

ASIAM PROPOSAL FOR ROUND 7 OF THE GLOBAL FUND

	From	To
Month and year:	10/2008	09/2013

4.2 Disease specific component executive summary

4.2.1 Executive summary

This proposal is based on an up-dated analysis of the programmatic and financial needs of the National Tuberculosis (TB) Program in Asiam, which is guided by the findings and recommendations of the Joint Program Review of the National TB Program in Asiam (August/September 2006).

In line with the Joint Program Review and the National Health Strategic Plan for TB control in Asiam (2006-2010), this proposal aims to address the following challenges and needs:

- The Strategic Plan for TB Laboratories identifies the need to upgrade and further strengthen the National TB Program's laboratory facilities and services of the National Reference Laboratory (NRL) and of the 190 laboratories at provincial and district level. This Round 7 proposal aims to support the implementation of the strategic plan and will provide for the testing and diagnosis of approximately 245,000 suspected TB cases each year.
- This proposal will allow the National TB Program to secure the supply of first-line TB drugs for a period of four years, ensuring treatment of approximately 35,000 TB patients each year.
- In line with the National TB Program's strategy to engage NGOs and community level volunteers and to provide DOTS at the community level, this proposal aims to support the implementation of the Community DOTS strategy in 41 Operational Districts and 461 Health Centers. It is estimated that almost 30,000 TB patient with limited access to health facilities will benefit from this proposal.
- This proposal will support the National TB Program's efforts to scale-up TB/HIV collaborative activities to all 77 Operational Health Districts in the country. Activities include training of TB staff, providing TB screening for people living with HIV/AIDS (PLHA), and supporting the referral of TB patients to voluntary HIV counseling and testing (VCT) sites. TB/HIV collaborative activities supported by this Round 7 proposal will reach more than 28,000 TB patients to be tested for HIV in year five.
- The number of suspected MDR-TB cases is expected to increase. This Round 7 proposal aims to support the National TB Program to provide adequate diagnostic services for suspected MDR-TB cases and prompt and effective treatment for detected MDR-TB cases. A growing number of suspected MDR-TB cases (reaching 1,225 in year 5) will be covered by this proposal.

This proposal will be implemented by the National Centre for Tuberculosis Control, ten national and international NGOs and one civil society organization (Asiam Anti-Tuberculosis Association – AATA).

The **goal** of the proposed program is ***to reduce morbidity and mortality due to tuberculosis and in line with the Asiam Millennium Development Goals and the Stop TB Strategy.***

The proposed program includes three main objectives:

Objective 1: To ensure high quality Tuberculosis services nation-wide

This objective focuses on the key services *case detection, diagnosis* and *treatment*, and includes the strengthening of laboratory services, procurement of anti-tuberculosis drugs, and ACSM (Advocacy, Communication and Social Mobilization).

The National TB Program will strengthen laboratory services at national level as well as in the provinces and districts. Activities included are training of laboratory staff, quality control of TB microscopy, and the procurement and replacement of laboratory equipment.

The National TB Program will procure first-line TB drugs for the first four years of the proposed program and second-line drugs for the full duration (five years) of the proposed program. At the moment, first-line drugs are procured under GFATM Round 5, which will provide drugs for three years (procurement in years 2007 to 2009)

The National TB Program also proposes the development, production, and dissemination of various IEC (Information, Education and Communication) messages, through radio and TV spots, printed materials (posters, leaflets, calendars) and printed t-shirts.

Objective 2: To expand close-to-patient DOTS services

This objective focuses on the key service *Community DOTS* and aims to provide community based DOTS services to those with limited access to facility (TB Units and Health Centres) based DOTS.

Community DOTS is planned to be implemented by ten non-governmental organizations (NGOs) and one civil society organization in 41 Operational Health Districts and covering 461 Health Centres throughout the country. Community DOTS provides TB treatment in the communities, together with support for and close supervision of the patients by community members (DOTS watchers).

The implementation of Community DOTS includes a wide-range of activities, such as training of Health Centre staff and DOTS watchers, support to poor patients to help them to access TB services, community based health education, and close supervision and regular follow-up of TB patients.

Furthermore, the National TB Program plans to initiate PPM-DOTS in garment factories and to strengthen the collaboration with the military health services.

Objective 3: To address emerging priorities, including TB/HIV and MDR-TB

This objective focuses on the key services *TB-HIV* and *MDR-TB* and aims to promote referral of registered TB patients for HIV counseling and testing, and to develop and provide MDR-TB services in Asiam.

TB/HIV activities are aimed at strengthening TB/HIV collaboration at provincial and district levels, including managerial capacity of National TB Program staff through several activities, such as training, quarterly meetings, supervision, annual workshops, study visits (to observe and learn best practices), and health education (ACSM).

As part of the proposed Community DOTS activities, NGO partners plan to provide support to eligible TB patients (taking into consideration poverty and distance) in the form of travel costs and to help them to access HIV counseling and testing services. In addition, the NGOs will conduct TB/HIV health education at community level through audio-visual presentations and dissemination of leaflets and posters.

At the moment, Asiam has very limited MDR-TB services. The only services available are in the form of a pilot project implemented by an NGO. This proposal aims to build the capacity of the National TB Program to provide MDR-TB services in three selected sites in the country and to provide MDR-TB treatment to a growing number of patients.

4.3 National program context for this component

4.3.2 Epidemiological and disease-specific background

Table 4.3.2 – Estimated disease prevalence within key population groups

Population	Estimated number	Year of estimate	Source of estimate
(i) Total Population (all ages)	13,096,838	2005	Population Projection by the National Institute of Statistics, and based on Inter-Censal Population Survey Report (2004)
(ii) Current estimates on the stage of the disease in the following population groups:			
People living with all forms of tuberculosis	92,065	2005	WHO Report 2007 Global TB Control (prevalence for the year 2005: 703/100,000); Population Projection by the National Institute of Statistics
People with new smear-positive tuberculosis	29,599	2005	WHO Report 2007 Global TB Control (incidence for the year 2005: 226/100,000); Population Projection by the National Institute of Statistics
People treated for new smear-positive tuberculosis	21,001	2005	TB information system, and as reported in the WHO Report 2007 Global TB Control
Tuberculosis related deaths per year	11,394	2005	WHO Report 2007 Global TB Control (mortality rate for the year 2005: 87/100,000); Population Projection by the National Institute of Statistics
Number of cases of multi-drug resistance per year	104	2005	TB information system (3.1% of 1,306 re-treated cases plus 0.3% of the estimated new ss+ cases in 2005)
Case detection rate of new smear-positive cases	70%	2005	TB information system (using population from Asian Inter-Censal Population Survey 2004)
DOTS treatment success rate	92%	2004	WHO Report 2007 Global Tuberculosis Control (2004 cohort of new smear positive pulmonary TB cases)

4.3.3 Disease-prevention and control initiatives and broader development frameworks

The overall responsibility for the National TB Program lies with and prevention and control strategies as described in the *National Health Strategic Plan for Tuberculosis Control 2006-2010* (May 2006) are in line with the Global Plan to Stop TB and the Regional Strategic Plan to Stop TB in the Western Pacific.

