No. of training No. of trainees
		HIV/AIDS, MTCT, VCT, TB 20 participant/ workshop									
2-2	To conduct laboratory training for health workers to support VCT, MTCT and TB control programmes	←					→				No. of training No. of trainees
2-3	To participate in development of training manuals for HIV/AIDS and TB for staff of peripheral laboratories	← Review →		← Complete →				Project Manager	Counterparts (Heads of Labs) JICA Experts (HIV/TB) CBoH Tech. W.G.		Training manuals of HIV/AIDS and TB are developed and circulated
2-4	To support planning, distribution and monitoring of activities of VCT and MTCT sites		←				→	Project Manager	JICA Experts (MTCT/VCT Short term) Counterparts (MTCT/VCT coordinator in Lab.) CBoH Tech. W.G.s	Transport(4WD) Storage facilities Communication equipment ie..Fax/phone(3) Interphone system	No. supplies utilised by reporting inventory system No. of persons utilising MTCT/VCT services

Annex 5 **PLAN OF OPERATION (PO) OF HIV/AIDS AND TUBERCULOSIS CONTROL PROJECT**

OUTPUT 2. Performance and quality of peripheral labs for HIV/AIDS and TB test is improved

ACTIVITIY 2-5 To ensure quality assurance for HIV/AIDS and TB testings

ACTIVITIES		2001	2002	2003	2004	2005	2006	PERSON INCHARGE	IMPLEME-NTERS	EQUIPMENT/ MATERIALS	EXPECTED RESULTS INDICATORS
2-5 (a)	To ensure quality assurance of HIV testing at all VCT and MTCT sites		←	—	—	—	→	Project Manager	JICA Experts (HIV) Counterparts (HIV) CBoH VCT/MTCT TDRC Tech. W.G.	Reagents (HIV serology) Printed materials	QA systems established at all sites
2-5 (b)	To ensure quality assurance of TB diagnostic sites in Lusaka Province			←	—	—	→	Head of TB Lab	JICA Experts (TB) Counterparts (TB) CBoH CDL/CDC Tech. W.G.	Reagents (TB microscopy) Printed materials	QA systems established at all sites

Annex 5 **PLAN OF OPERATION (PO) OF HIV/AIDS AND TUBERCULOSIS CONTROL PROJECT**

OUTPUT 3. Utilization of laboratory services by health workers (Private, public and NGO) is improved

ACTIVITIES		2001	2002	2003	2004	2005	2006	PERSON INCHARGE	IMPLEME-NTERS	EQUIPMENT/ MATERIALS	EXPECTED RESULTS INDICATORS
3-1	To sensitize health workers and clinicians on the importance of lab diagnosis for HIV/AIDS and TB through meeting, workshops and distribution of project newsletters	x Meeting , Workshop	x x x x Newsletters	x x x x	x x x x	x x x x	x x	Head of Virology & TB Lab	JICA Experts (HIV/TB) Counterparts (HIV/TB) UTH personnel	Printed materials	No. of request from clinical sites to Laboratory No. of workshop and meeting No. of participant No. of newsletter distributed
3-2	To update and distribute laboratory handbook for clinicians		←→ Review	←→ Complete				Project Manager	JICA Experts (HIV/TB) Counterparts (HIV/TB) UTH Lab Director	Printed materials	1000 copies of laboratory hand book are printed and circulated
3-3	To provide results of HIV/AIDS and TB lab tests timely to UTH clinicians		←→ Situation study	← Improvement	→	→	→	Project Manager	JICA Experts (HIV/TB) Counterparts (HIV/TB) UTH courier system	Computer software referred to 1-6 Reagents and Florescence Microscope referred to 1-3(b)	90% of HIV and initial TB microscopy test result return with in 48 hours

Annex 5 **PLAN OF OPERATION (PO) OF HIV/AIDS AND TUBERCULOSIS CONTROL PROJECT**

OUTPUT 4. Information on HIV/TB generated by the project is utilised widely by majority of stake holders in planning and implementing programmes (i.e.. GRZ, other donors, health workers, NGO s , schools, youth and communities)

ACTIVITIES		2001	2002	2003	2004	2005	2006	PERSON INCHARGE	IMPLEME-NTERS	EQUIPMENT/ MATERIALS	EXPECTED RESULTS INDICATORS
4-1	To produce and distribute technical information and materials on HIV/AIDS and TB to stakeholders		←	—	—	—	→	Project Manager	JICA Experts Counterparts	Printed materials Travel allowance	Total number of participants receiving HIV/TB information A number of request for information Feed back from participant
4-2	To produce project homepage on the Internet		← → Establishment					Project Manager	JICA Experts (Administrator/ Coordinator) Counterparts (Computer Clerk)	Computer Software referred to 1-6 Maintain charge	Establishment of Homepage Number of homepage updated, No. of person accessing web site
				← — Improvement	—	—	→				

Annex 5 **PLAN OF OPERATION (PO) OF HIV/AIDS AND TUBERCULOSIS CONTROL PROJECT**

OUTPUT 4. Information on HIV/TB generated by the project is utilised widely by majority of stake holders in planning and implementing programmes (i.e.. other donors, health workers, NGO s , schools, youth and communities)

ACTIVITIES		2001	2002	2003	2004	2005	2006	PERSON INCHARGE	IMPLEME-NTERS	EQUIPMENT/ MATERIALS	EXPECTED RESULTS INDICATORS
4-3	To hold dissemination meetings with MOH/CBoH on the activities of project at least twice a year	x	x x	x x	x x	x x	x	Project Manager	JICA Experts Counterparts CBoH MOH	Audio-visual equipment referred to 2-1	Number of participants, minutes produced and project information used in planning National policy
4-4	To organise sensitizing meetings for youth in community on VCT programme		Lusaka		Expantion			Project Manager	JICA Experts Counterparts PPAZ Boys scouts Girls scouts	Audio-visual equipment referred to 2-1	No. of participants No. of meetings in various area % of youth who go through VCT among meeting participant

Annex 5 **PLAN OF OPERATION (PO) OF HIV/AIDS AND TUBERCULOSIS CONTROL PROJECT**

OUTPUT 5. Collaboration with HIV/AIDS and TB Working Groups is institutionalised

ACTIVITIES		2001	2002	2003	2004	2005	2006	PERSON INCHARGE	IMPLEME-NTERS	EQUIPMENT/ MATERIALS	EXPECTED RESULTS INDICATORS
5	Project staff both Japanese and Zambian get officially appointed and actively involved in various Technical working groups (VCT, MTCT, TB and Vaccine and treatment)	←	—	—	—	—	→	Project Manager	JICA Experts Counterparts Tech. W.G.		Project staff are officially appointed Number of meeting attended, minutes, report and minutes form technical working group