

National TB Control Programme Managers and Partners

*Report of the Meeting
Bangkok, Thailand, 6-9 December 2011*



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Abbreviations

ACSM	advocacy, communication and social mobilization
AIDS	acquired immune deficiency syndrome
ART	anti-retroviral therapy
BD	Becton Dickinson
BRAC	Bangladesh Rural Advancement Committee
CBO	community-based organization
CDC	Centres for Disease Control
C/DST	culture and drug susceptibility testing
CPT	co-trimoxazole preventive therapy
CSO	civil society organization
CSS	community systems strengthening
DDC	Department of Disease Control
DOT	directly observed therapy
DOTS	directly observed therapy – short course
DRA	Drug Regulatory Authority
DST	drug susceptibility testing
EQA	external quality assurance
FDC	fixed dose combination
FIND	foundation for Innovative New Diagnostics
FM	Fluorescent microscopy
GDF	Global TB Drug Facility
GF	Global Fund to Fight HIV/AIDS, TB and Malaria
GLC	Green Light Committee
GLRA	German Leprosy and TB Relief Association
HBC	high-burden country
HIV	human immunodeficiency virus
HSS	health systems strengthening

IC	infection control
INH	isoniazid
IPT	isoniazid prophylaxis therapy
IRL	intermediate reference laboratory
ISTC	International Standards of TB Care
JATA	Japan Anti-Tuberculosis Association
LED	light-emitting diode
LPA	line probe assay
MDG	Millennium Development Goal
MDR	multi-drug resistance
MDR-TB	multi-drug resistant tuberculosis
M&E	monitoring and evaluation
MoPH	Ministry of Public Health
MSF	Médecins Sans Frontières
M/XDR-TB	multi- and extensively drug-resistant TB
NGO	nongovernmental organization
NRL	National Reference Laboratory
NTP	National Tuberculosis Control Programme
PAL	practical approach to lung disease
PATH	Programme for Appropriate Technology in Health
PHC	primary health care
PLHIV	people living with HIV
PMDT	programmatic management of drug-resistant tuberculosis
PPD	purified protein derivative
PPM	public-private mix
PSF	Promoter Familia Sante
PSM	procurement and supply chain management
PTB	pulmonary tuberculosis
QA	quality assurance

QC	quality control
QM	quality monitoring
RDMA	Regional Development Mission, Asia
Rif	rifampicin
RNTCP	Revised National Tuberculosis Control Programme
SSF	single stream of funding
STAG	WHO Strategic and Technical Advisory Group for Tuberculosis
STP	Stop TB Partnership
TA	technical assistance
TB	tuberculosis
TBTEAM	TB technical assistance mechanism
UHC	urban health centre
USAID	United States Agency for International Development
WHO	World Health Organization
WVFT	World Vision Foundation – Thailand
XDR-TB	extensively drug-resistant TBXDR-TB

1. Introduction

The South East Asia (SEA) Region of the World Health Organization (WHO) continues to bear more than one third of the global burden of tuberculosis (TB), an estimated pool of nearly five million cases to which more than three million are added each year. Decreases in prevalence have been achieved due to a good case-notification and treatment-success rate of more than 85% for the Region as a whole. The progress in expanding and strengthening directly observed therapy – short course (DOTS) services is apparent from the increasing case-notification and success rates. Good performance of DOTS in the Region has also led to low levels of multidrug-resistant TB (MDR-TB) among newly detected cases. Further improvement and expansion of the scope of TB services is envisaged through the application of the wider Stop TB strategy that now forms the basis of Regional and national multiyear plans for TB control.

WHO Regional and country offices supported national TB programmes (NTPs) to develop national multiyear plans in line with the Stop TB strategy based on the Regional Strategic Plan 2006-2015 towards reaching the TB targets under the Millennium Development Goals (MDGs). Only full implementation of these plans will lead to the desired results in each of the countries of the Region.

Meetings of the NTP managers have been held annually since the beginning of the scale-up of DOTS in the Region. Since 2009, these meetings are now held biannually. They have provided a very useful forum for interaction, to follow up on actions taken on the recommendations of previous meetings, exchange information on existing and innovative approaches being applied in countries and discuss technical issues. This has resulted in valuable advice for developing policies, strategies and plans for implementation of TB control interventions in Member countries in the coming year, including by WHO and partners. Several technical and policy-level discussions were held during global and regional level meetings in 2010, such as the meeting of the SEA Regional Technical Working Group on TB, and SEA Regional workshops on (a) programmatic management of drug-resistant TB (PMDT), (b) an informal consultation meeting on laboratory services, (c) advocacy, communication and social mobilization

(ACSM), and (d) laboratory diagnosis of MDR-TB. Thus the meeting also provides a platform for sharing the deliberations in the meetings held since the last NTP managers' meeting.

In view of the above, a meeting of NTP managers and partners was held in Bangkok from 6 to 9 December 2011.

2. Inaugural session

Dr Paichit Warachit, Permanent Secretary, Ministry of Public Health (MoPH), Thailand, delivered the welcome address to participants in the meeting. He stated that the SEA Region has a significant contribution to make to global efforts in TB control. The Region has already achieved good treatment success rate among new pulmonary sputum-positive TB cases. It is now important to ensure universal access to quality TB care, and there is a need for strengthening innovation. He reiterated the need for introducing rapid diagnostics and making the treatment patient-friendly. There is a need for involvement of all partners in TB control and specifically to reach the populations that cannot be reached by the public health system alone.

The meeting of NTP Managers and Partners was inaugurated by Dr Samlee Plianbangchang, Regional Director, WHO South-East Asia. In his address the Regional Director commended the progress made in the Region to control the TB situation. He commented that the decline of TB prevalence has been contributed to by the expansion of quality DOTS services. He also pointed out that MDR-TB and human immune deficiency virus (HIV)-TB coinfection are a serious problem in the SEA Region. The two related programmes, namely National TB Control and National AIDS Control programmes in most countries in the Region are jointly implementing a comprehensive package of interventions against this problem. This is helping them cover an estimated 600 million people. Success in TB control, to a large extent, has come from the participation and involvement of a wide range of partners. Examples of such partners are: private medical practitioners; international and national nongovernmental organizations (NGOs); public and private hospitals; medical colleges; and state enterprises. This multistakeholder involvement has contributed to an increase of about 25% increase in case notification and to more than 90% of the treatment success rate. However, we need to recognize that these achievements can be successfully maintained in the long term only when national health systems based on the primary health care (PHC) approach function effectively. The PHC approach is the key intervention to help ensure that hard-to-reach and unreached populations are covered. Community-based care and services are essential for sustained achievements in long-term TB control for the entire population. Tuberculosis is a disease of poverty having strong social and economic determinants. Therefore, adequate social and economic support to control programmes, including TB patients, is critically important for the programmes' success.

