



Zambia Tuberculosis Program

Stop TB Strategic Plan

Implementation Update

2008 to 2012

**Revised and updated during the preparation
of the Global Fund Round 7 Application
(June 2007)**

1/22

Current draft 8th June 2007

Zambia Tuberculosis Program Stop TB Strategic Plan Implementation Update 2008 to 2012

Executive Summary

During the next five years the NTP will further raise political commitment, rehabilitate and improve the microscopy network infrastructure and coverage of the quality assurance system. The funding for quality drug supply for first and second line drugs and drugs for children will be secured. Programme management especially supervision and monitoring and evaluation will be strengthened with additional funds particularly for district and community activities. TB HIV ACHM and Human resource focal points will be appointed at national level and microscopists and provincial TB HIV coordinators will be funded. Diagnostic testing and counseling will be further promoted through health worker training and a Greenlight supported MDR TB treatment programme will commence. Private practitioners will be sensitized and trained for integrated TB activities in 5 pilot districts. Involvement of community and treatment supporters will be strengthened through training and supporting activities. Capacity building in district operational research will be enhanced with national training and district research. A funding gap of xxx million has been identified for the implementation of activities by three of the partners implementing this strategic plan namely the Churches Health Association of Zambia (CHAZ), the Zambian National Aids Network and the Zambian MoH. During the first two years all MoH activities (except the drug supply in year two) are fully funded mainly as a result of years 4 & 5 of Global Fund Round 1. while CHAZ and ZNAN require additional funding throughout the 5 years.

Note on methodology:

This document describes the proposed implementation of the Zambian Strategic Tuberculosis Plan between 2008 and 2012.

This document has been produced as a result of a 3 weeks of collaborative meetings between the National Tuberculosis Programme and its local and international partner organizations.

It is produced as part of the Global Fund Round 7 application and has involved the piloting the Stop TB strategy budgeting and planning tool developed by WHO and recommended by the Global Fund. Partners have planned jointly overall activities with detailed budgets to be conducted during the five years based on the components of the Stop TB Strategy. The detailed planned activities under each Service Delivery areas of the Stop TB Strategic Plan Component Objectives contain reference to the detailed budget to be found in the Zambian budgeting and planning tool. This reference incorporates the spreadsheet name and a budget item number. Eg to examine reference (Budget: ACSM 1.1.2), the reader would open the Budgeting and planning excel spreadsheet, set 'show sheet tabs' setting on and review the sheet called ACSM and look for budget activity 1.1.2. This allows for an easy linkage between budget and narrative text to be made.

Introduction and Background

Zambia has a population of 11.3 million people, of which 46.5% are under 15 years. Zambia's population is currently estimated at 11.3 million, comprising of approximately 50% males and 50% females. The country has one of the highest dependency ratios in the world and is also among the most urbanized countries in Sub-Saharan Africa, with approximately 38% of the population living in urban areas. Poverty levels have remained high, estimated at 67% in 2002. As a result of high levels of poverty, preventable and

treatable diseases have taken an enormous toll on the poor, increasing pressure on the already constrained health sector.

Structure:

Zambia is a multiparty democracy administratively divided into 9 provinces and 72 districts.



Economy:

Zambia's economy in the past has been reliant on copper mining and tobacco farming. The GDP of Zambia is * %. During the period from 2000 to 2004, the Zambian economy registered positive real growth at an average rate of 4.6% per year. The Governments. has made a commitment to progressively increase annual funding for the health sector from the current 11.5% of the budget to 15%.

Education: and literacy

The average national literacy rate in 2001-02 was estimated at 65.1% (ZDHS 2001-02). In all the age groups, literacy levels for

men were higher than for women. The total literacy level for men was 81.6%, against 60.6% for women. Literacy levels were also higher in urban areas (79% for women and 91% for men) than in rural areas (48% for women and 76% for men).

Health and development Indicators:

**Table 1
Selected Impact Indicators**

Indicator	2002
Infant Mortality Rate per 1,000	95
Under 5 Mortality Rate per 1,000	168
Maternal Mortality Ratio per 100,000	729
HIV Prevalence Rate (ESS)	19.0
HIV Prevalence Rate (ZDHS 2001-2)	15.6
Malaria Incidence Rate	388

Source: Zambia Demographic Health Survey 2001/02

Health care administration:

The main providers of health care services in Zambia include: public health facilities under MOH; facilities under the Ministry of Defence, including clinics and one hospital in Lusaka; clinics under the Ministry of Home Affairs; Mine hospitals and clinics; Mission hospitals and clinics, which are coordinated by the Churches Health Association of Zambia (CHAZ); Private hospitals and clinics; Non-Governmental Organizations (NGOs); and traditional healers.

Central Ministry of Health: Lusaka:

Health services are regulated and managed by the central Ministry of Health in Lusaka.

Provincial Health Offices (9)

These manage provincial and district health services and comprise of Provincial management teams including the following focal persons: Clinical care specialist: data manager; Enviromental Health officer: Pharmacy, Provincial Director: Laboratory manager:

District Health Offices (72)

These manage the health services in districts including hospitals and clinics. The staffing of these offices includes the TB focal point persons, Clinical care expert, Manager for planning & Dev. District, HMIS, District director for Health, Environmental Health, Pharmacy Manager, Administration and District laboratory person (around 10 people per team)

Health care institutions (table 2)

Zambia has **1327** health care institutions. Mainly government run these include:

Hospitals (97)

There are 97 hospitals which are organized in three levels

Peripheral 1st level hospitals (74) these are mainly district level hospitals. Of these there are 74 (of which 17 private and 21 mission) with an average staffing of 40 health care personnel. There are currently 19 districts without a level one referral hospital.

2nd level referral hospitals (18)

These are mainly provincial referral hospitals

There are 18 of these with approximate staffing of 100 health care personnel. Of these 6 are mission run.

3rd level referral hospitals (5) These consists of 5 hospitals with staffing of some 300 personnel each

Health centres (1210).

These fall broadly into two categories:

(i) rural health centres of which there are 973

Usually run by clinical officers, nurses and environmental health officers. The ideal staffing level is 5 per centre, though often actual staffing is more likely to be ~ 3/ centre. Of these health centres, 23 are private and 61 are missionary, and the rest government run.

(ii) urban health centres of which there are 237, much busier and with much higher staffing levels of around 40 / centre

Health Posts (20 established) and many additional ones operating 'under a tree'. This is the most peripheral community outreach level of the health system and Health posts are staffed by Traditional Birth Attendants, Community Health Worker and TB treatment supporter. These are not paid but receive training from the MoH. On average there are around 20 Health Posts per Health Centre and an estimated 24,000 community health outreach workers.

Table 2: Summary of Existing Health Facilities in Zambia

Source: CBoH, Health Institutions in Zambia: A Listing of Health Facilities According to Levels and Locations, 2002

Type/Level	GRZ	Mission	Private	Total
Hospitals	53	27	17	97
Health Centres	1,052	61	97	1,210
Health Posts	19	0	1	20
Total	1,124	88	115	1,327

Burden of Tuberculosis Disease

Each year it is estimated that some 55,000 people develop TB.