The long-term objective of the National TB Program is to reduce the prevalence of TB and deaths due to TB, contributing to reaching the Millennium Development Goals (MDGs) by 2015. The Program's medium-term objectives are (i) to ensure equity and access to quality TB services and (ii) to maintain a high cure rate of more than 85% and a case detection rate of over 70% during the period 2006-2010.

Prevention and Control Strategies

The strategies of the NTP are to strengthen both institutional capacity and human resources at various levels of service provision, increase accessibility to TB services (HC-DOTS and Community DOTS), enhance diagnostic services and improve the drug management system, in order to provide quality DOTS and control the spread of TB. The NTP has an effective monitoring and evaluation system combined with regular supervision from central, provincial and district levels and an efficient recording and reporting system which is in line with WHO guidelines.

Specific strategies (PPM-DOTS) have been developed and piloted to include the private health sector and other government health facilities (military & police) to increase case detection (>70%) and maintain high cure rates (>85%). To mitigate the impact of HIV on TB, TB/HIV collaborative activities have been carried out in 33 ODs to address co-infection. Furthermore, isoniazid preventive therapy (IPT) is being provided at selected facilities for PLWHA who do not have TB.

As part of the preventive activities, health education on infection control is given to providers and patients, while waste disposal is included in the training of health workers. Through ACSM activities, TB awareness campaigns have been periodically carried out in remote villages, prisons, garment factories and schools. The policy of the NTP is to focus on early detection of TB, prompt treatment (DOTS) and efficient defaulter tracing to reduce the transmission of tuberculosis in the community. More than 20,000 village health support group members (VHSG) have been trained as DOTS supporters to assist case finding, treatment compliance and contact tracing.

In addition, the NTP promotes BCG vaccination according to the national immunization programme strategies. The NTP is planning to provide chemoprophylaxis to target groups such as children under five years who are TB contacts.

Provision of quality TB services

The main strategy of the National TB Program is to implement DOTS at all levels of the public health system. DOTS was introduced in 1994 with technical assistance of WHO and between 1994 and 1998 DOTS became available in 69 provincial and district level referral hospitals and in 76 Health Centres that were former district hospitals. Ambulatory DOTS in Health Centres started in 1999 and the expansion of DOTS was completed by the end of 2004 when all functioning Health Centres were able to provide ambulatory DOTS, including the referral of patients (or transportation of smear specimens), contact tracing, and tracing of defaulters.

At the moment, DOTS services are available in five national hospitals, 69 provincial and district level referral hospitals and in all functioning Health Centres (943) and Health Posts (47).

Diagnosis

TB suspects are identified in the out-patient clinics of Referral Hospitals and Health Centres, while diagnosis by microscopy is performed in 190 TB laboratories. The National TB Reference Laboratory (NRL – part of) is responsible for training, quality assurance and supervision, and culture and drug sensitivity testing (DST). The latter is in conjunction with the Supra National Reference Laboratory (SRL) in Japan.

External Quality Assurance (EQA) of TB microscopy by re-checking of slides is currently performed by the NRL and two other regional centres. As part of the GFATM Round 5 program, cross-checking of slides will be expanded to two additional centers, which will bring the total to five centres

Quality microscopy requires upgrading of the NRL and of the two existing regional laboratories to strengthen their role in training, supervision and EQA. Furthermore, the peripheral laboratory network needs improvement through regular training and supervision of the laboratory technicians, improved equipment and supplies, replacement of old microscopes, and improved infection control measures. This Round 7 proposal plans to upgrade two regional laboratories for training, EQA and culture. This will be done in collaboration with technical support provided by Tuberculosis Control Assistance Program (TB CAP).

The National TB Program also plans to improve the capacity to diagnose smear negative pulmonary TB and extra-pulmonary cases (including in children and PLHA) through better access to X-Ray services. Under Round 7, the National TB Program plans to screen 40,000 TB suspects by X-Ray per year and to train hospital staff (in 50 out of 69 district and provincial Referral Hospitals) in X-Ray reading.

Community DOTS (C-DOTS)

Community DOTS is basically defined as the provision of directly observed treatment to TB patients that have very limited access to the Health Centres (due to distance and/or their physical condition) with the active participation of community volunteers.

One of the main objectives of the National TB Program is to expand Community DOTS to cover more than 80% of all health centres by the end of 2010. During the first quarter of 2007, Community DOTS was available in 493 Health Centres (51% of all Health Centres), including 54 Health Centres supported under Round 2 and 122 Health Centres covered under Round 5.

This Round 7 proposal aims to scale-up Community DOTS by starting its implementation in 342 additional Health Centres. Furthermore, this proposal also supports the continuation of Community DOTS in 119 Health Centres that are already implementing C-DOTS. Round 7 is expected to bring progressively the coverage of Community DOTS to more than 80% of all Health Centres.

The primary beneficiaries of Community DOTS are the TB patients living far from the Health Centres and those with limited access due to illness, old age, or disability.

The Community DOTS package includes training and re-training of Health Centre staff, training of Community DOTS supporters and DOTS watchers, support for the transportation of slides to the nearest microscopy unit, and community visits by Health Centre staff with the aim to supervise DOTS watchers, check contacts and trace defaulters.

TB-HIV

In response to the high TB-HIV burden in the country (ten percent of TB patients were HIV positive in 2005 – HIV Sero-Prevalence Survey Amongst TB Patients), the Ministry of Health has endorsed the Standard Operating Procedures (SOP) for prompt testing of TB-HIV and rapid access to treatment and care services (2006). The SOP has clarified and further strengthened the collaboration between the National TB Program and the National Centre for HIV/AIDS, Dermatology and Sexually Transmitted Diseases (NCHADS). It provides guidance on prompt HIV testing for all TB patients and TB screening of PLHA in order to provide care and treatment services in a timely manner.