The national TB control programmes face many challenges in medical, social and economic terms:

- difficulty faced by patients in accessing quality medical treatment;
- poverty, at the individual and family level;
- social stigma which can prevent patients from seeking treatment;
- crowded and polluted environment that is conducive to TB transmission;
- poor nutrition that leads to low body resistance against the infection;
- displaced population that is prone to TB infection for a variety of reasons.

Another important challenge is ensuring uninterrupted supplies of quality second-line anti-TB drugs for treatment of patients with MDR-TB. This is indeed proving to be a difficult task, especially in larger countries.

In this context, there is a need to understand that improvement in the overall social and economic development of a country will contribute importantly to its long-term, sustained success in TB elimination. Some basic issues involving the following areas must be tackled first for TB control:

- universal case detection of all forms of TB;
- introduction of new and more effective laboratory diagnosis;
- increasing access to quality DOTS services;
- effective infection control (IC), both in- and outside institutions;
- availability of quality anti-TB drugs that are affordable to individuals, families, community and the government

In particular, the rational use of anti-TB drugs must be promoted. This is another critical area of concern. National regulatory mechanisms must be strengthened to help ensure quality and rational use of drugs.

The participants were then introduced to the objectives of the meeting.

The **general objective** of the meeting was to further strengthen and improve implementation of the Stop TB Strategy towards achieving TB targets set under MDGs in all member countries.

The **specific objectives** were:

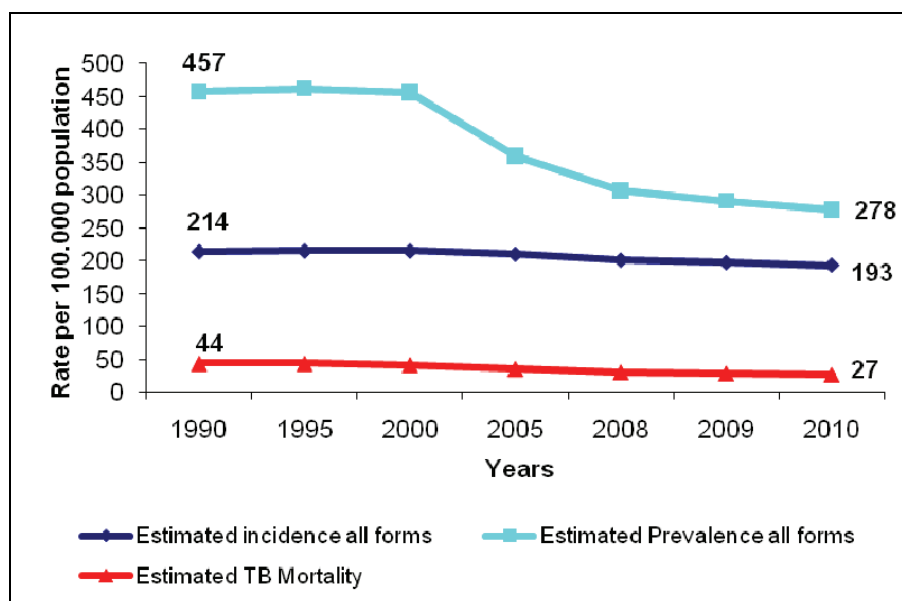
- (1) To quantify the progress made by NTPs in the Region in context of recommendations made in 2009, with a focus on:
 - adopting the target of universal case detection;
 - introduction of new lab diagnostics, especially liquid culture and line probe assay (LPA);
 - expansion in access to DOTS;
 - building capacity in infection control to prevent TB transmission in health facilities;
 - nationally costed scale-up plans until 2015, including for achieving universal access to diagnosis and treatment of all forms of TB;
 - national regulatory mechanism to promote rational use of anti-TB drugs.
- (2) To review progress in member countries against national plans for 2010-2011 developed in the meeting of National TB Programme Managers in 2009, and identify constraints and challenges in achieving planned targets set for 2011.
- (3) To discuss, identify and plan interventions to intensify implementation of the Stop TB strategy including most recent strategies towards meeting the impact targets set under MDGs at Regional and country levels.
- (4) To suggest mechanisms to ensure and sustain necessary technical and financial resources required for efficient implementation of national plans 2012-2013.

3. Technical Sessions

(1) Global and Regional overview of TB: progress and challenges for TB control

Overall the Region has shown a good progress in TB control, with a decrease of more than 25% in prevalence since 1990 (see Figure 1). This has been achieved due to good case notification and a treatment success rate among new pulmonary smear-positive cases of more than 85% for the Region as a whole. The mortality rate among TB patients has also decreased by more than 44% for the Region, although absolute mortality figures are still close to half a million.

Figure 1: *TB incidence, prevalence and mortality in the SEA Region*



Good performance of DOTS in the Region has also led to low levels of MDR-TB among newly detected cases (range: 1.7%-4.2%). Among previously treated cases in the Region, MDR-TB rates range from 10.0%-34.7%.

The spread of HIV threatens to reverse the gains already achieved by TB control programmes. It is estimated that there are 3.5 million people

living with HIV (PLHIV) in the South-East Asia Region, constituting 11% of the total number of PLHIVs globally. This calls for further strengthening of the degree of collaboration between TB and HIV programmes.

The Stop TB strategy is the basis for national TB control plans in all 11 countries in the Region, though the time period covered by these plans differs among countries. NTP manuals and training modules have been or are being updated in all countries and efforts are being made to address newer topics such as MDR-TB. Human resource development plans to support national TB control plans have either been updated or are being updated in six countries of the Region, and national capacity is being built in various technical areas for scaling up innovations to implement the full Stop TB strategy.

However, despite these gains, the desired goal of universal access is yet to be achieved and remains a challenge for most countries. Programmes continue to face many challenges, among them:

- overstretched national public health-care systems, and specifically gaps in human resources, surveillance and monitoring, procurement and logistics management systems;
- inadequate national laboratory capacity in several countries, including capacity for TB cultures, drug sensitivity testing, and deployment of newer rapid diagnostics;
- limited capacity for programme management for drug-resistant TB and TB-HIV
- provision of health care in other sectors is not yet fully linked to national programmes;
- low levels of community awareness and therefore low utilization of services;
- unregulated over-the-counter sales of both first-line and several second-line TB drugs in many countries;
- limited availability of quality-assured second-line drugs primarily because of small number of pre-qualified manufacturers, often leading to delays in procurement;

- uncertain long-term funding, particularly for MDR-TB; the Region lacks an estimated one third of funding required for TB control until 2015.

There have been some efforts made in the region to establish partnerships with various health sectors and civil society. Good models of partnerships need to be replicated in all countries with the involvement of communities to promote a patient-centric approach.