The incidence burden of all forms of TB in 2004 was estimated at 680/100,000, the 5th highest in Africa after Swaziland, South Africa, Namibia and Lesotho. Among the smear positive cases the male V female ratio was 1.26 in 2005 though in the 15 to 24 year age group and younger females predominated (55% of all cases) This

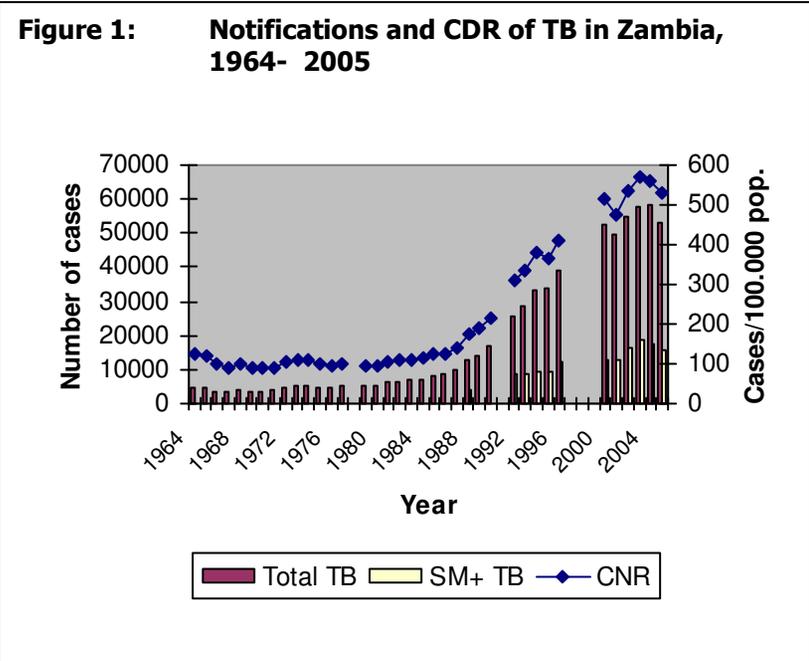
TB Deaths

The overall death ratio in new smear positive patients in the 2004 cohort was 8% and rates were only slightly higher in retreatment categories. It is estimated that amongst the 55,000 cases treated annually 4400 die. If one assumes that of the 15,000 undetected patients over half have HIV, then one can assume that overall over 10,000 people die of Tuberculosis in Zambia every year which is more than 1/1000.

Notified cases to the National Tuberculosis Control Program

(Performance on Case finding)

It appears that the case detection in Zambia is leveling off at 50,000 - 55,000 patients per year. The 2005 Case Detection Rate CDR for all forms of TB is 68% and 52% for Smear Positive TB. ZAMBART results from local prevalence studies indicate that in some areas TB prevalence is much higher than estimated by WHO, so it seems obvious that more cases can and should be detected. On the other hand the HIV prevalence in Zambia has been gradually declining since 1998 (from an estimated 16% prevalence in 1997 to 12% now) which should have its impact on the TB incidence which annual growth is expected to slow down and level off. Additionally the development and expansion of joint TB-HIV activities and the availability of ART to a growing number of patients are also expected to have an impact on TB case detection. In many patients immunity will improve with less chance to contract TB or reactivate an old infection. Furthermore an increasing number of HIV positive patients with a doubtful diagnosis of SSN PTB or EPTB, who were previously diagnosed (more easily) as TB and put on anti-TB treatment, will now be diagnosed as HIV related disease and put on ART and show no signs of TB. Again, related to the introduction of ART, it is expected that the fraction of SSN PTB and EPTB will decline with an increasing number of patients put on ART which should result in a gradual increase of the SSP PTB proportion in the future. The program notified a total of 51,179 TB patients in 2006. Among them were 14,025 new smear positive patients, 22,059 smear negative PTB patients, 9,841 EPTB patients and 5254 patients that were diagnosed any form of recurrent TB.



The decline of the fraction of smear positive cases to 30% in 2005 and 27% in 2006 follows an initial increase between 2001 and 2004 from 25% to 33%. (Figure 1) A possible reason of this disturbing decline of the fraction of sputum smear positive cases is that with the change of regimen of Category III (2RHZ/6EH) to a regimen that is the same as Category I (2RHZE/6EH), the stimulus to examine sputum has declined in several areas, especially where workload is high and manpower low. Other continuing problems that contribute to the low sputum positivity is the need of the program to decentralize laboratory services and to improve smear quality. The notification-trends of TB in Lusaka also show stabilisation and a drop in the proportion of smear positive TB in 2005 after three years of increase Table 3.

Table 3: TB Notification in Lusaka Province, 2000-2005

Cohort	All forms	New SS+ Proportion	New SS-	EPTB	Retreatment			
					SS+	SS-	Fail	Def
2005	17,601	4,185	8,780	2,883	512	1191	50	0
2004	16,420	5,141	6,372	3,191	856	1021	46	0
2003	17,324	5,274	6,775	3,403	715	1111	46	0
2002	18,680	4,272	8,879	3,909	613	826	41	80
2001 Retrospective	22,162	4,997	10,186	4,875	655	1281	76	92

Re-treatment cases

Since the re-introduction of registers and reporting forms in 2002, re-treatment cases are reported in three categories, sputum smear positive re-treatments, sputum smear negative re-treatments and those who failed initial category I treatment. After an initial rapid increase of re-treatment cases it appears that the numbers are stabilising with the exception of the decline in SS- retreatment cases in 2006. This could partly be the result of the introduction of ART as described above as this category of patients is likely to have a higher HIV prevalence. (Table 4)

Table 4: Different categories of re-treatment in 2002-2004 in Zambia

	SS+ re-treatment cases	SS- re-treatment cases	Failure of treatment	Cat. I
2006	1865	3292	97	
2005	1805	3476	215	
2004	2168	3669	437	
2003	2189	3389	308	
2002	1961	2157	198	

Trend analysis of Tuberculosis Cases in Zambia.

Performance on Case Holding

Case holding is the process by which patients with tuberculosis are treated with anti-tuberculosis drugs until they are cured. the cure rate is the percentage of pulmonary sputum smear positive cases started on treatment that are cured. In Zambia treatment success rates in 2004 were high, with 82% treatment success, and 69% new and relapse case detection rate, though only 53% if considering ss +ve case detection rate only. (Source: Global WHO TB Report 2006). TB and HIV . The estimated (WHO-TME) prevalence of HIV in TB patients in 2004 was 54%, though the NTP estimates this to be higher, between 60 and 80%, and initial data from the new national recording and reporting system (2006 first 3 quarters Southern province) bears this out with 69% of TB patients TB HIV co-infected finished their treatment and were cured. However with increasing proportion of patients tested it is expected that the prevalence of HIV estimated from routine testing in TB patients will decline.

MDR TB

Results of the 2000 TB Drug Resistance Survey indicate a prevalence of 1.8% multi-drug resistance. There has been no other survey since 2001. The planned survey in 2006 had to be postponed following the delay of the Global Fund round one second phase support. The DR survey is now planned to start in the second half of 2007.

Cohort data show a strong decline in failure cases among new smear positive and previously treated smear positive cases indicating that MDR is not an emerging problem (See Table 3). However, data from the Chest Disease Laboratory (National Reference Laboratory for Tuberculosis) in their Annual Report 2005 showed that 439 for resistant suspected isolates were tested for drug susceptibility using first line drugs. MDR-TB was documented in a total of 24 (22.9%) cases. Data from 2006 will be very soon available.

Approximately 50 patients with MDR have been registered and some of them are being treated (mainly at UTH).

The National TB Programme does not have access to quality second-line TB drugs because the country has not applied to the Green-light Committee of the TB partnership. Zambia is working on meeting the

requirements for management of MDR TB and will subsequently apply for second line drugs from Green-light Committee. These second line drugs are currently available in some private hospitals to a limited number of patients, e.g. those who can afford the costs. Although WHO treatment recommendations are provided to these facilities, there is urgent need to standardize the regimen and national treatment guidelines for MDR TB which can only be provided after the results of the MDR survey are known. Even though the numbers of patients are still low, inadequate treatment is a great danger for developing XDR, which in a country like Zambia with its high HIV prevalence is in the first a great threat to many of the HIV patients, secondly to the community at large.

Structure of the National Tuberculosis Control Program.