The SOP outlines three options to increase the access to VCCT and OI/ART sites for TB patients, namely:

Option-1: TB patients referred to the nearest VCCT for HIV testing should be provided with transportation costs

Option-2: Health Centers with capacity to provide pre-test and post-test counseling could draw blood samples from TB patients and send specimens to the nearest VCCT laboratory.

Option-3: Mobile teams from VCCT could visit HCs where TB patients have been group-counseled and provide pre-test counseling, offer rapid testing and post-counseling in collaboration with home-based teams (HBC).

While TB services have been expanded to the health centre level and also into the communities, the VCCTs and OI/ART sites are mostly located at the district referral hospitals. Transportation costs, among other factors, also hinder the referral of TB patients for HIV testing. At all OI/ART sites, TB screening is routinely carried out before ART initiation. In 2006, the detection of PLHA diagnosed with TB (at baseline) varied from 29% to 54% across sites.

TB-HIV services are now available in 33 Operational Health Districts. With support of GFATM Round 5 funding, the National TB Program and NCHADS are in the process of scaling-up TB/HIV and CoC services including Provider Initiated Counseling and Testing (PICT) with the aim to have these services available in 50 Operational Health Districts by the end of 2010. In 2006, collected TB-HIV related information from 11,156 TB patients. Of the 9,870 TB cases with unknown HIV status (the remaining 1,286 were known to be HIV positive), 3,547 cases underwent HIV testing, which resulted in 342 new co-infected patients identified and referred to HIV/AIDS services.

Most of the NGO partners supporting the implementation of Community DOTS are also supporting TB-HIV/AIDS activities. In most cases, this consists of providing support to poor TB patients to facilitate referral to the nearest health facility that provides HIV counseling and testing, while some NGO partners are also involved in prevention and in continuum of care (including home based care) for PLHA. Referral systems for TB patients will be strengthened with the support of TB-CAP to selected Operational Health Districts that are not covered under the GFATM Round 5.

As DOTS coverage is 100%, this Round 7 proposal supports the scaling-up of TB-HIV to all (77) Operational Health Districts by end of 2012. This includes support for specific TB/HIV collaborative activities, such as training, supervision, M&E, health education, the provision of X-Ray films for TB

screening of PLHA, and financial support to patients for referral to voluntary counseling and testing (VCT) sites.

MDR-TB

The DRS, conducted in Asiam in the year 2000, did not find MDR-TB among newly notified cases, while in previously treated TB cases MDR-TB was 3.1 % (WHO/IUATLD Global Project on Anti-Tuberculosis Drug Resistance Surveillance – 2001)

ACSM activities

The National TB Program Strategic Plan 2006-2010 contains several strategies and activities related to advocacy, communication and social mobilization for TB control in Asiam. This includes:

- Collaboration with the National Committee Against Tuberculosis
- Inter-agency Coordination Committee (ICC)
- The production of health education materials, such as posters, leaflets, video, and dissemination of messages through various media. The main messages are that TB is curable and that treatment is free of charge
- Special events are organized at all levels (central, provincial and district) for World TB day

All NGO partners implementing Community DOTS also support ACSM activities at community level. Activities include the adaptation and dissemination of health education messages to their respective target groups, the development of peer education involving former TB patients, and encouraging local authorities and community members to facilitate communication between the communities and the Health Centres.

PPM

In 2005, a special committee for PPM at central level (consisting of and technical partners) was established to review and finalize the PPM strategy, implementation plans, the training materials, recording/reporting format and IEC materials, etc. The PPM-DOTS strategy was to be implemented in two phases:

Phase One - Referral of TB suspects from private to public health facilities, and

Phase Two - Provision of diagnostic/treatment services at private health facilities.

In August 2005, the PPM-DOTS pilot project was implemented by PATH (with USAID funding) and JICA in two ODs at The capital and later expanded to two more ODs in 2006, which included 328 pharmacies, 56 cabinets, 21 Health Centers, one Referral Hospital and five other hospitals. Currently, PATH with continued funding support from USAID has expanded PPM-DOTS to five more provinces, which includes, an additional 238 registered pharmacies in the private sector, 212 DOTS health centers and 13 Referral Hospitals in the public sector.

PPM-DOTS was piloted by URC in August 2005 and URC is currently supporting PPM-DOTS in five Operational Health Districts, which involves 92 Health Centers, five Referral Hospitals, 304 health staff and includes 292 private health facilities and 343 private providers. It is planned to further expand PPM-DOTS to four more Operational Health Districts in three provinces.

As part of the PPM-DOTS activities supported by TB CAP, the International Standard of TB Care (ISTC) will be translated into Asiam language and disseminated through orientation meetings on ISTC for Medical and Pharmacist associations. In addition, JATA will support operational research to implement DOTS by private health providers in the capital.

The National TB Program's Partners in TB control implementation

NTP has developed and maintained long-lasting partnerships with various bi-lateral and multi-lateral organizations, as well as with a growing number of NGOs. Technical assistance has been provided by WHO since the start of DOTS in 1994, while JICA started its support in mid-1999, which is presently in its second (and final) stage and will come to an end during the second half of 2009.

The World Bank provided a soft loan to the National TB Program for five years from 1998 to 2002, which included financial assistance for infrastructure and recurrent cost, and technical assistance for the last two years of the project. The project was extended in the form of grant-aid for a further five years (2003-07) through the multi-donor funded and Ministry of Health managed Health Sector Support Program (HSSP).

Other partners are USAID (technical and financial support for TB-HIV activities, Community DOTS through NGOs, and PPM-DOTS through PATH and URC), CDC (TB-HIV in one province and assistance to NRL), the WFP (food supplementation for TB patients), and several NGO partners.

GFATM support to the National TB Program started with the approval of the Round 2 TB component. Implementation started in January 2004, with a focus on expanding case detection activities at Health Centre level and scaling-up Community DOTS, improving knowledge about TB through health education and TB awareness campaigns, and capacity building for the National TB Program and its staff at central and provincial levels. Implementation of Round 5 started in November 2006 and included strengthening the quality of TB services (including the supply of TB drugs and building technical and managerial capacity of the National TB Program), further scaling up of Community DOTS, and TB-HIV. .