Recognizing that effective TB control depends on strong health systems, efforts are being made to effectively streamline TB services within PHC systems, and optimize the use of common resources for the delivery of TB services alongside those of other programmes, while at the same time adopting the successful approaches of other programmes to improve TB services.

Respiratory IC is important to prevent the spread of TB infection and such policy should be part of health system strengthening. IC is not just limited to health-care facilities. All congregate settings need to be assessed. A Regional-level endeavour is required to raise the issue of the need for greater attention to the neglected area of IC within the national health systems at the highest-level policy forums.

Research has been observed to be a weak area in the Region and efforts will be made to strengthen this through Regional training and technical support. Specifically in the context of upcoming newer technologies, countries would need to undertake operations research for quick adoption of such tools and technologies in the local context. Member countries will also need to undertake further research on social and behavioural determinants that influence the disease progress and outcome.

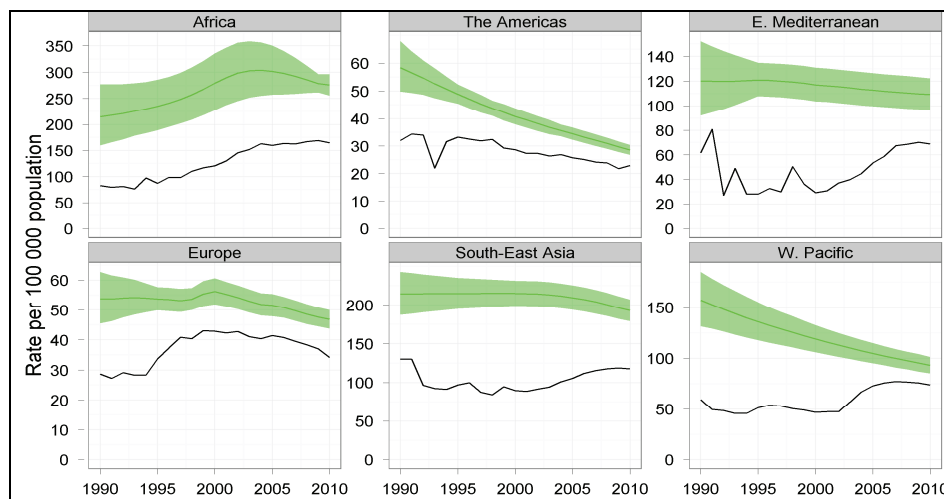
Sustaining these efforts will require continued commitment and adequate resources for NTPs for several more years. Increased commitment from donors and funding agencies will also be required not only for strengthening basic DOTS but also for establishing and expanding PMDT. Like all previous years it is hoped that the Region will continue to show tangible progress towards the achievement of TB control goals in the next year.

(2) Early and higher case detection

One of the key Stop TB strategy objectives is universal access to high-quality care for all TB patients. However with current case notifications in the Region (see Figure 2), an estimated one third of cases are still being missed. These cases could be across various age groups and genders; in vulnerable groups like HIV positive people, the poor, migrants, contacts of active cases, smokers, diabetics, alcoholics, infants, prisoners, etc. The situation for each country would be different. Several studies clearly demonstrate that longer delays in notification mean more transmission. There have been several suggested interventions to improve early case detection. These include:

- intensification and expansion of passive case finding;
- optimizing diagnostic approaches that need laboratory strengthening, better X-ray diagnosis, new tools, etc;
- equal attention to all forms of TB, MDR-TB and all age-groups;
- countries need to focus on training and other aspects of human resource development;
- identification and involvement of the health care providers like the private sector and hence the required focus on the Public–Private Mix (PPM) concept;
- strengthening communication strategies to improve health-seeking behaviours;
- interventions to reduce access barriers, especially for vulnerable groups, and improve health systems so that universal access can be achieved.

Figure 2: TB case notification by WHO Regions



However, there is also a need for more active approaches. This is substantiated by some of the recent prevalence studies within and outside the Region. The Viet Nam prevalence survey 2006-2007 (NTP 2009) shows that 23% of new smear-positive cases reported no symptoms and 47% did not have symptoms corresponding to the "TB suspect" definition. Similarly, the Cambodia prevalence survey 2002 (NTP 2005) showed that 15% of bacteriologically confirmed cases had no symptoms and 61% did not have symptoms corresponding to the TB suspect definition. Studies in Zambia and Zimbabwe also came up with similar results. Within the region, the Myanmar prevalence survey 2009-2010 showed that more than 17% of smear-positive cases did not report any symptom, while more than 50% of smear-negative culture positive cases did not report any symptoms.

Thus there is a need for a more active "passive case finding" inside health services and to revise the definition of a TB suspect. Screening indications should be broadened based on additional symptoms and using a risk-factor profile, e.g. contacts, HIV, poor, slum-dwellers, homeless, alcoholics, smokers, diabetics, elderly, infants, previously treated. To improve case notifications, programmes could also embark on an active screening of risk populations such as contacts, slum dwellers, migrants, prisoners, the homeless, etc. Operational research that is country-context-specific will help to generate more evidence for the roll-out of all new initiatives and improve case finding.

Country perspective: Bangladesh

Bangladesh has adopted several strategies for early and higher case detection, including linkages with other programmes. The programme has a strong partnership between the NTP, local government and partners. Forty-four nongovernmental organizations (NGOs) Light-Emitting Diode (LED) are involved as partners, including the Bangladesh Rural Advancement Committee (BRAC), Damien Foundation, Leprosy Mission Bangladesh, Lepra Bangladesh, (RDRS), HEED Bangladesh, SSFP, etc. Also involved in the programme are medical colleges, specialized institutions and universities (36 public and private), NGOs, private hospitals and clinics, and corporate sector representatives such as the Youngone Group, Bangladesh Garment Manufacturers & Exporters Association (BGMEA), Export Processing Zones (EPZs) and other companies.

The strategies adopted to shorten diagnostic delay include introduction of LED microscopy in a phased manner; health system strengthening through practical approach to lung disease (PAL); introducing TB service through community clinics; further expanding public–private collaborative activities; scaling-up of comprehensive ACSM activities; and improving coordination between NTP and NGOs through performance review meetings.

To scale up case detection in children, the programme is now developing operational guidelines for childhood TB and is training doctors and paramedics who can diagnose and treat children with TB. There is greater involvement of paediatricians with fine needle aspiration technology and MT are now available in urban health centres (UHCs) at the subdistrict level. There are systematic screening and referral of children suspected to have TB, and family-centered contact tracing. The programme has also introduced isoniazid (INH) prophylaxis in 0-5 year-old children instead of children under 1 year as earlier.