The Tuberculosis Program structure has a Program manager and a central unit staff of three people. Patients are assessed for TB in any of the 1327 health care units. All patients should be assessed for smear microscopy and smears are sent to one of the 156 laboratories. Smear positive patient treatment can be initiated at HC level. Smear negative suspects are sent to district hospital for clinical diagnosis and confirmation by a clinician. After diagnosis, treatment is initiated at health centre level, the basic management unit for tuberculosis. This is also where the registers are kept. All treatment is ambulatory, and hospital admission is only done on clinical grounds. Daily treatment is carried out under DOTS which is either observed at the health centre or by trained community treatment supporters/relatives.

The estimated number of health care workers involved in TB care is **21,525** of which **7180** are in Hospitals 1st,(74 units with 40 staff per unit), 2nd (18 units, 100 staff per unit), 3rd (5 units, staff 100 per unit), **14,345** are based in Health Centres (1210 health centres, of which **4,865** are in 973 rural health centres (5/centre) and **9,480** are in 237 urban

The Tuberculosis Programme adopted the DOTS strategy in 1994 and operates according to guidelines laid down in the National Tuberculosis Control Manual (3 edition 2006)

Laboratory diagnosis of TB is carried out at one of 156 laboratories. Culture facilities exist at 2 sites in Lusaka (UTH, Chest Diseases Laboratory and one at TDRC (Tropical Disease Research Centre) in Ndola Copper belt.. The Lusaka laboratories are also responsible for carrying out quality assurance of smear microscopy throughout the country. Currently only panel testing Quality Assurance is carried out for the Tuberculosis program. Routine first line drug sensitivity testing is also available at the three central laboratories. These currently do not have an external DST quality assurance programme with a supranational laboratory, though there has been collaboration with the (?) MRC laboratory South Africa. Reagents and materials for TB diagnosis are provided from Central Medical Stores Ltd to the laboratories.

Drugs for the Tuberculosis Program are purchased centrally (from abroad) by the National Tuberculosis Programme through the Global Drug Facility (GDF), and provided on an annual basis (with buffer stock) to Hospitals and clinics. The drugs and district/BHU buffer stocks are worked out on previous caseload basis, and ensure that there are no stock outs of TB drugs at any level.

Monitoring and evaluation of the program takes place at national level using the quarterly reports compiled at provincial level from the consolidation of district and health central reports. The corner stone of the reporting is the outcome cohort analysis, and the smear conversion rates at 2 months. The data is compiled in annual reports and sent to the WHO for its global data-base. Currently there are technical review meetings at national provincial and district level and regular external reviews of the program.

Main Partners in Tuberculosis control	
Partner	Area
GAFTM	Funding through NTP and partners ,Dots expansion Nationwide 5 yr funding
CDC	TB-HIV in Southern, Western and Eastern Province. Support the National Reference laboratory CDL and TDRL laboratory in Ndola.
CIDRZ	n TB-HIV activities and operational research. The TB-HIV projects are focussing on Lusaka.
JICA	Laboratory support to the TB program TB-HIV care services in two districts (Chongwe and Mumbwa)
CIDA-KNCV	National and provincial monitoring and coordination of the TB program and provides technical assistance.
FHI/JATA/WHO/TBCAP	A project in 5 provinces Luapula, Copperbelt Northern and Eastern and North Western provinces with cascade training in TB and TB/HIV, DCT etc. JATA started training TDRL and provincial laboratory staff in EQA etc. The activities focus on DOTS expansion, TB-HIV, capacity building and strengthening of laboratory network
FHI/ZPCT	ZPCT is a local NGO supported by FHI and PEPFAR funds that conduct HIV/AIDS and TB/HIV services in the 5 Northern provinces since May 2005.
MSF	Is involved in HIV/AIDS activities in several districts and is combining this with TB/HIV
WHO	WHO provides technical support, and capacity building
ZAMBART	ZAMSTAR project, TB reduction study in 16 sites in Zambia, Provide Technical Assistance

Goal of the National Tuberculosis Control Program of Zambia

The overall goal of the National TB Program is:

" to reduce the mortality, morbidity and socio-economic burden associated with TB in the Zambian population by 2011"

The National Tuberculosis programme has developed 5 priority objectives which will assist in reaching these goals.

These objectives are consistent with the Stop TB strategy. This Global Fund application will employ the Stop TB Strategy Budgeting and Planning tool. For the purposes of planning and linking the

narrative with the budgets in the tool, the objectives (Components) and the Service Delivery Areas (**SDA**) of the Stop TB Strategy as laid out in table 1. have been used.

Thus for the purpose of this strategic plan implementation, the structure of the narrative will follow the component area objectives, and Service Delivery Areas of the Stop TB strategy. Reference will be made to the linkage with the NTP priority objectives listed below.

Table 1 STOP TB STRATEGY COMPONENTS/OBJECTIVES AND SERVICE DELIVERY AREAS

SERVICE DELIVERY AREAS

COMPONENT 1: Pursue high quality DOTS expansion and enhancement

- 1.1 Political commitment
- 1.2 Quality assured bacteriology
- 1.3/5.3 Standardized treatment, with supervision and patient support
- 1.4 An effective drug supply and management system
- 1.5.1 M&E, including impact assessment
- 1.5.2 Programme management and supervision activities
- 1.5.3 Human Resources

COMPONENT 2: Address TB/HIV, MDR and other challenges

- 2.1 TB/HIV
- 2.2 Management of MDR-TB
- 2.3 TB control for prisoners, refugees and other high-risk groups and situations

COMPONENT 3: Contribute to health system strengthening

- 3.1 Actively participate in efforts to improve system-wide policy, human resources, financing, management, service delivery, and information systems
- 3.2 Share innovations that strengthen systems, including the Practical Approach to Lung Health (PAL)
- 3.3 Adapt innovations from other fields

COMPONENT 4: Engage all care providers

- 4.1/4.2 PPM, including ISTC

COMPONENT 5: Empower people with TB and communities

- 5.1 ACSM
- 5.2 Community TB care
- 5.3/1.3 Patients' charter for TB care

COMPONENT 6: Enable and promote research

- 6.1 Programme-based operational research

Objectives of the National Tuberculosis Control Programme:

Objective 1: Strengthen the management of TB in all provinces and districts by 2011 in order to achieve the Global targets for TB control (detection of 70% of smear positive cases and cure rates of 85% of the detected smear positive cases) and prevent the development of MDR TB. **(Component 1.2 to 1.5.3 and 2.2 could also include 4.1 PPM)**

Objective 2: Develop and implement TB and HIV coordinated activities in order to reduce the burden of both diseases in co-infected individuals. **(Component 2.1)**

Objective 3: Support and strengthen the health system for effective TB control and management with a focus on infrastructure strengthening, efficient supply chain management for drugs/laboratory and supplies and human resource capacity. **(Component 1.2 to 1.5.3)**

Objective 4: Develop and implement a health promotion strategy for TB control **(Component 1.1 and 5.1-5.3)**

Objective 5: Strengthen the capacity for operational research within the TB program. **(Component 6.1)**

STOP TB STRATEGY OBJECTIVES:

Objective 1: Pursue high quality DOTS expansion and enhancement.

SDA 1.1 Political commitment

The level of government support to the TB programme is high, and has been instrumental in attracting international funding, and partner support. It is planned that during the next five years Zambia will declare a TB emergency. Events such as World TB day will be used as a platform to maximize TB advocacy. The NTP will provide funds for provincial and district level to support locally planned campaigns. (Budget ACSM 5.1.1)

As part of Community TB Care a national and local radio and TV mass media campaign is planned during the next five years (Budget ACSM 1.1.1). In addition World TB day events at national provincial and district level have been supported by Global Fund round 1 and it is proposed to continue this support with the current grant. (Budget: ACSM 1.1.2). CHAZ is planning to conduct WTBD activities in 120 faith based communities and budget for this activity is requested throughout the five year period. **(Budget ACSM1.1.2)** A TB partnership is proposed at national level building on the TB/HIV partnership model which has emerged at national level during the last few years. Political commitment will be strengthened by the ACSM strategy described in **SDA 5.1**. Political Commitment at local level will be enhanced through the community training and review activities of the Community Tuberculosis Care component **SDA 5.2**

SDA 1.2 Quality assured bacteriology

Microscopy laboratories infrastructure and rehabilitation:

Laboratory has been identified as one of the weakest links in the TB programme. In the coming years the responsibility of the

laboratory network will only increase with growing attention to EQA and routine drug resistance surveillance.