National Strategic Development Plan 2006-2010

The National Social Development Plan (NSDP) 2006-2010 is the single and overarching document containing the Royal Government's priority goals and strategies to reduce poverty rapidly, and to achieve other Asiam Millennium Development Goals (CMDGs) and socio-economic development goals for the benefit of all Asiamns

The NSDP recognizes that the health sector has a crucial part to play in poverty reduction and that the absence of good health is both a cause and consequence of poverty. The NSDP acknowledges the successes in terms of increased TB detection and cure rates, but also states that the (prevalence and incidence) rates continue to be among the highest in the region.

Asiam Millennium Development Goals

The Asiam Millennium Development Goals (CMDGs) Report (2003) includes a section on Tuberculosis under Goal 6; Combat HIV/AIDS, Malaria, and Other Diseases. The report identifies four strategies to overcome the main challenges to TB control in Asiam:

- Increased funding and more efficient use of existing resources
- Capacity building for staff at all levels, especially in planning, management and implementation of DOTS
- Expanding DOTS to reach the community level
- IEC campaigns for the general population on proper TB prevention, detection and treatment.

In line with above strategy, the policy of the National TB Program has been to ensure that DOTS will be "pro-poor" by providing "free of charge" services. Furthermore the increased accessibility of TB services through the expansion of DOTS to the Health Centres and the communities reduces direct and opportunity costs for patients, thereby removing important barriers for the poor to access DOTS. The prevalence of TB in the communities can be further reduced, which is expected to contribute significantly to increasing economic productivity.

The current Round 7 proposal will increase access to DOTS for rural and remote populations, as well as co-infected populations (TB with HIV/AIDS). This proposal will build on work initiated through funding obtained in GFATM Rounds 2 and 5, as well as on existing partnerships.

Health Systems Strengthening Strategy

In August 2002, the Ministry of Health launched the Health Sector Strategic Plan 2003-07, which envisaged a Sector-Wide Management (SWiM) approach for the health sector in Asiam. The Strategic Plan stresses the priority of prevention and control of communicable diseases (including TB) and identifies strategies to strengthen the management of cost effective interventions to control communicable diseases.

Furthermore, the Strategic Plan includes several strategies to overcome the main constraints to further development of the health sector, including human resource development, health financing, and quality improvement. These strategies also apply to specific health programs such as the National TB Program and hence, form the basis on which the National Program's own Strategic Plan has been developed.

Global Plan to Stop TB (2006-2015)

The Global Plan to Stop TB (2006-2015) clearly sets out the activities to achieve the Stop TB Partnership's global targets of halving TB prevalence and mortality by 2015. It is also in line with the Millennium Development Goals to reduce the incidence of TB ("*having halted... and begun to reverse the*

incidence of TB”).

The goal of the National TB Program as stated in the National Strategic Plan for TB Control in Asiam (2006-2010) is to reduce morbidity and mortality due to tuberculosis in line with the CMDGs, the Global Stop TB Plan (2006-2015) and the Strategic Plan to Stop TB in the Western Pacific (2006-2010).

The objectives of this proposal (as listed below) are closely linked to the above strategies:

- To ensure high quality TB services nationwide
- To expand close-to-patient DOTS services
- To address emerging priorities including TB/HIV and MDR-TB

(c) Describe how this proposal seeks to: (1) use, to the extent that they exist, country systems for planning and budgeting, procurement and supply management, monitoring and evaluation and auditing; and (2) achieve greater harmonization and alignment of partners to country cycles in regard to procedures for reporting, budgeting, financial management and procurement.

Asiam secured GFATM Round 5 funding in support of Ministry of Health planning and budgeting and procurement and supply management systems. It should be noted that this proposal seeks to use the same Ministry of Health systems.

The National TB Program already prepares its Annual Operational Plan (AOP) and budget in line with the Ministry of Health annual planning and budgeting framework and as described in the Ministry of Health Planning Manual.

The main characteristics of the Ministry of Health planning system are a joint planning process and comprehensive plans. With respect to the National TB Program, this means that annual plans are developed together with the main partners and that all available resources (as provided by different donors) are planned in connection with each other and in an effort to improve effectiveness and efficiency and to avoid overlap and gaps.

The National TB Program has developed and put in place its own disease specific monitoring and evaluation system, which generates the necessary program specific information regarding implementation and the achievement of program targets. In line with the Ministry of Health planning system, the National TB Program uses the available data to monitor progress in implementing its Annual Operational Plan on a quarterly basis (quarterly review meetings) and to evaluate the achievement of objectives and specific targets at the end of each year (annual performance review).

The procurement and supply management of pharmaceuticals and other health products is coordinated by the Ministry of Health (MoH), with involvement of , the MoH Department of Drugs and Food (DDF), the MoH Department of Finance, and the Central Medical Stores (CMS).

Procurement under current GFATM funded programs is carried out by the Principal Recipient (PR), in consultation with . The MoH, in collaboration with , DDF and CMS, is responsible for procurement policies and systems, issues related to international and national laws on patents, and quality assurance and quality control. Product selection, forecasting, procurement and planning, inventory management, distribution to other stores and end-users and ensuring rational drug use, is the shared responsibility of PR/MoH, and the CMS.

Procurement of all first- and second-line anti-tuberculosis drugs under this Round 7 proposal will be carried out by as the proposed PR. This Round 7 proposal makes provisions for direct procurement of anti-tuberculosis drugs and laboratory supplies from the Global TB Drug Facility (GDF).

The NTP and its partners are currently already aligned to existing cycles and procedures concerning planning and budgeting, financial management, reporting and procurement. When approved, the implementation of the current proposal will also be in line with these existing cycles and procedures.

4.3.4 National health system

The Health Sector Strategic Plan (2003-07) of the Ministry of Health identifies the organizational and financial reforms that were initiated in the second half of the 1990s as critical achievements, which provide the necessary basis for current efforts to further strengthen the national health system and to provide more and better quality health services for the population.

Organizational reforms included the rational planning of the number and location of public health facilities based on population covered and access (distance) to health facilities. In addition, the package of service

provided at each level of the health system was defined clearly, training modules for each package of services were developed, and training programs were developed and implemented. These efforts went hand in hand with considerable investments in the renovation of existing health facilities and construction of new facilities.