Community involvement in case detection has been strengthened through DOTS committees involving community leaders that meet regularly. These committees are involved in identification and referral of TB suspects, directly observed therapy (DOT), defaulter tracing and counselling. Female community health volunteers (Shastho Shebika) also play a key role in the activities, as do village doctors. TB clubs consisting of cured TB patients have been established in various parts of the country. A

national strategic plan for ACSM has been developed and communication tools also prepared to support ACSM activities.

Country perspective: Democratic People's Republic of Korea

Some of the adopted strategies for early and higher case detection include linkages with other programmes. To sustain current success and improve case detection, there has been an enhanced political commitment for long-term planning, adequate human resources and sustainable financing.

Continuous supply of lab equipment and consumables through a reliable procurement and supply chain management (PSM) system is being ensured. There is also a focus on improving the function of the laboratory network through an external quality assurance (EQA) system. Internationally recommended diagnostic approaches have now been adopted across all health sectors in the country and there is an attempt to improve the awareness of medical students on programme principles and practices by updating the medical and paramedical curriculum.

Efforts are being made to raise community awareness about TB to reduce stigma and discrimination. Increased awareness is also expected to lead to improved utilization of services and earlier detection of TB cases. Active case detection is being done by household doctors through regular visits to houses and counselling of residents.

Country perspective: Timor-Leste

For early and higher case detection ACSM is being implemented by the health promotion branch of the Ministry of Health. A knowledge, attitude and practices survey has been completed and knowledge of TB in community is being improved via ACSM interventions.

NGO and private facilities are being used to support the programme. An Xpert MTB/Rif machine is available through an NGO, and there is plan for uptake with support from donors. There is also a plan to incorporate Xpert MTB/Rif testing into the diagnostic algorithm.

The programme is taking support of SISCA programme workers – Promoter Familia Sante (PSF). There is at least one PSF in every village, around 400 in the country that will increase to 600 in the next two years.

Community sensitization meetings and meetings with village leaders are held regularly and all TB suspects are offered sputum testing and chest X-ray. TB suspect registers are placed at all community health centres to track that all suspects are offered sputum testing (2%-3% of outpatient departments). Good-quality microscopy is ensured by regular panel testing and cross-checking.

There is also an ongoing training of doctors and nurses on International Standards of TB Care (ISTC) and best practices in TB control. Currently contact tracing guidelines and guidelines for diagnosis of TB in children are out of date and need updating. There are very few paediatricians in the country and purified protein derivative (PPD) is not available. Development of guidelines and training on administration of PPD is planned for the next two years.

(3) New diagnostic tools

The WHO STOP TB department and the Global Laboratory Initiative has been pivotal in supporting laboratory scale-up and providing technical assistance (TA) in resource-constrained, high-burden TB countries. The department and the initiative recognize and stress the central role of TB laboratory services in global action to stop TB and their contribution to health systems strengthening (HSS).

One of the prerequisites for addressing multi- and extensively drug-resistant TB (M/XDR-TB) is developing the capacity of national laboratory networks to detect drug-resistant TB through quality-assured culture and drug susceptibility testing (DST) as well as undertaking regular drug resistance survey/surveillance to determine trends in MDR/XDR TB. It is estimated that Regional capacity needs to be scaled up to perform 20-30 million primary cultures and around 2 million drug susceptibility tests by 2015 in order to meet the MDG targets.

To support the scale-up, new rapid diagnostics are being introduced (see Table 1). These include the phased introduction of LED-based fluorescent microscopy (FM) in both high and low workload settings, liquid culture systems, molecular-based LPA and recently the Xpert MTB/RIF assay. The MTB/Rif is a cartridge-based nucleic amplification technology that has the potential for screening infectious and non-infectious diseases including HIV viral load, malaria and the detection of human papilloma virus for

cervical cancer. It is a highly sensitive and specific, automated, real-time molecular diagnostic test which uses state-of-the-art DNA technology for rapid and simultaneous detection of TB and rifampicin resistance (a reliable proxy for MDR-TB) in both HIV-negative and HIV-positive individuals. The TB platform was completed in 2009 and it is considered an important breakthrough in the fight against TB. The assay provides results directly from sputum within 100 minutes. On 8 December 2010, WHO endorsed the Xpert MTB/RIF assay. The technology is suitable for use at district and subdistrict health service level, outside conventional laboratory settings. Given its ease of use and speed of diagnosis, Xpert MTB/RIF is expected to have a major impact on patient care and disease control by reducing diagnostic delays, decentralizing the diagnosis of MDR-TB and HIV-associated TB, and accelerating patient access to appropriate care. Although technical end-user training requirements for Xpert MTB/RIF are minimal, maximum efficiency and optimal use of the technology requires a major overhaul of TB and MDR-TB diagnostic algorithms, changes in patient management approaches, and changes in case definitions and monitoring and evaluation (M&E) indicators. Country-specific validation, sustainability, addressing basic requirements for optimal utilization, maintenance, annual calibrations, monitoring, and mentoring and data management at country level require careful planning with the NTP and partners.

Table 1: WHO-endorsed diagnostic tools

Year & Technology	Turnaround Time	Sensitivity Gain
Before 2007 ZN Microscopy Solid Culture	2-3 days 30-60 days	Baseline
2007 Liquid Culture/DST Rapid Speciation	15-30 days 15 mins	10% as compared to LJ
2008 LPA (H&R)	2-4 days	Only for smear +ve cases
2009 LED- based FM	1-2 days	10% as compared to ZN
2009 (conditional)	In-house DST (MODS/NRA/CRI)	First-line drugs only
2010 (with caveats) Automated NAAT (TB,RIF)	90 mins	40% compared to ZN, sensitivity comparable to culture

WHO has provided detailed policy guidelines for the introduction, deployment within the NTP and scale-up of modern molecular-based technologies for rapid identification of MDR-TB. WHO also supported the introduction of automated liquid culture systems to address the issue of universal access for management of all types of TB including smear negative pulmonary TB (PTB), HIV-TB, paediatric, and extra-pulmonary TB. The UNITAID-funded EXPAND TB project support the introduction and scaling up of newer diagnostic tools in identified resource-constrained, high-burden countries. This unique project supports quality-assured second-line drugs for MDR-TB treatment and developing laboratory capacity through Foundation for Innovative New Diagnostics (FIND) for the introduction of newer diagnostic tools. The project has been implemented from 2009 and so far has supported 27 countries in Africa, Eastern Europe and South Asia including India. The project also expanded to support Bangladesh, Indonesia and Myanmar in 2011.