In order to address the low smear positivity rates in the country, and low access to microscopy services, some renovation of laboratory infrastructure is planned. During the next five years the laboratory network will renovate some 44 diagnostic centres, mainly in rural areas, and repair and upgrade 80 others so that the current level of 156 laboratories will increase to 200 active laboratories with improved facilities by the year 2011. This will improve the ratio of laboratory to population from 1 per 70,000 to 1 per 50,000. (Budget Lab 1.2.1).

The existing laboratory network (156 labs) according to an external quality assurance on-site evaluation report in 2006, in need of upgrading and repair and we have allocated a budget for 16 labs to be rehabilitated per year over the funding period. (Budget: Lab R 34)

Fluorescent microscopy is used in 3 high volume workload laboratories and it is planned to provide one additional microscope for Western region during the next five years. (Budget Lab 1.2.4).

In addition new technology light emitting diode (LED) microscopes are now available to provide better resolution smear microscopy, which allows more sensitive diagnosis of larger volumes of larger volumes of slides. It is planned to introduce these gradually to Zambia during the next five year period at the rate of 10 per year (Budget Lab 1.2.4) in high volume microscopy centres. In addition the need for replacement microscopes (10 year life span of average microscope) has been calculated at 15 microscopes per year. (Budget lab 1.2.4). Training for LED microscopes will be incorporated into the routine laboratory training programme.

In addition in the 156 existing laboratories we are budgeting for a small equipment, maintenance/ repair budget (200US/yr), to avoid microscopes being out of use for minor reasons (Budget: Lab 1.2.4)

Laboratory reagents smear and culture

Routine smear (Budget lab 1.2.5) supplies are provided by the NTP. Requirements are calculated using previous and projected case

finding data multiplied by average smears needed per patient and TB suspects per patient identified. The number of cultures to be conducted in the three central laboratories is set to double (from 6000 to 11,000 over the funding period, to facilitate 2 cultures for every treatment failure and re-treatment case annually (approximately 5500 cases/annum) and cultures. (Budget: lab 1.2.6)

The 3 culture facilities in the country are sufficient to handle the proposed workload, though additional funding for DST facility upgrade and cultures and a PCR machine and 2 gene probe apparatuses (Budget Lab 1.2.8) is requested. This includes a maintenance budget (Budget : lab 1.2.9) Drug Sensitivity Testing will be conducted on all culture positive TB cases, and this will be accompanied by local training for DST (Budget : lab 1.2.21) Both Midget and traditional culture methods are running in parallel in all three reference laboratories. This is a continuation and extension of round one supported activities and is in preparation for testing patients to be enrolled on the MDR TB Pilot project that is planned during the next five years (see SDA 2.2) It is planned to establish regular supranational 1st line DST quality assurance mechanisms with a Supranational Ref Lab (MRC Pretoria, South Africa). This requires funds for sample transportation which will be funded through this grant (Budget : lab 1.2.16) There is no need to fund transport for EQA panel checking for district laboratories as these are taken during supervision visits. The transportation of samples from the peripheral laboratory centres to one of the central laboratories will be facilitated by transportation (motorbikes) made available at district level through the global round one funds. However the provision of specimen courier boxes will facilitate the safer transportation of sputum for smear and culture (Budget lab: 1.2.16).

Laboratory training activities

Annual routine training activities for the laboratory service include 4 national routine smear microscopy trainings for 25 participants each (Budget: lab 1.2.19). 4 routine EQA trainings for the same number of participants (Budget lab 1.2.20), and 1 national routine training in culture and DST for 20 participants (Budget lab 1.2.21) are planned. These were not included in the training activities of GF round one and lack routine government funding. Currently these are

carried out as and when other donor funds become available. At this moment some of these are funded up to 2007.

Training of new microscopists.

There are not enough trained laboratory technicians to adequately staff peripheral laboratories. Supervisory visits have demonstrated that this understaffing results in smear microscopy not being carried out during temporary absences of laboratory technicians working on their own. Every year there are about 40 new laboratory technicians trained and half of these do not end up in the government sector. Using GF round one funding a training curriculum was developed for basic training of health staff with school leaving certificate in TB smear microscopy. This was piloted and evaluated with QA panel testing by the Zambart Project (supported by the London School of Hygiene and Tropical Medicine) and Lusaka District Health Management Team (DHMT). The conclusion was that this training was feasible and could help to address the personnel shortage. The plan is to train about 50 people a year from 2008 onwards. Currently these posts are only available using existing health staff government salaries. In the first year of this plan, half of these will come from staff already working in the government health system and the other half (25) will be recruited with funds from this proposal (see SDA 5.1.2). The numbers employed under this grant will gradually increase up to 100 microscopists. These will be employed to strengthen the peripheral laboratories under the supervision of laboratory technicians.

. It is planned to use GF money to train (Budget:Lab 1.2.18) and then employ (Budget staff R1.5.3.3.) these additional staff to address this critical issue. The NTP will work towards convincing the MoH to absorb the funding of this cadre of staff within in next 5 years.

Laboratory Supervision/ Quality assurance activities:

Much attention needs to be paid to this during the coming years and to facilitate this three workshops to initiate and implement a solid integrated supervisory system of the laboratory network. Will be held in 2008 and again for revision in 2011. (Budget lab 1.2.12)

Supervision for EQA: recent reviews of the NTP have commented on the lack of EQA at peripheral laboratory level linked to lack of funding for this activity. Currently other donors PEPFAR and TBCAP in particular have supported the supervision from national to provincial and some provincial to district level in their areas of operation. The NTP would like to conduct regular quarterly EQA supervisory visits from national to 8 provinces (32 visits) (Budget lab 1.2.13), quarterly provincial to district (Budget lab 1.2.14) and quarterly district to health centre laboratory level (Budget lab 1.2.15). The NTP would like to conduct this activity in a regular funded manner over the next five years and is thus seeking support from the Global fund to fill the funding gap.

International training/ conferences

in order for the central unit and provincial staff to update their knowledge and share best practice experiences, it is proposed to budget for 2 people attending a one week international training event per year. This has not been budgeted for before. (Budget lab 1.2.22)

Computerisation:

It is planned to conduct upgrading of information transfer and recording in 81 (72 district and 9 provincial) laboratories. With the more regular use of culture and DST testing for retreatment and treatment failures, it is anticipated that a computerized data management system in the laboratories handling referrals would be of benefit. There is PEPFAR money available to support internet connectivity of the laboratory network and support with appropriate software. During the next five years the programme will use the computers procured by the national programme for every district (See SDA 1.5.2) to improve the R&R system in an integrated manner.

SDA 1.3 Standardized treatment, with supervision and patient support

The treatment of TB is given according to standardized guidelines observing the DOTS strategy, and with quality assured single source

centrally purchased drugs and reagents. Supervision of patients is carried out at health centres and with the collaboration of some of the 25,000 trained treatment supporters and family support networks. The programme intends to strengthen patient supervision and support through the **Service delivery area Community TB Care 5.2.**

SDA 1.4 An effective drug supply and management system

The Zambian MoH policy is to provide TB drugs free of charge at the point of delivery. The drug supply system is based on the WHO demand led 'pull' model, where a supply based on the number of patients registered in the previous quarter and a 3 months buffer stock is calculated and put in place at provincial and district level. At health centre level one months buffer-stock is kept in place.

Zambia has a standardized regimen based on WHO recommendations, has recently switched to fixed dose combination drugs, and is planning to introduce RH regimen in the continuation phase for all new first line patients in 2008.