The result is a public health system that includes 69 provincial and district level Referral Hospitals, 966 Health Centres, and 79 Health Posts, which reaches into the most remote and sparsely populated areas in the country. This network has made it possible for the Ministry of Health to scale-up the provision of basic health services throughout the country and to accomplish successes such as the elimination of polio (Asiam was declared polio-free in 2001). The network of public health services also plays an important role in TB control and it should be mentioned here that by the end of 2004 all functioning Health Centres were able to provide DOTS.

Financial reform started with the 1997 Health Financing Charter, which allowed public health facilities for the first time to levy official charges for services in order to regulate unofficial payments, to increase funding, and to reduce household (out-of-pocket) health expenditures. This was followed with other initiatives such as health equity funds, which aim to protect the poor against the disastrous effect of health expenditures, and the present piloting of community health insurance schemes.

Several critical issues still need to be resolved, such as the limited resource availability (also in terms of the quality of available human resources), limited management capacity, demand-side issues, and the uncontrolled growth of a largely unregulated private health sector:

- (i) The lack of qualified staff (especially in remote areas) and the low level of salaries for public health staff are often identified as the most critical factors that limit the effective delivery of health services.
- (ii) Despite gradual increases in the national health budget and attempts to increase budget access through various fiscal and financial reforms, the health sector remains under-funded and dependent on external support (estimated at 35% of the planned health investments for 2007).
- (iii) One of the main challenges is to ensure that available resources (human and financial) are allocated equitably and managed adequately in order to guarantee their most effective and efficient use (value for money).
- (iv) Demand-side issues to be tackled include working on an improved understanding by the general public of appropriate, good quality and fairly priced health services. However, this also includes the need to build the public's trust in health services and to improve their perception of the quality of services provided.
- (v) There is a need to strengthen regulation in order to ensure good quality health services and to reduce common malpractices. This is especially true for the often un-trained providers in the informal private sector (e.g. drug sellers, etc.), who are often the first line of care, but provide poor quality services at relatively high costs.

(b) Describe the national priorities in addressing these constraints.

The Health Sector Strategic Plan 2003-07 identifies 20 strategies that are grouped according to key areas of work. Health service delivery has a central place in the strategic plan, while the other five key areas of work aim to support the achievement of health service delivery outcomes (i.e. improved coverage, increased utilization especially by the poor, reduction of prevalence rates of communicable diseases, increased availability of supplies and functioning equipment, and an effective referral system).

- (i) Behavioral change strategies aim to enable consumers to make decisions that promote healthy lifestyles and appropriate health seeking behavior and to empower consumers to interact with other stakeholders in the development of quality health services. This key area of work also aims to improve health providers' behavior and to improve communication between providers and consumers.
- (ii) Quality improvement aims to introduce and develop a culture of quality in health service delivery.
- (iii) Human resource development includes strategies that aim to ensure that the right staff are in the right place, in the right numbers, at the right time, and with the right skills and attitudes
- (iv) Health financing strategies aim to ensure increased resources and to strengthen financial management, include alternative health financing schemes that aim to safeguard financial access to health services for the poor (e.g. health equity funds and community health insurance schemes), and to ensure transparent, efficient and effective use of available financial resources. It should be noted that efforts in this key area of work are closely linked to financial and fiscal reform initiatives

developed and implemented by the government.

- (v) Institutional development includes the organizational and management reforms of Ministry of Health management structures, systems, and procedures and aims to introduce a management culture that is more capable of responding to change. This is closely linked to the overall public administrative reform efforts of the government and includes efforts to develop and introduce increased salary scales for key Ministry of Health staff (performance based salaries).

(c) **Coordination and Synergies**

The Health Sector Strategic Plan 2003-07 of the Ministry of Health stresses the priority of prevention and control of communicable diseases (including TB) and identifies strategies to strengthen the management of cost effective interventions to control communicable diseases.

The Technical Working Group for Health (TWGH), which consists of the Ministry of Health and its development partners, is the main mechanism to review progress, discuss issues and to oversee the implementation and management of the Health Sector Strategic Plan 2003-07. The TWGH is also responsible to review progress and to advise on the development and implementation of sub-sector plans, including disease specific plans.

The responsibility to review progress and to facilitate the development and implementation of TB control plans in Asiam, lies with the Sub-Technical Working Group for TB Control (formerly the Inter-agency Coordination Committee – ICC). The TWGH aims to maintain a close relationship with this sub-group (as well as other sub-groups) as a mechanism for coordination and to facilitate achievement of harmonization and alignment of sub-sector plans at the implementation level.

In order to facilitate TB-HIV collaboration, both National Programs (NTP and NAP) have designated staff to function as national focal points. Furthermore, TB-HIV coordination meetings are proposed to be held frequently with the involvement of all concerned partners (WHO, JICA, CDC/GAP, FHI, USAID, URC, CHC, SHCH, MSF, etc.).

4.4 Overall Needs Assessment

4.4.1 Programmatic Needs Assessment

4.4.1 Overall programmatic needs assessment

Five key services are identified in this proposal

Key Service 1: TB Diagnosis

TB diagnosis in people with cough more than 3 weeks, in routine practice, is made on clinical examination and laboratory confirmation of sputum smear for acid fast bacilli (*M. tuberculosis*) and sometimes requires radiological examination (X-Rays) in cases of smear negative TB. The majority of TB suspects are seen at the outpatient clinics at health centres where smear-making is possible but microscopes and technicians are not available. Sputum smears have to be transported to the nearest microscopy centres situated at TB units (former district hospitals or Referral Hospitals) for laboratory confirmation. Similarly, for the radiological assessment of smear negative cases, clients have to travel to the Referral Hospitals where X-Rays are available.

The estimated number of people with cough with more than 3 weeks: >400,000

In 2006, it was estimated that 490,268 TB suspects needed to be screened, but only 50% underwent sputum examination. This proposal will meet the needs of around 245,000 TB suspects to reach 70% case detection rate.

Key Service 2: TB Treatment

Standardized TB treatment (DOTS) is offered to confirmed TB patients, the majority of whom are ambulatory, at health centres or for those who are critically ill, at hospitals. All government health workers and VHSG members, involved in the NTP, must receive proper training to provide quality services. The NTP must ensure an efficient drug management system and uninterrupted supply of quality anti-TB drugs.

In 2006, 34,660 new TB cases were notified and all received DOTS. The NTP will provide drugs obtained through Global Fund (Round 5) till 2009. The present proposal will ensure that drugs are available till 2012.