WHO policy recommendation for Use of Xpert MTB/RIF (conditional)

- In high MDR-TB settings: Persons at risk of MDR-TB (e.g. treatment failures, other retreatment cases, close contacts with MDR-TB cases) should be tested using Xpert MTB/RIF as the primary diagnostic test.
- In high-HIV-prevalence settings: Persons living with HIV who have signs and symptoms of TB, those seriously ill and suspected of having TB regardless of HIV status, and those with unknown HIV status presenting with strong clinical evidence of HIV infection, should be tested using Xpert MTB/RIF as the primary diagnostic test.
- In other settings: Xpert MTB/RIF is recommended as the primary diagnostic test where available, including in persons living with HIV in these settings, or as a follow-on test (at higher level of the health service) after screening by sputum smear microscopy (at lower level of the health service) or after screening by chest radiography.

To conclude, there is a need for appropriate screening policies. LED microscopy should be phased in as an alternative to conventional ZN light microscopy. Regarding culture, the best is the combination of solid + liquid which yields a sensitivity of 87%-89%. LPAs can be used for smear-positive sputum and cultures but there is insufficient evidence on smear-negatives. Furthermore, LPAs do not replace culture and DST.

The major advantages of Xpert MTB/RIF are:

- no bio-safety cabinet
- closed system (no contamination risk)
- specific for MTB, sensitivity close to culture
- detection of rif-resistance via rpoB gene

Country perspective: Indonesia

Several steps have been taken to strengthen the laboratory capacity, specifically for the requirement of the expansion of PMDT. The culture and DST laboratory at BLK Semarang, Central Java, has recently been renovated. Several steps are also been taken for the introduction of liquid culture and LPA and the roll-out of Xpert MTB/RIF. Two out of five certified DST laboratories are now applying liquid culture. These include Microbiology UI, Jakarta (MGIT 960) and NEHCRI Makassar (Manual MGIT). Expand TB will support MGIT 960 and HAIN for two more labs – BBLK Surabaya (national reference laboratory or NRL for culture/DST) and Persahabatan Hospital (MDR-TB Treatment Centre). Three labs are already implemented LPA (Hain test) - Microbiology UI, Jakarta, NEHCRI Makassar and Soetomo Hospital, Surabaya. A total of 17 units of Xpert MTB/Rif machines and 1700 cartridges have also been procured. Implementation of Xpert MTB/RIFrt will be done in a stepwise manner. Six initial sites will be reviewed after three months, followed by another 11 sites for roll-out of Xpert MTB/Rif.

TB laboratories plays a main role in MDR-TB diagnosis to support PMDT scale-up. Expansion of quality-assured culture/DST laboratories and MDR-TB treatment centres is crucial to achieve the national targets. The programme aims to use the new TB diagnostic tools as a breakthrough to avoid delays in treatment and provide better services to TB patients.

Country perspective: Myanmar

To strengthen the lab capacity, the country is improving the reach and scope of current laboratory network services. There has been a decentralization of laboratories to Station Hospitals and the township laboratories are being used by both public and private doctors. EQA for smear acid-fast bacillus microscopy has also been strengthened, with 415

laboratories now participating. LED-based microscopy is available in Yangon and Mandalay Regional TB centres and reference laboratories as are culture (solid and liquid), first-line DST and LPA in two sites (Yangon and Mandalay). These sites are under the Supra-National Reference Laboratory (SNRL), Thailand.

The country also conducted a National TB Prevalence Survey (2009-2010), the results of which are now available. Reference laboratories for DOTS Plus Pilot Project for diagnostic and follow-up investigations have been established. Xpert MTB/Rif is now available through the support of the Union (2) and will be set up in Mandalay. The concerned staff was trained during the first week of December, 2011. Additionally, one Xpert MTB/Rif machine will be set up in a centre run by Médecins Sans Frontières (MSF)-Holland.

Some of the issues faced in the introduction of rapid diagnostics include the availability of adequate and trained human resources. The rapid tests also lead to increased workloads with attrition of laboratory technicians. The IC system for setting up rapid tests needs to be strengthened and there is also a need for regular supervision and monitoring. Challenges are also envisaged in funding for maintenance and repair of equipment.

To meet some of the challenges, there is a plan to strengthen laboratory manpower and to further expand the laboratory network. All retreatment cases, TB-HIV, contacts of MDR-TB patients will be benefited for diagnosis of TB/DR-TB using a sputum specimens transportation system for rapid tests. There is also plan to introduce second-line DST and expand solid culture facility at Taunggyi TB Centre in Shan State,

(4) Programmatic management of drug-resistant tuberculosis

Well-functioning national TB control programmes in the Region have led to low levels (range: 1.7%-4.2%) of multi drug-resistance (MDR) among newly detected cases. Among previously treated cases in the Region, MDR-TB rates range from 10.0%-34.7%. However, given the large numbers of TB cases in the SEA Region, this prevalence translates to 130 000 MDR-TB

cases (110 000–170 000), accounting for nearly one third of the world’s MDR-TB cases.

Relevant targets for PMDT according to the global plan 2011-2015 are shown in Table 2.

Table 2: Global targets for PMDT, 2011-2015

	Baseline (2008/2009)	Target (2015)
Drug-resistant TB/Laboratory strengthening		
Percentage of previously treated TB patients tested for MDR-TB	5%	100%
Percentage of new TB patients tested for MDR-TB	2%	20%
Number of countries among the 22 high-burden countries (HBCs) and 27 MDR-TB HBCs with ≥ 1 culture laboratory per 5 m population	18–21	36
Percentage of confirmed cases of MDR-TB enrolled in treatment according to international guidelines	28%	100%
Number of confirmed cases of MDR-TB enrolled in treatment according to international guidelines	11 000	~270 000
T/t success rate among confirmed cases of MDR-TB	60%	$\geq 75\%$

During the past few years, steady progress has been made in the Region in notifying and MDR-TB cases (Figure 3) and initiating treatment for them (Figure 4). In 2010, nearly 4000 patients with MDR-TB had been registered for treatment in the Region. Extensively drug-resistant TB (XDR-TB) has also been reported from five countries in the Region. MDR-TB could potentially replace drug-susceptible TB and constitutes a threat to global public health security. In areas of high HIV prevalence, the potential for increased transmission of MDR-TB is high.