Zambia has had problems in the past in securing funding for its national drug requirements. These have been addressed with a Global Drug Facility three year grant which is coming to an end in 2007. Funding for the national drug supply, both drugs costs and transportation to Zambia is not secured from 2008 onwards and it is proposed that this should be funded through this grant. (Budget drugs 1.4.1, 1.4.2). The costing assumptions are based on reaching 70% case finding by 2010 and a carriage cost that is 20% of total drug cost. The government takes care of storage and distribution within Zambia.

SDA 1.5.1 M&E, including impact assessment

The routine monitoring and evaluation system has been set up and the routine review meetings, printing of registers, and supervision are covered financially and activity wise through the Programme

Management and supervisory activities. (see SDA 1.5.2 and Budget Pgr Mng Sup)

With the support of the Global Fund, CDC and other partners, the recording and reporting forms were redesigned to incorporate more information including TB HIV related activities. A national drug resistance survey is planned and has been funded for 2007. TB HIV prevalence is assessed through routine testing of all TB patients as part of programmatic activities. There is a plan to conduct a further national drug resistance survey in 2011 measuring the impact of the MDR strategy presented in this plan. (Budget M&E. 1.5.1.1).

In addition the next national review (with international participants) of the program is planned for 2010 in time for the preparation of the next strategic plan. (2011-2015) (Budget M&E 1.5.1.5). Further meetings to discuss and review the data management system are planned in the first years of the funding period and further district trainings in the management of the revised system. (Budget M&E 1.5.1.2. and 1.5.1.3). The M&E self assessment tool of the Global fund was piloted in Zambia in March 2007 and the three principal recipients are currently in the process to finalize an updated M&E system with GF support. (Budget M&E 1.5.1.4).

This M&E budget does not reach the 10% of all activity costs that that the Global Fund recommends, as the routine review meetings and supervision activities are the backbone of the M&E system and are budgeted under Programme management and supervision activities SDA: 1.5.2.

SDA 1.5.2 Programme management and supervision activities

The backbone of the TB programme is its management and supervisory system which incorporates a cascade of review meetings at all levels. As HIV activities have been incorporated as part of routine management and supervision, these activities now include TB/HIV in their title. Thus only new innovative initiatives are now planned and budgeted as specific TB/ HIV activities in **SDA 2.1.**

National level:

TB Review meetings:

These 5 day meetings are currently held once per year.

50 Participants are drawn from the 9 provincial health offices (focal persons), some selected district focal persons and other stake holders. The objective of the meeting is to compile data from the provinces and share experiences and information; these are currently funded through CHAZ, TBCAP, CDC, WHO and the Government of the Republic of Zambia.

Planned: They are proving to be very useful and we plan to hold these meetings 2 times a year to further improve quality and timeliness of data analysis. The first meeting focuses on half year activities and the second meeting focuses on the annual reports. (Budget PGM MngSP 1.5.2.4.)

**TB/HIV National Coordinating body
(Budget: PGM Mng sp 1.5.2.3)**

This interagency advisory body to the Ministry of Health oversees national collaboration on TB/HIV issues. This body meets at one day meetings which are planned to be held quarterly, but due to limited resources are held on an ad hoc basis. The participants are drawn from the Ministry of Health, National AIDS Council, bilateral partners, non governmental organizations and community based organizations. National guidelines on TB HIV were developed by this body. The body is in the process of helping the provinces to establish similar bodies. Currently the meetings are funded alternatively by CDC, CHAZ, TBCAP, ZAMBART and the Government of the Republic of Zambia (GRZ). It is planned that these meetings should be held quarterly with funds from this Global Fund Grant.

Provincial level:**TB review meetings:**

These review meetings which planned to be held quarterly at 9 provincial offices, are between managers of the TB programme at district provincial and hospital levels. The objective of these meetings are the same as the national ones. The funding for these meetings has come mainly through KNCV and TBCAP (in the area where it operates) with some contributions from, CHAZ and GRZ.

The level of funding for these meetings is usually not sufficient and the principal funder's funding is not secured beyond 2007. In order to ensure that these vital review meetings occur the funding gap needs to be filled. (Budget: PGM Mng sp 1.5.2.3)

District level**TB/HIV coordinating meetings.**

(Budget PgmMngSup 1.5.6)

These 3 day meetings are held in a few districts when funding is made available from partners or GRZ. The objective of this meeting is to review, analyze and compile data from the health facilities in the district. 30 participants are drawn from health facilities, NGOs, CBOs and FBOs in the districts. These meetings should be held quarterly in every district. At this moment the funding from the major donors does not cover these meetings and it proposed to secure funding for these for the next five years.

Community level:**TB/HIV Co-coordinating body.**

The Zambian NTP has encouraged community involvement in TB control through the training of treatment supporters. Neighborhood health committees are attached to health centres. Monthly health centre level meetings are planned to promote community involvement in case finding and case holding, and to provide support for unpaid community service workers. This is a new activity and currently not funded. The output is to improve quality of TB case holding and to strengthen community involvement in TB control. It is proposed to fund these meetings using GF resources. This is budgeted for under the CTBC component (Budget CTBC 5.2.7)

Supervision**National to Provincial:**

In addition Supervision plays a pivotal role in the management of the TB program. Supervision from the National level to the 9 provinces is planned to be carried out twice in the year. (Budget PgmMngSup 1.5 13) From 9 Provinces to 72 districts 4 times a year (Budget PgmMngSup 1.5. 14) and from district (72) to health facility

level monthly (Budget PgmMngSup 1.5.15). Program staff are given training on site and strengths, weaknesses, threats and opportunities are identified during these visits. Regular supervisory funding is planned for in this five year plan.

Health facility to community

The health facility level is supervising the community based activities being implemented by Neighborhood Health committees, Faith and Community Based Organizations. This supervision is ideally supposed to be done monthly. However, some health facilities do not implement this activity due to lack of transport, financial resources and other logistics. Twice monthly supervision visits to all community based activities by the health facility in that catchment area are planned for in this plan. (Budget: PgmMngSup 1.5.16)

Training Institution curricula update:

The NTP would like to ensure that the trainings conducted by the health professional training institutions explain the Stop TB strategy and DOTs public health approach and will hold a series of 3 stakeholder workshops during which the curricula would be updated Budget (PgMngSup 1.5.2.2)

Manuals and reporting and recording card production

In order to support reporting and recording, monitoring and evaluation activities, the annual printing and distribution of treatment cards, patient ID cards, registers for treatment, laboratory and TB suspect registers is a recurrent activity(Budget PgmMngSup 1.5.2 8 to 12).

The Tuberculosis Manual. The current revision of the TB manual has been sponsored by GF round 1 money. It is anticipated that by 2011 a further revision will be carried out. This revision of the TB manual (Budget: PgmMngSup1.5.2.1) will be followed by manual production in 2012 (Budget: PgmMngSup 1.5.2.7). TB manual revisions are included in the annual routine refresher trainings planned and thus do not require additional training initiatives.

The programme will computerize its reporting and recording system in the coming years and will supply one computer per district in 2008 and again in 2011 (as computers have an expected three year lifespan). These will be used by the district TB coordinators and Laboratory staff to record TB related data, and also will be shared with the DHMT for general health services use. (Budget PgmMmSup 1.5.2.17).

Transportation support

The NTP will support the strengthening of the transportation systems in the provinces and districts. In order to do this cars, motorcycles and boats will be purchased as replacements of some of the ageing fleet. In addition a regular maintenance budget of vehicles is budgeted for. (Budget PgmMngSup 1.5.2.20-21)

SDA 1.5.3 Human Resources (*staff and training*)

1. Staffing:

Staff salaries are calculated on the assumption that while employed on fixed term contracts, staff will otherwise have similar terms and conditions as MoH staff with certain terminal incentives to take account of the fixed term nature of their employment.