The estimated number of people in need of TB treatment: >65,000

Key Service 3: Community DOTS

The NTP has estimated that nearly 60% of estimated TB cases have limited access to TB services (85% of the population live in rural areas). In order to improve access to DOTS for disadvantaged groups (very old, disabled or living far from health facilities), Community DOTS (in collaboration with NGOs) has been launched to provide daily directly observed treatment. In addition, community health volunteers such as VHSG members, have to be trained to identify and refer TB suspects and contacts of TB patients besides supporting TB patients to complete treatment.

The estimated number of people in need of C-DOTS: >30,000

In 2006, under Global Fund (R-5) and other donors, C-DOTS was provided to 9,236 TB patients (22% of the estimated needs). This proposal will allow C-DOTS to be implemented at 80% of all health centres (NTP target by 2010).

Key Service 4: TB-HIV

TB/HIV collaborative activities are being carried out according to the Asiam Framework for TB/HIV and Standard Operating Procedures (SOP) and in line with the Ministry of Health policy of Provider Initiated Counseling and Testing (PICT). While TB services have been expanded to the health centre level and also into the communities, the VCT sites are mostly located at the district referral hospitals.

Health education on TB/HIV co-infection will be provided, in particular through the NGOs implementing Community DOTS, as well as financial support to cover patients' travel costs. All registered TB patients (100%) should receive HIV counseling and if accepted, HIV testing which means all the 34,660 TB patients in 2006.

The estimated number of registered TB patients in need of HIV testing: >35,000

In 2006, 3,547 TB patients underwent HIV testing (NTP data). Access to ART for co-infected patients needs to be improved. The NTP has set a target to have at least 80% of TB patients referred for HIV testing by 2010 with the support of all external donors and partners.

Key Services 5: MDR-TB

Retreated TB cases are at significant higher risk to develop MDR-TB. All these patients should undergo sputum culture plus drug sensitivity testing. In addition, 50% of the cases under category "others" should also undergo the same testing procedure, since under this category are labeled the chronic TB cases. Based on data from the WHO Global TB Report (2007) and TB information system (2006), it is estimated here that the number of MDR-TB suspects will increase with 5% per year. As the target is to provide treatment for an increasing number of patients, it is assumed here that the number of patients to be screened needs to increase at the same rate.

The estimated number TB patients suspected of having MDR-TB: approximately 1200

In 2006, 1,143 cases would have needed this service, and only 15 of them received it (1%). In the following years, this service will be expanded slightly with the support of national and international NGOs, covering only 23% of the needs. The target is to provide MDR diagnostic services, and second line treatment if needed to at least 80% of the MDR TB estimated cases.

4.6 Tuberculosis component/implementation strategy

4.6.2 Goals and objectives and service delivery areas

The goal of the proposed program is "***To reduce the morbidity and mortality due to tuberculosis and in line with the Asiam Millennium Development Goals and the Stop TB Strategy***".

The proposed program has three objectives:

Objective 1: To ensure high quality Tuberculosis services nation-wide

This objective focuses on the key services *case detection, diagnosis and treatment* and includes further strengthening of laboratory services through procurement and replacement of laboratory equipment, training of laboratory staff, and quality control through external quality assurance (EQA) of TB microscopy.

Furthermore, the National TB Program will ensure appropriate TB treatment through procurement of first-line TB drugs to cover the need for the initial four years of the proposed Round 7 program.

This objective also includes the production and dissemination of various IEC materials and supports general M&E activities of the National TB Program (including supervision from centre to province, province to district, and district to Health Centres – after completion of Round 5 implementation, i.e. years four and five of Round 7).

It should be noted that the first three years do not include a main focus on strengthening DOTS at Health Centres, because of the fact that this is already funded under Round 5. However, several activities (such as the transportation of slides and refresher training for HC staff) are included in years four and five, i.e. after completion of Round 5 implementation.

This objective includes the following SDAs:

- Improving Diagnosis: Consists of further strengthening of laboratory services at central (NRL) and peripheral levels
- Standardized Treatment, Patient Support and Patient Charter
- Procurement and Supply Management
- M&E
- ACSM

Objective 2: To expand close-to-patient DOTS services

This objective aims to facilitate early detection and prompt treatment of TB and hence, to reduce transmission of TB.

The key service (see table 4.4.1) covered by this objective is *Community DOTS*, which will cover 41 Operational Health District and 461 Health Centres, and will be implemented by ten national and international NGOs and a civil society organization. The decision to scale-up Community DOTS is in line with the National TB Program's strategy to expand Community DOTS to more than 80% of the Health Centres and follows recommendations of the Joint Programme Review to increase access to TB treatment through scaling-up Community DOTS.

NGO partners plan to train Health Centre staff as DOTS supporters and community members as DOTS Watchers. In cases that *Village Health Support Group (VHSG)* members are selected and trained as DOTS Watchers, the NGOs plan to include training in their role and responsibility as VHSG members and to strengthen the community participation in Health Centres. Planned Community DOTS activities include a strong emphasis on providing health education to the communities, patients and the patients' family members, and also focus on awareness raising amongst local officials and the general public. Several NGO partners provide support (in the form of travel costs) in order to make it possible for poor patients to access diagnostic and treatment of TB.

The National TB Program plans to start work on PPM DOTS in a number of garment factories, which is in line with international guidelines to promote DOTS services at the work place (garment factories) and the National TB Program's strategy to reach out to specific population groups (factory workers)

This objective also includes cooperation with the armed forces (public-public), and aims to reach out to military personnel and their families living in military camps and to increase the capacity of military health staff to diagnose and treat TB.

This objective includes the following SDAs:

- PPM/ISTC
- Community TB Care
- Standardized Treatment, Patient Support and Patient Charter
- ACSM
- M&E
- HSS (beyond TB)

Objective 3: To address emerging priorities, including TB-HIV and MDR-TB

This objective focuses on two emerging priorities which are also part of the Global Stop TB Strategy: The key services *TB-HIV* and *MDR-TB*.

The National TB Program aims to strengthen the TB-HIV collaboration at provincial and district levels and to strengthen the managerial capacity of National TB Program staff with regard to TB-HIV co-infection. This includes support for specific TB/HIV collaborative activities, such as training, supervision, M&E, health education, the provision of X-Ray films for TB screening of PLHA, and financial support to patients for referral to voluntary counseling and testing (VCT) sites.