Figure 3: **MDR-TB cases notified in the SEA Region, 2005-2010**

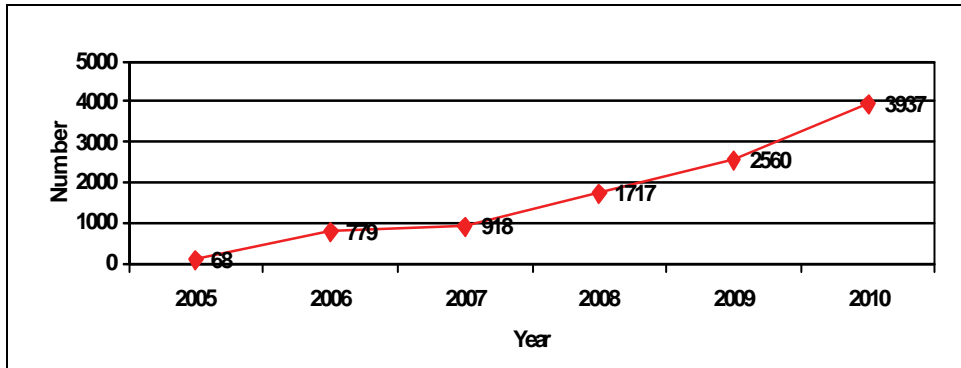
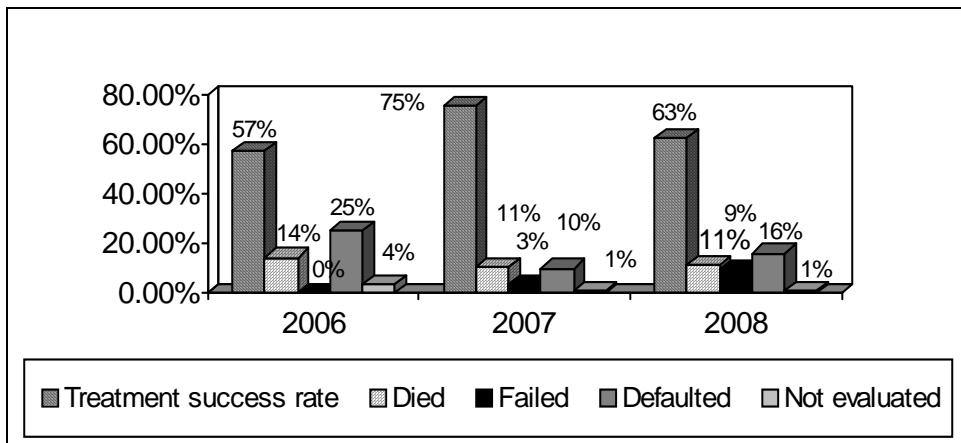


Figure 4: **Treatment outcomes for MDR-TB in the SEA Region, 2006-2008**



Considerable efforts are required to expand the capacity of countries to adequately respond to this challenge. All activities also need to be in alignment with the latest WHO guidelines. A regional response plan has been developed to have a common understanding of activities to be undertaken and scale up MDR-TB response to reach the goals of universal access for all MDR-TB patients.

Regional challenges:

- Suboptimal case detection
A case detection rate of 61% for all cases suggests that more than one third of estimated cases are not registered by NTPs.
- Unreached populations
While the geographical coverage for DOTS in all member countries has reached 100%, there are challenges to access for several pockets of populations.
- Suboptimal involvement of private practitioners
Studies in the Region indicate that the private sector is the first contact for 65% of TB patients in India and 73% in Myanmar. A study in Indonesia also reveals that the majority of people in rural areas preferred private practitioners for treatment of TB. This means that despite significant progress, the involvement of private and other health sectors in TB control in the Region is still far from optimal.
- Low treatment success rates for patients treated in the private sector
Evidence also suggests that treatment success rates in the private sector (unless part of PPM initiatives) are usually < 50%.
- Low registration of MDR-TB treatment
Fewer than 5% of estimated MDR-TB cases are registered for treatment by NTPs. A huge proportion of cases are either not getting treatment or are being treated under unknown conditions, with a high chance of a non-standardized regimen.
- Poor drug regulation
Anti-TB drugs (both first- and second-line) are available over the counter in several countries in the Region.
- Overburdened health infrastructure, especially overcrowded hospitals with no IC policy
- Poor housing conditions

- Several countries in the region face poor housing conditions, specifically overcrowding in urban areas, that facilitate spread of infections

A Regional response plan in alignment with the Regional strategic plan 2006-2015 has been developed. The purpose of the document is to provide an overview of the planned Regional response to M/XDR-TB; draw a roadmap for Regional contribution to achievement of global targets set forth for M/XDR-TB in the Global Plan 2011-2015; act as guidance tool for member countries for developing strategic and operational plans for PMDT; and serve as a reference document and tool of communication for Regional priorities for addressing the challenges related to M/XDR-TB in the Region.

The objectives of the plan are:

- To sustain or surpass the 70% case-detection and 85% treatment-success rates among TB cases set by the World Health Assembly in 2000 (related to Indicator 24 under the MDGs), in order to then:
- Halve TB deaths and prevalence by 2015 (related to Indicator 23 under the MDGs) as a move towards halting and beginning to reverse the incidence of TB as implicitly stated under the MDGs set for 2015.

The component strategies of the plan include:

- Preventing the emergence of resistance through sustained and enhanced efforts to reach all TB patients with quality care
 - Strengthening basic TB control services to improve case notification and treatment success
 - Promoting the adoption of ISTC by all care providers
 - Promoting rational use of drugs and pharmacovigilance
 - Strengthening TB-HIV collaboration
- Scaling up PMDT
 - Screening and testing for resistance to first- and second-line drugs, as well as HIV testing among confirmed cases of MDR-TB

- Providing access to effective treatment for drug-resistant TB
- Providing patient-centric care and promoting adherence
- Implementing TB IC in health-care facilities and congregate settings
- Strengthening surveillance, including recording and reporting of drug-resistant TB
- Strengthening health systems to ensure capacity for PMDT integrated with PHC
- Forging partnerships and ensuring coordination with stakeholders to mobilize the requisite resources
- Supporting PMDT through ACSM
- Undertaking research

All countries will need to align their respective plans with this Regional plan.

Country perspective: India

As of the third quarter of 2011, a total of 8755 MDR-TB cases have been diagnosed in the country, out of which 5810 (67%) have begun treatment. Results of the 2008 cohort show a treatment success rate of 46%. These results are expected to be better in coming years as shown by the interim results of patients currently on treatment .

Despite tremendous progress, the programme continues to face some challenges in scale-up of PMDT. These include delay in establishment and accreditation of laboratories which means that a sufficient number of cases cannot be detected. There is also a diagnostic delay with the conventional diagnostic method (3-4 months turnaround time), which is being used in several intermediate reference laboratories (IRLs). While the programme intends to roll out newer diagnostics, there are special requirements for introduction of such diagnostics including upgrading of laboratory infrastructure and training. Patient factors such as deaths and refusals associated with the long delay in diagnosis leads to less than optimum case notifications.

Since the number of cases being detected is rising, an uninterrupted supply of second-line anti TB drugs is a prerequisite. However, global shortage of some drugs and cost escalation (~\$2,100) reduce the number of patients that can be initiated on treatment. There is a need for extensive training, supervision and monitoring at all levels nationwide. Finally, dramatic demand on local programme staff for supervision, ensuring treatment adherence and timely follow-up puts a strain on existing human resources.