TB/HIV Focal Persons: Staffing at the National TB Program of 3 in the Ministry of health is small and the MoH plans to increase this to 6. The work load is high and requires more staff. The TB/HIV co-infection has also added more work on the NTP. It is estimated that about 70% of TB patients are co-infected with HIV. Centers for Disease Control and Prevention (CDC) will support placement of a TB/HIV Focal person in NTP at National level (Budget: Staff 1.5.3.7). In order to further promote integrated TB/HIV activities at provincial level it is planned to provide all provinces with TB/ HIV focal points and funding is sought for this. (Budget: staff 1.5.3.1) **xx** Both CHAZ and ZNAN have their own TB officers, and continued funding for these positions is required (**Budget: Staff 1.5.3.5.a & b**)(three of the four CHAZ officers were already funded under GF round 1)

Microscopists: the programme plans to employ a proportion of the trained microscopists per year (Budget: staff 1.5.3.3). This will be staggered as shown in the budget. Their functions and training is described in SDA 1.2 Quality assured bacteriology.

TB Programme Officer for CHAZ and ZNAN: TB programme officers for CHAZ and ZNAN the principal partners in this TB application will be employed during the next five years **(Budget Staff 1.5.3.5)**.

Human Resource Development (HDR) Coordinator

This additional focal point will be recruited in 2007 and funding is secured until the end of 2008 through CIDA. Initially this is seen as a temporary post which will be used to design and implement a TB Human resource development strategy. **(Budget: staff 1.5.3.6)**

Support to ACSM: There will be increased focus on Advocacy, Communication and Social Mobilization as a very important component in TB control. The messages that are being used as at present are developed from different sources by different partners. The NTP will appoint a focal person who will have ACSM as part of their portfolio. This focal person will coordinate these activities and develop an ACSM strategy. This will not be an additional position and will not have staff salary cost implications.

PPM focal point:

The NTP and the private sector will select a focal point for PPM activities. This person will receive some reimbursement from the NTP for the services to tuberculosis control rendered. **(Budget staff 1.5.3.1)**

ACSM Specialist: Advocacy, Communication and Social Mobilization is a very important component in TB control. The messages that are being used as at present are developed from different sources by different partners. A focal person at the NTP is

proposed to coordinate these activities and develop an ACSM strategy. **(Budget staff 1.5.3.2)**

2. Training:

With the introduction of the stop TB strategy, the aim is to re-train 100 provincial level trainers in DOTS management from 2008 to 2012. In 2008, 50 staff will be trained. 25 will be trained in 2009 and in 2010, taking into account the new Stop TB Strategy.

(Budget training 1.5.3.1) From 2008 to 2012, 500 district and health centre level staff will be newly trained in the revised WHO DOTS modules. **(Budget training 1.5.3.2)**

In service trainings of staff in the current WHO DOTS modules will continue for provincial level and district and health centre level staff. A total of 3125 health workers will be trained over the 5 year period. **(Budget Training 1.5.3.3)**

International trainings.

2 Provincial/District TB focal persons will be sent for training in Arusha, Tanzania annually for the TB/HIV/Leprosy training from 2008 to 2012. **(Budget training 1.5.3.4)**

Training activities of other service delivery areas are budgeted for under these areas .See Lab (1.2) ; OR (6.1) ; CTBC (5.2) ; TB/HIV (2.1); and MDR (2.2)

Technical assistance from international partners in support of the programme is fully funded by these partners. In this proposal this is assessed on the basis of 12 visits per year, 4 from TBCAP, 3 from KNCV/CIDA, 3 from WHO, and 2 from CDC. These have been recorded in the TA section (Budget:TA 5.3.1.1)

Objective 2: Address TB/HIV, MDR and other challenges

SDA 2.1 TB/HIV

Recent achievements of the TB HIV collaborative activities include:

(i) a National TB/HIV steering committee established and functioning with a TB/HIV guidelines prepared and the first 2,000 copies printed.

(ii) A training manual for diagnostic counseling and testing (DCT) prepared, printed and in use. This has been used for the training of 55 trainers in DCT, and subsequent training of 775 health staff. The national TB recording and reporting forms have been revised and distributed, and districts have started reporting TB/HIV activities. Lay counselors have been trained in some districts. TB screening for HIV infected individuals is occurring but not as yet routine.

In terms of funding, TB/HIV related diagnostic kits and HIV drug treatment and care is provided and managed by the HIV/AIDS Programme. Supervisory and monitoring/evaluation activities are incorporated in general DOTS (SDA 1.5.1-3) All these activities have been renamed TB/HIV activities in the recognition of the mainstreaming of this within the TB programme.

DCT is an activity of TB HIV collaboration that is in the process of being scaled up to all districts. This activity is supported by MoH and US-G funds. In the next five year period it is proposed to continue intensified training of health care workers in DCT.

The total number of health care workers involved in TB care are estimated at 21,525 and the plan is to provide training for half of these (13848) during the next five years. This will include 50% of staff in hospitals (3090) and 75% of staff in health centres (10,758). This is an average of 2,769 each year rounded up to 2700/year and will 108 trainings with 25 participants in each training each year. (Budget HIV 2.1.1). This activity is fully funded by PEPFAR, TB-CAP, and WHO contributions. The US G funds provide additional support for a full range of collaborative TB HIV activities which are not reflected in the direct TB program activities. Total funding for TB HIV activities in 2007 from PEPFAR amounted to 8.1 million.

The community volunteers are being trained as part of the CTBC activities, (SDA 5.2)

SDA 2.2 Management of MDR-TB

The management of MDR-TB is currently mainly carried out within the general health sector but without a specific program or guidelines from the NTP. It is estimated that around 50 patients were diagnosed with MDR TB throughout Zambia in government facilities in 2006. Only a few patients who were able to pay for their own drugs have started treatment. Drugs are not centrally purchased and DST testing is not quality assured by a supranational laboratory at this moment.

Zambia wants to develop a NTP led, and Green Light Committee approved MDR treatment program. In order to achieve this Zambia will:

(i) develop quality assurance links for DST with the MRC laboratory South Africa (one of 22 WHO recognized supranational laboratories). A budget for DST testing and transport of samples to South Africa has been developed. (SDA 1.2)

This accreditation is the cornerstone which is a precondition for an MDR TB program with drug provided through the Green light committee and funded by the Global Fund.

This process is likely to take some time and in the meantime the programme will start developing national guidelines and will start training clinicians and other health care workers in proper MDR management. At the same time the results of the latest Drug Resistance survey will inform the NTP of the local DST resistance patterns to first and second line drugs. This will eventually inform the choice of drugs for a standardized second-line regimen.

US 50,000 per year have been set aside for Green Light support costs.

International training of 14 clinicians and 40 lab technicians in management of MDR TB will take place over the 5 year period (Budget MDR 2.2.3 & 2.2.4). These trainings are staggered so that 5 clinicians will be trained in the first year. These will also act as resource persons for the development of the MDR TB manual and as members of the therapeutic committee that will oversee the project.

A detailed Manual for the treatment of MDR patients with a standardized treatment protocol will be worked out by a national MDR TB therapeutic committee with the input from a technical

expert, and the Green light committee, and this consultant will also facilitate the writing of the application to the Greenlight committee once the DST quality assurance issues have been successfully addressed (Budget MDR 2.2.8). Further technical assistance will be required to examine appropriate infection control measures and housing for MDR patients who may be hospitalized. This budget item which is for 69,000 US (Budget MDR 2.2.9.& 2.2.7) will also be utilized for initial infection control activities resulting out of the advice these consultancies.

With Green light approval, training of Health workers on the NTP MDR guidelines will commence (Budget MDR 2.2.5) and both second line drugs (Budget MDR 2.2.1) and side effect drugs (Budget MDR2.2.6) will be purchased. We have calculated the drug cost on the Peru estimate provided by the WHO budgeting and planning tool. The NTP has not yet chosen its preferred second line regimen. For monitoring and evaluation purposes a computer will be purchased, though a manual system for recording and reporting, based on a central MDR TB register will also be funded (Budget MDR 2.2.10).