Furthermore, most of the NGOs implementing community DOTS will support the referral of registered TB patients to the nearest health facility that provides voluntary counseling and testing for HIV.

While this TB proposal will help to expand the referral of registered TB patients for counseling and testing to all Operational Health Districts, it should be noted that the Round 7 HIV/AIDS proposal supports the referral of PLHAs for TB screening in 33 additional Operational Health Districts by 2011.

This proposal also aims to build the capacity of the National TB Program to provide adequate treatment for MDR-TB patients at the National TB Hospital and in two provincial centres (Kg Cham and Battambang Provinces). The National TB Program will ensure appropriate treatment of MDR-TB through procurement of second-line drugs covering the needs for the full duration of the proposed program (five years). The necessary investments to strengthen laboratory services in order to address MDR-TB are included under Objective 1.

This objective includes the following SDAs:

- TB/HIV
- Standardized Treatment, Patient Support and Patient Charter
- ACSM
- M&E
- MDR-TB

4.6.3 Specific Interventions, Target Groups and Equity

(a) Specific Interventions/Activities supported by this proposal

Objective 1: To ensure high quality Tuberculosis services nation-wide

- SDA: Improving Diagnosis:
Planned activities:
 - Strengthening of laboratory services through training and the replacement of existing laboratory equipment (including microscopes) and supply of additional laboratory equipment - Implemented by
 - Supply of additional equipment for National Reference Laboratory and two regional laboratories aimed at strengthening laboratory services to diagnose MDR-TB.
 - Procurement of laboratory supplies (including reagents) and X-Ray film.
 - Training and on-the-job support for TB staff in North Operational Health District (The capital) and Rattanakiri, with the aim to strengthen TB diagnosis and treatment – Implemented by SHCH and VOR ORT respectively
 - Transporting sputum smear slides from Health Centres to the nearest TB laboratory – Implemented by National TB Program staff in the Operational Health Districts, supervised and monitored by central and provincial level staff (years four and five only, after the end of Round 5)
 - Strengthening of EQA (external quality assurance) – Implemented by the National TB Program
- SDA: Standardized Treatment, Patient Support and Patient Charter
Planned activities:
 - Support for the referral of suspected cases to TB services and for the referral of TB patients to counseling and testing for HIV (support in the form of travel costs) – Implemented by National TB Program at central, provincial and district levels
- SDA: Procurement and Supply Management
Planned activities:
 - Procurement of first-line TB drugs for years one to four
- SDA: M&E
Planned activities:
 - Quarterly monitoring workshops – Organized by National TB Program in The capital
 - Annual Performance Review meeting (evaluation) – Organized by the National TB Program in the capital
 - Regular supervision from central level to all provinces, from provincial level to all districts, from district level to all Health Centres (years four and five only, after the end of Round 5) – Implemented by National TB Program at all levels
- SDA: ACSM
Planned activities:
 - Production and broadcasting of TV and Radio spots – Implemented by the National TB Program in The capital
 - Development and production (printing) of posters, leaflets, calendars, etc. - Implemented by the National TB Program in The capital
 - Production and printing of TB bulletin and various reports - Implemented by the National TB Program in The capital
 - School health education activities – Implemented by the National TB Program
 - Organization of annual World TB Day events – Implemented by the National TB program at all levels

Objective 2: To expand close-to-patient DOTS services

- SDA: PPM/ISTC
Planned activities:
 - National PPM DOTS workshops in years four and five (following on from Round 5) – Implemented by the National TB Program
 - Sensitizing workshops on PPM DOTS in garment factories and TOT for staff of factory dispensaries – Implemented by the National TB Program

- TB health education for factory workers - Implemented by the National TB Program
- Training and refresher training for military health staff - Implemented by the National TB Program

- SDA: Community TB Care

Planned activities:

- Training of Health Centre staff as Community DOTS supervisors – Implemented by NGO partners
- Training of community volunteers as DOTS watchers - Implemented by NGO partners
- Implementation and management of Community DOTS in 41 Operational Health Districts and 461 Health Centres - Implemented by NGO partners
- Active case finding in communities with high prevalence – Implemented by National TB Program staff at all levels

SDA: Standardized Treatment, Patient Support and Patients Charter

Planned activities:

- Support in the form of travel costs for patients to be referred to TB services for diagnosis and/or treatment - Implemented by NGO partners

- SDA: ACSM

Planned activities:

- TB health education in the communities covered by Community DOTS, including LCD shows - Implemented by NGO partners

- SDA: M&E

Planned activities:

- Regular supervision of DOTS watchers by Health Centre staff and/or by NGO staff - Implemented by NGO staff and Health Centre staff
- Regular monitoring of Community DOTS activities implemented in 41 Operational Health Districts - Implemented by NGO staff and by National TB Program staff

- SDA: HSS (beyond TB)

Planned activities:

- As part of their training as DOTS Watchers, training for VHSG members in their role and function as VHSG members – Implemented by several of the NGO partners
- Support to quarterly DOTS Watcher meetings. This will also support to quarterly VHSG meetings as these meetings can coincide – Implemented by several of the NGO partners

Objective 3: To address emerging priorities, including TB-HIV and MDR-TB

- SDA TB/HIV

Planned activities:

- Quarterly TB-HIV meetings at provincial and district level – Implemented by the NTP and selected NGO partners
- Annual national workshop on TB-HIV – Organized by the NTP
- Training on TB-HIV as part of the overall training on DOTS – for scaling up (for NTP staff)
 - Training on the package of TB/HIV collaborative activities for staff at TB unit, HC, VCCT and HBC team at new ODs
 - Special training on TB infection control in HIV care and treatment setting (at RH where CoC is implemented)
 - Refresher training on TB/HIV care and treatment, recording and reporting system for staff previously trained (2 years ago)
 - Training on X-Ray reading for staff at RH
- Study visits to other TB/HIV collaborative sites (in-country and neighboring countries) to share experiences and "lessons learnt"
- Referral of registered TB patients for HIV counseling and testing – Implemented by NGO partners

- SDA Standardized Treatment, Patient Support and Patient Charter

Planned activities:

- Support in the form of travel costs for the referral of registered TB patients for HIV counseling and testing – Implemented by NGO partners in the areas where they are implementing Community DOTS

- SDA M&E

Planned activities:

- Regular monitoring and supervision of TB-HIV activities by NTP as well as by the NGO partners in

the areas where they are implementing C-DOTS

- Central level: Implemented by (as part of routine supervision)
- Provincial level: as part of routine supervision
- District level: as part of routine supervision

- SDA ACSM

Planned activities:

- Health education to TB patients and PLHA on TB-HIV co-infection – by NGO partners in the areas where C-DOTS is implemented
 - Dissemination through media, e.g. radio, TV and newspaper
 - Dissemination through posters and leaflets in the health facilities and community

- SDA MDR-TB

Planned activities:

- Application to the Green Light Committee - Implemented by the National TB Program
- Development of Standard Operating Procedures and Operational Guidelines, with the help of short-term technical assistance (TA) - Implemented by the National Program
- Development of training curriculum for MDR-TB training - Implemented by the National Program and technical partners
- Training in MDR-TB management for staff in three centres that will provide MDR-TB - Implemented by the National Program
- Training on the continuation phase for MDR-TB treatment for provincial and district level staff - Implemented by the National Program
- Training on the continuation phase for MDR-TB treatment for Health Centre staff and community members - Implemented by the National Program
- Support for the referral of MDR-TB patients and living support during the eight-month intensive phase (hospitalization) - Implemented by the National Program
- Supervision by provincial and district level staff during continuation phase - Implemented by the National Program
- Renovations required for setting-up isolation rooms in the three MDR-TB centres – Implemented by the National Program
- Procurement of second-line TB drugs for years one to five

(b) **Target groups**

Provide a description of the target groups (and, where relevant, the rationale for inclusion or exclusion of certain groups). In addition, describe how the target groups were involved during planning, implementation and evaluation of the proposal prior to submission to the Global Fund. Describe the impact that the program will have on these group(s).

The target group of the National TB Program is all people that are suspected of having TB (suspected cases) and those that have been confirmed as having TB (confirmed cases). The coverage of the National TB Program is nation-wide and hence, the program targets all suspected and confirmed cases of TB in the country.

Community DOTS aims to facilitate early detection and prompt treatment and hence, to reduce transmission. Community DOTS is planned to be implemented in 41 Operational Health District (out of a total of 77) throughout the country. These districts are either not yet covered by Community DOTS services (29 districts) or will run out of funding to implement Community DOTS (12 districts, most of which are presently funded under Rounds 2 and 5). An additional criterion used to select Operational Health District was the presence of an NGO partner that is capable and willing to implement Community DOTS

Community DOTS targets TB patients with limited access to DOTS provided at the Health Centres, due to distance or limited mobility as a result of poor health, old age, or disability. The communities are closely involved in the implementation of Community DOTS as community volunteers act as DOTS watchers and provide essential supervision and support to the TB patients while undergoing treatment.

It should also be noted that the NGOs will especially target poor TB patients, by supporting (in the form of travel costs) their referral for TB testing/treatment and/or counseling and testing for HIV. Community TB activities will be implemented by community members who are familiar with TB, and in many cases will have been affected by the disease.

Finally, this proposal includes support to MDR-TB and hence, a special target group is those TB patients living with MDR-TB. TB/HIV patients bear a double stigma, and have a complex health situation, requiring specific care and support. Early identification of this group of patients will allow providing them with the appropriate care, which will have a clear impact on their quality of life.

(c) **Equitable access to services**

Describe how principles of equity will be ensured in the selection of clients to access services, particularly if the proposal includes services that will only reach a proportion of the population in need (e.g., some antiretroviral therapy programs).

This proposal aims to facilitate the access to high quality TB services nationwide, and to decrease the inequities in health care between rural and urban populations. As was mentioned above, Community DOTS will target those patients with limited access to existing facility based DOTS. The selection of communities to be covered by Community DOTS is largely based on the lack of geographical access to existing Health Centres. The access to Community DOTS services within selected communities will be equal for all in need of TB services.

Some of the NGOs plan to select the poorest TB patients for further support, especially in the form of travel costs of referral for TB services and/or referral for counseling and testing for HIV/AIDS. It is planned that those most in need of this type of support (i.e. the poorest TB patients) will be selected through use of poverty identification tools, in particular wealth ranking.

(d) **Social inequalities targeted in this proposal**

Describe how this proposal addresses the needs of specific marginalized groups in the country/countries targeted in this proposal. *For example, if your proposal targets a gender, age-group or other demographic presently excluded or underrepresented in existing service delivery activities, identify this and describe how the group(s) will be targeted.*

Please ensure that you include appropriate targets and indicators to monitor performance against these strategies in '**Attachment A**' (Targets and Indicators Table).

Tuberculosis affects the poor more than other segments of the population, and it has been well documented in Asiam that the poor are less likely to access and use available health services. The latter is true even when services are provided for free, as is the case with TB diagnosis and treatment in Asiam. A visit to the local Health Center still involves travel expenses and other costs, which are often important barriers that prevent the poor from accessing these services. This is especially relevant in remote and sparsely populated areas where it is more difficult and hence, more costly to access available health services.

The proposed Community DOTS activities aim to provide support to the poor to access TB diagnostic and treatment services and to help registered TB patients to access VCT services. Furthermore, the proposed Community DOTS activities include some of the most remote and difficult to access provinces in the country with minority population groups (i.e. Rattanakiri, Stung Treng, Preah Vihear, and Odar Meanchey).

Community DOTS also provides treatment for other groups that would otherwise not have been able to access TB services available at the Health Centres, such as the elderly and the disabled. With the help of the community based DOTS Watchers, these disadvantaged groups will be able to receive treatment in their respective communities.

(e) **Stigma and discrimination**

Describe how this proposal will contribute to reducing stigma and discrimination against people living with and/or affected by HIV/AIDS, tuberculosis and/or malaria, as applicable, and other types of stigma and discrimination that facilitate the spread of these diseases.

The stigma that previously existed concerning Tuberculosis is believed to have diminished during recent years. This is partly the result of the fact that the general population has more/better information about TB, but also because of the fact that treatment has become more readily available, ensuring better outcomes. However, tuberculosis is still a stigmatizing illness and this situation is even worse for TB/HIV patients, who face a double burden of stigma.

The Community DOTS activities, which include a significant ACSM component, will give access to TB treatment in remote communities, increase community participation in TB control activities and raise communities' awareness and knowledge of TB. Therefore, community DOTS and other activities included in this proposal are expected to provide a significant contribution to further reduction in stigma and discrimination.