Country perspective: Nepal

Key features of PMDT in Nepal include fully supervised ambulatory treatment with a standardized treatment regimen. There is systematic clinical monitoring, treatment and documentation of side effects (monthly during intensive phase, bimonthly during continuation phase) and regular sputum and culture monitoring (monthly during intensive phase, bimonthly during continuation phase).

A national DR TB Technical Advisory Group has been constituted consisting of the German Nepal TB Project, Senior Clinical, Laboratory and Section Heads of the NTP, Ministry of Health (MOHP) Senior Chest Physicians, South Asian Association for Regional Cooperation TB Centre and WHO. The key role of this group is policy and planning, guidelines development, clinical advice on individual cases, and advocacy and resource mobilization.

By 2010, 910 MDR-TB cases had registered for treatment and there is a nationwide programme expansion. The number of treatment centres has more than doubled since the start of programme, from five to 12, while sub-treatment centres have increased from 11 to 52. There has been a revision of the DR TB Manual in 2010, leading to a change of regimen (from 24 to 20 months) and Ofloxacin being replaced with Levofloxacin.

Key challenges include concerns around programme sustainability. As of now all drug requirements are funded through external sources. The programme in its current form is too expensive. Funding through national sources is not feasible in the foreseeable future. There are also challenges around timely availability of second-line drugs, with a long lead time associated with Global TB Drug Facility (GDF) and WHO procurement. There is a global shortage/unavailability of some drugs. The country has also faced a high default rate (14.5% cumulative for five years) among MDR-TB

patients. Currently there are no culture/DST facilities at Regional level, leading to limited access to diagnostic services.

The country plans to treat 1500 cases during the period 2010-2015 and to expand MDR-TB programme sites (from 64 to 80). There is also a proposed provision of hostel accommodation (10 hostels). To strengthen lab capacity in the country, the Central NTP Laboratory will be upgraded to an NRL. There also plans to establish culture facilities at Regional level (3) and DST (1 Region). The programme will continue to expand collaboration with public- and private-sector partners to increase outreach.

(5) TB-HIV in SEA Region and strategic framework

The WHO South-East Asia Region accounts for nearly 15% of the global burden of TB-HIV. Five countries in the Region with the highest HIV burden also have a high TB burden (Table 3).

Table 3: HIV/TB Burden South-East Asia Region- 2010

Country	Estimated people living with HIV	Adult population infected with HIV	Prevalence of all forms of TB (Number)	Rate per 100 000 population	HIV prevalence among new TB cases	Incidence of HIV-positive TB cases (Number)	Rate per 100 000 population
Bangladesh	7 000	<0.1%	690 000	426	0.2%	580	<1
Bhutan	<1 000	0.10%	1 300	179	<0.1%	36	
DPR Korea	NA	NA	100 000	423	NA	200	
India	2 390 000	0.3%	3 000 000	249	6.4%	130 000	5.1
Indonesia	300 000	0.2%	660 000	285	2.8%	12 000	<1
Maldives	<100	<0.1%	150	47	<0.1%	<10	<1
Myanmar	230 000	0.5%	300 000	595	9.2%	22 000	44
Nepal	60 000	0.3%	71 000	241	2.4%	1 100	3.8
Sri Lanka	3 000	<0.1%	20 000	101	0.1%	32	<1
Thailand	540 000	1.1%	130 000	189	17%	16 000	23
Timor-Leste	<1000	0.1%	8 400	743	1.1%	<10	<1
Total	3.5million	0.3%	5 million	278	5.7%	180 000	10

Source: Country reports, national AIDS programmes; Global TB Control WHO Report, 2011

Note: Figures are rounded off. Data shown are the best available estimates; NA=not available

The incidence rate of HIV-positive TB cases is highest in Myanmar, followed by Thailand, India and Indonesia. The incidence rate of HIV-positive TB cases was below 1 per 100 000 population in Bangladesh, Maldives, Sri Lanka and Timor-Leste. India accounted for the majority of new HIV-positive TB cases in the Region. Overall, HIV prevalence among TB cases is 5.7%, but it varies widely among countries.

The estimated prevalence of HIV among TB patients between the ages of 15-49 years and the estimated number of active TB cases among PLHA in this age group is as shown in Table 4.

Table 4: HIV/TB burden in SEA Region, 2010

Country	Estimated people living with HIV	Adult population infected with HIV	Prevalence of all forms of TB		HIV prevalence among new TB cases	Incidence of HIV-positive TB cases	
			Number	Rate per 100 000 population		Number	Rate per 100 000 population
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Source: Country reports, national AIDS programmes; Global TB Control WHO Report, 2011

Note: Figures are rounded off. Data shown are the best available estimates; NA=not available

The need to urgently address TB-HIV is well understood in the Region. A Regional Strategic Plan for HIV-TB has been developed, adapting global strategies and guidelines to the unique needs of the Region. In this Regional plan, the following strategies and interventions are recommended in Table 5.

Table 5: Regional strategic plan for TB-HIV collaborative activities

A. Joint policy and strategy development for planning and strengthening of systems for the implementation and monitoring of TB-HIV collaborative activities	
A.1 Set up coordinating bodies for TB-HIV activities at different levels	Jointly by NACP, NTP and partners
A.2 Conduct surveillance of HIV prevalence among TB patients	
A.3 Joint planning and strengthening of systems to implement TB-HIV interventions	
A.4 Conduct M&E	
B. Decrease the burden of TB in PLHIV	
B.1 Establish intensified TB case-finding	HIV control programmes
B.2 Introduce isoniazid preventive therapy	
B.3 Ensure TB-IC in health-care and congregate settings	
C. Decrease the burden of HIV in TB patients	
C.1 Provide HIV testing and counselling	TB control programmes TB control programmes
C.2 Introduce HIV prevention methods	
C.3 Introduce co-trimoxazole preventive therapy (CPT)	
C.4 Ensure HIV/AIDS care and support	
C.5 Introduce antiretroviral therapy (ART)	

Countries face many challenges in implementing these collaborative TB-HIV activities. Broadly, the first challenge is to overcome the administrative barriers to collaboration between two often very different health programmes, and to mobilize the necessary political will and resources at all levels. The second challenge is to increase access to provider-initiated counselling and testing in both HIV/AIDS and TB settings and to link these

to the existing and expanding network of diagnostic and treatment facilities and providers working with TB programmes. The third challenge is to ensure that patients diagnosed with both HIV and active TB are provided optimal care for TB and promptly linked to the care and support services of national HIV/AIDS programmes, including for co-trimoxazole prophylaxis and antiretroviral treatment. The fourth challenge is to ensure a patient-centric approach at a unified point of care. Lastly, programmes must find rational ways to monitor and evaluate these activities.