SDA 2.3 TB control for prisoners, refugees and other high-risk groups and situations

There are not specific advocacy activities targeting refugees or prisoners. However prisons have health centres and these are supplied from the NTP through the districts with drugs and laboratory supplies, registers and forms. The health workers report back to and participate in district reviews. Prison clinics are supervised by the district TB programme. Likewise the UNHCR has refugee camps in Zambia. These are supplied with TB drugs and registers by the programme through the districts.

The camps have no laboratory facilities. TB/HIV activities are weak both in camps and in prisons with difficulty in accessing ARVs. At this moment there are no special activities planned by the TB program beyond these integrated activities.

Objective 3: *Contribute to health system strengthening*

SDA 3.1 *Actively participate in efforts to improve system wide policy human resources, financing management service delivery and information systems.*

The Zambian TB programme has very few TB specific workers, and can only operate through the use of the integrated primary health care system adopting a decentralized public health approach. Thus all inputs at and beyond the district level strengthen the role of generic health workers in health centers and hospitals throughout the country. The Laboratories rehabilitated supported by the TB programme also are used for general diagnosis. The programme supports 25,000 community volunteers who are also used in the other programmes of the health sector. HIV testing introduced in many health facilities throughout the country as part of the TB/HIV collaborative activities, is part of strengthening the health systems ability to provide comprehensive health care services.

Objective 4: *Engage all care providers*

SDA 4.1 PPM

Zambia has some 432 private practitioners (including doctors pharmacists and other health care professionals) registered with the General Medical Council (Source Government Gazette March 2006) The NTP has started the process of developing a situation analysis and the development of guidelines and an operational plan. The NTP

will hold regular national level advocacy meetings with Medical Council, professional, and corporate bodies to inform and discuss the developments in the PPM initiative. and (Budget PPM 4.1.1) these will support the development of guidelines and the implementation plans for DOTS/TB/HIV activities in the private sector. These meetings will be held annually in the presence of an international expert, who support the development and review of this. Operational guidelines will be printed for distribution to regional health staff and private practitioners during training (Budget PPM 4.1.3)

The NTP will negotiate contracts with private practitioners which will commit both sides to certain responsibilities. This usually will include the NTP providing the drugs, training for staff recording and reporting equipment including the TB register , supervision and data review meetings free of charge on the one hand and on the other a commitment from the practitioners to participate in reporting, recording and supervisory activities as well as not charging for the items provided for free by the NTP.

It is proposed to develop demonstration areas in urban areas with a higher concentration of private practitioners such as Lusaka and the Copperbelt. In the provinces containing these districts and within the districts local sensitization meetings will be held annually. (Budget PPM 4.1.2). These will be followed by training of private sector clinicians, nurses, pharmacists and laboratory assistants in these districts (Budget PPM 4.1.4 and 5)

The private sector clinics will be provided with TB registers recording and reporting forms, drugs and laboratory reagents as required, and the personnell will be supervised by the NTP and encouraged to participate in the review meetings of the NTP at local level. After initial training in DOTS/TB /HIV the private practitioners will be able to attend the routine trainings of the NTP.

The PPM is currently supported by Global Fund Round one and by Zambia TB CAP. This will need some funds to enable continuation of the project beyond current funding..

The International Standards of TB care document will be given for endorsement to the relevant professional bodies (Doctors

nurses pharmacists, laboratory, private practitioners etc). The programme will then develop a summarized version to be printed and distributed to all health care providers. 4 meetings with separate professional bodies half day . 20 people (lunch 15 dollars trans).

Objective 5: ***Empower people with TB and communities***

SDA 5.1 ACSM

The NTP will develop a national ACSM strategy and liaise between the partners in this process. It will appoint a focal person within the central unit to coordinate and manage the ACSM component.

The creation of a TB partnership along the lines of the TB /HIV working group will be encouraged. The ACSM focal point will be responsible for developing and distributing advocacy materials including an annual TB report card for World TB Day and engaging the media. A half day training of journalists in tuberculosis control will be carried out annually just prior to World TB day. This will serve to maximize the coverage of World TB day events. (Budget ACSM 1.1.3). The NTP has budgeted for World TB day with devolved budgets to provincial and district levels (Budget ACSM 1.1.2). The ACSM focal point will be responsible for coordinating between the national and local level and ensuring that the events of the day are captured in word and in pictures in an annual world TB day events report which will be distributed nationally and globally to the Stop TB Partnership at WHO. The ACSM focal point will engage with theatre and sports personalities to seek their endorsements and appearance in the planned radio and TV advocacy activities (ACSM 1.1)

The programme will develop and disseminate a leaflet with the Patients charter to be distributed to all health care provider and community supporters. (100,000 leaflets per year) (Budget ACSM 1.1.4)

SDA 5.2 Community TB care

Service delivery area: CTBC

Zambia has developed a manual for treatment supporter training. ToT has occurred and the NTP has started to train community volunteers and former TB patients using GF round 1 and partner sources. Advocacy packages for community involvement have been developed and stakeholder meetings to initiate scaling up of activities are taking place. It is planned that during the next five years there will be scale up of this training effort.

Training of TB treatment supporters in DOTS counselling, MDR TB and TB HIV.

Community participation in TB control is in line with the WHO New Stop TB Strategy, under the component 'Empower people with TB and community'. Issues of stigma, TB/HIV and poor adherence to treatment among TB patients need to be addressed in order to prevent defaulting, MDR and improve TB treatment outcomes. The recommended DOT plan for TB patients in the intensive phase of treatment in Zambia is VCR. V represents treatment observation by a volunteer, C represents treatment observation by clinic staff and R is treatment observation by relatives to patients. Community treatment supporters are volunteers that are identified by the community and the local health unit staff. Their roles include: Community DOT/adherence support, behavioural change communication, patient follow-up and referral of TB suspects/patients to the health centres. Community Based and Faith Based Organizations also support TB control. Some training for treatment supporters in DOTS have been done by the MOH, CHAZ and ZNAN. Global Fund round 1 supported the training of a cumulative total of 2334 treatment supporters in 87 church health institutions/Faith Based Organisations and MoH.

It is planned to build on this it is planned that 6780 will be trained during the coming five year period the importance of DOTS MDR and TB/HIV in annual district based trainings (budget CTBC 5.2.2)

Training in income Generating Activities:

These are activities that health units staff and the community support groups identify in order to generate livelihood support for TB patients and families. Profit generated from IGA is used to support TB patients in their immediate physical and nutritional needs. However

TB patients and families are encouraged to work for their own livelihood except where it is extremely difficult for them to do so. Income generation is mainly community based and it is proving to be a motivating factor for community volunteers as well as patients. CHAZ has trained 209 community support groups in IGAs. ZNAN has intentions of beginning IGA implementation. Health workers are trained in business identification, market research, inventory and record keeping. Documentation and reporting are emphasized for accountability purposes.

140 health workers per year will be trained in IGAs: Income Generating Activities (IGAs). (Budget CTBC 5.2.3)

400 TB treatment supporters per year will be trained in IGAs: Groups of at least 10 members each are identified for training in IGA implementation. So that 80 groups a year will be trained (Budget : CTBC:5.2.4)

Training of volunteers in the dissemination of BCC materials (behavioural change communication). Under the previous GF round 1 we have revised national BCC materials, and have trained health workers, treatment supporters media people and local drama groups. The plan is to train a further 250 volunteers a year (district level training) throughout the country. (Budget :CTBC 5.2.5)

Advocacy Communication and Social Mobilisation Community:

Local radio programmes produced and aired: Programmes will be produced and aired at local radio stations in local languages. Apparently, local radio stations are community based and the audience is community.(Budget ACSM 5.1.1)

Community enablers / direct support:

Revolving funds for investment: The IGA is a community revolving fund which is meant to support the sustainability of community based TB control. Guidelines have been developed for IGA implementation. The revolving fund is usually provided to the mobilized and trained community support groups for investment. CHAZ has 209 community treatment support groups trained and active in implementing IGAs. ZNAN has not implemented IGAs in the past. MOH is implementing IGAs in 72 districts. The plan for the

next five years is to give 80 community groups per year (402) 1500 US seed money for revolving fund activities. (Budget CTBC 5.2.6) In addition 230 trained Treatment supporters a year will be issued with bicycles as a regular incentive alternative. (CTBC 5.2.6)

Local supervision/ support meetings:

Quarterly community meetings at health centre level (1333) will be supported to facilitate networking, community involvement and training for treatment supporters, and community and faith based organizations. Traditional healers will be encouraged to become treatment supporters as they are very influential in health at community level. A quarterly supervisory visit to treatment supporters from the health centres is also planned (Budget CTBC 5.2.7)

SDA 5.3/1.3 Patients’ charter for TB care

The patients charter for TB care will inform the ACSM campaigns that will be organized on World TB day and as part of the ACSM strategy. See under SDA 5.1 ACSM

Objective 6: Enable and promote research

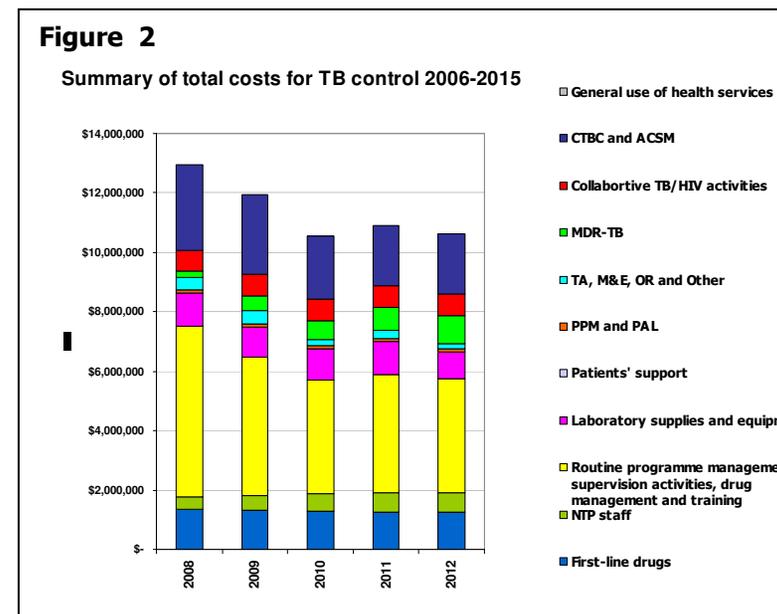
SDA 6.1 Programme-based operational research

The plan for the next 5 years is to strengthen the capacity of the districts to carry out operational research at field level. In addition links with academic research institutions will be strengthened. Initially it is proposed to sensitize representatives of all provinces during national review meetings to this strategy and encourage district participation in the promotion of operational research. Districts will be invited to provide a declaration of interest in being involved with research activities, after which 5 districts will be chosen each year by a national review committee to participate in

further training for OR. This will consist of three training workshops in proposal development, data analysis and report writing. (Budget OR 6.3-6.6) The five districts will be provided with funds up to 10,000 dollars each to conduct an approved operational research to be carried out within one year. (Budget OR 6.1) During this time they will be mentored by visiting research consultants from the University of Zambia, and TDRC (tropical disease research centre) (Budget OR 6.2 . This cycle will be repeated annually.

Funding of the five year plan.

This five year plan has been costed in detail and all epidemiological and supply assumptions are provided along with the detailed budget sheets and the summary sheet. The total budget is \$ 57,012,513 and the component parts over the five years is shown in the graph below . (Figure 2)



The annual amount of money available from local sources is shown in the summary sheet below and this amounts to 56% of the needed resources. The balance is the funding Gap which the NTP needs to find from an external donor to be able to fund this program of activities. This is estimated to be \$ 24,959,034 over 5 years. See Table 5 and Figure 3.

Figure 3

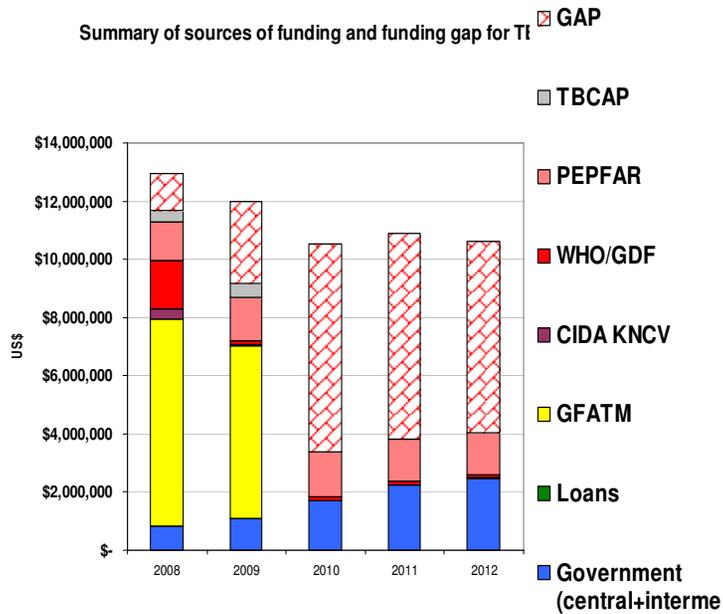


TABLE 5

Summary of funding sources and funding gap							
US: Total costs for TB control	\$ 12,964,961	\$ 11,962,158	\$ 10,551,783	\$ 10,899,734	\$ 10,633,878	\$ 57,012,513	
Government, central / national	\$ 567,017	\$ 635,605	\$ 800,000	\$ 920,000	\$ 950,000	\$ 3,872,622	
Government, intermediate / provincial	\$ 70,000	\$ 100,000	\$ 350,000	\$ 600,000	\$ 700,000	\$ 1,820,000	
Government, local / district	\$ 200,000	\$ 350,000	\$ 550,000	\$ 700,000	\$ 800,000	\$ 2,600,000	
Loans	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
GFATM	\$ 7,092,214	\$ 5,914,864	\$ -	\$ -	\$ -	\$ 13,007,078	
Other Grants CIDA KNCV	\$ 372,835	\$ 80,865	\$ 30,000	\$ 30,000	\$ 30,000	\$ 543,620	
WHO/GDF	\$ 1,860,096	\$ 109,500	\$ 99,500	\$ 99,500	\$ 99,500	\$ 2,068,096	
USG	\$ 1,329,289	\$ 1,516,494	\$ 1,537,360	\$ 1,463,360	\$ 1,479,560	\$ 7,326,063	
TBCAP	\$ 367,900	\$ 447,900	\$ -	\$ -	\$ -	\$ 815,800	
GAP TOTAL	\$ 1,305,609	\$ 2,806,810	\$ 7,184,923	\$ 7,086,874	\$ 6,574,818	\$ 24,959,034	

NOTE: The salary costs of health care workers and additional general health budget costs have not been attributed to the costs to treat TB. Thus the estimate of government contribution to the fight against Tuberculosis in this document is actually quite an under estimate. What is calculated here are specific TB costs made available to the NTCP and all drugs and laboratory recurrent supplies which are being covered by Domestic MoH sources.

Global Fund Round 7:

The application to the Global Fund Round 7 has been prepared by all the partners involved in TB control and requests funding for three principal recipients: MoH, CHAZ ZNAN. In the first year only CHAZ and ZNAN require funding for their CTBC and ACSM activities. In the second year drug needs of the Programme are also requested and thereafter the request is to fund the gap of all three partners. (Figure 4)

Figure 4