Challenges in implementing TB-HIV collaborative activities

- **The need to establish a firm foundation for collaboration** through commitment supporting a firm national policy and mandate for collaborative activities. There is a need for establishing well-functioning TB-HIV technical committees at national level and coordinating committees at region/state/provincial and district levels, and strengthening the already overstretched health system infrastructure to effectively undertake the additional services.
- **Addressing diagnostic challenges** by ensuring the availability of decentralized counselling and testing services for HIV at peripheral facilities providing TB services. Cross-training of the health staff to correctly identify, refer and care for patients co-affected by both HIV and TB will help to reduce diagnostic delays.
- **Overcoming treatment challenges** through training staff to initiate and manage concurrent administration of anti-TB treatment and ART and managing drug interactions and adverse reactions associated with simultaneous administration of these treatments. There is also a need for reducing the risk of immune reconstitution syndrome and preventing any adverse effects on adherence.
- **Ensuring effective PSM** by overcoming the present shortages/lack of availability of ART at peripheral health facilities; ensuring uninterrupted supplies of necessary drugs and consumables at all facilities offering TB and HIV diagnosis, treatment and care.

- **Patient-related and sociological challenges** like overcoming stigma, altering high-risk behaviour, establishing psychosocial support systems and reducing delays through changing health-seeking behaviours.
- **Undertaking effective M&E**, including HIV information within routine TB recording and reporting systems while maintaining the confidentiality of HIV status.
- **Surveillance:** Difficulties in shifting from anonymous unlinked testing among TB patients to routine provider-initiated counselling and testing for surveillance and establishing routine surveillance for TB among HIV-infected people.

Regardless of these challenges, in most countries, initiatives to establish and expand TB-HIV collaborative activities have commenced or are being actively pursued. In India, Nepal, Thailand, and Myanmar, programmes have jointly developed guidelines for TB-HIV collaborative activities, and are in various phases of scaling up activities nationwide.

Country perspective: Thailand

In 2010, 90% of TB cases were tested for HIV co-infection, out of which 16% were found to be HIV-positive. Out of the co-infected cases, 71% are receiving CPT, while 53% are receiving ART.

TB coordinators responsible for TB-HIV activities are now operating in all districts. Testing and recording of HIV status of all registered TB patients has become a standard routine procedure. All the monitoring indicators have been incorporated into the TB register for references and collaboration with the National AIDS Programme has increased ART provision for co-infected cases. The programme is in the process of developing and establishing TB-HIV collaboration activities with private and non-MoPH hospitals to improve coverage.

Issues and challenges faced by the programme include inadequate collaboration among the parties involved, leading to suboptimal performance. There is a need to increase the effectiveness of TB-HIV coordinators and to provide better reporting HIV in TB screening. Overall the programme needs to provide better treatment and services to patients, including the non-Thai patients who have previously not been recorded in to the system.

(6) Quality assured anti-TB medicines

Definitions

- Quality Assurance (QA) – a set of broad concepts covering all matters that influence the quality of a product and ensuring that pharmaceutical products are of the quality required for their intended use.
- Quality Control (QC) – all measures taken: specifications, sampling, testing and analytical clearance, to ensure that finished pharmaceutical products conform with established specifications for identity, strength, purity and other characteristics, including the packaging, labelling and product information.
- Quality Monitoring (QM)- all measures taken to ensure that finished pharmaceutical products continue to conform with established specifications and are used and disposed of rationally throughout their procurement, distribution and use.

The need for QA and QC arises because counterfeit and substandard drugs are widely produced and available and are a constant threat to global health, especially for people living in countries with limited regulatory capacity and resources. Such drugs put the public at risk from unsafe and ineffective medicines costing about US\$ 20 billion per year, representing about 7% of worldwide medicine sales.

Actions to monitor product quality include establishing a product problem reporting system indicating the following:

- Who should report the quality problem
- How to fill out reporting form, where to send, and to whom
- What follow-up information to provide and to whom
- Criteria for testing product
- How to recall (return) a poor quality product from your health centres and warehouses

A good reporting system tracks the batch number of each product to the facility level; classifies the type of recall (whether life-threatening or general recall); and monitors that all products have been properly recalled.

Progress in the Region: 11 countries in the region procure QA drugs through the Global Fund (GF) funding from quality-assured sources. Quality-assured paediatric formulations are also being used by some countries. There has been a moderate progress in increasing the number of qualified suppliers globally. This process is supported by countries by waived/fast-track registration of pre-qualified products (Table 6).

Table 6: Number of products pre-qualified by WHO or SRA-approved since 2009

Number of product got WHO prequalified or SRA approved from 2009	
ARV	23
Malaria	3
TB	13
Total	39

Challenges

- Non-adherence to common QA policy while procuring through funding from government/some donors
- Creating an opportunity for wide availability of substandard drugs
- Unwillingness of manufacturers to submit to PQ programme
- Monopoly and high price since there is no competition
- Inadequate supply of drugs leading to shortages
- NTPs alone are not able to change the situation, while N/DRA have not been involved yet or ignored
- Lack of resources to implement QA/QC/QM procedures

- No high-level commitment to enforce the existing rules and regulations
- Inadequate funding to improve storage infrastructure and supply chain management practices

Main actors to be involved

- Regulators: establish quality standards
- Donors: require quality standards
- Producers: manufacture according to quality standards
- Distributors: store/transport according to quality standards
- Purchasers: purchase according to quality standards
- Drug outlets: good storing conditions and rational use
- Civil society: create demand for QA drugs

In conclusion, countries need to ensure adherence to common QA standards for TB drugs/supplies procured with funding from all sources. There is a need for commitment from all countries to restrict regulation of TB drugs to QA drugs and enforce the existing regulations. There needs to be expansion of initiatives to strengthen N/DRA in all countries and involve them in establishing & enforcing QC/QM and government & donor commitment to improve storage infrastructure at all levels. The ministries should ensure adequate staffing and capacity-building in PSM.

Country perspective: Bhutan

PSM of anti-TB drugs in Bhutan starts with annual submission of quantifications by the centres. The next step is compilation and quantification by the Department of Vaccines and Essential Drugs, and a tender call by the department. Submitted tenders are evaluated and selected, followed by preparation of a distribution plan. The annual supplies are received at the medical supply depot, which distributes them.

The NTP has initiated procurement of both first- and second-line drugs through GDF/Green Light Committee (GLC) in 2009. All hospitals and BHUs grade I have access to QA first-line drugs while national and regional referral hospitals have access to QA second-line drugs. The quality of drugs is monitored by the Drug Regulatory Authority (DRA) and QA division.

Anti-TB drugs are available through government hospitals only and no private hospitals prescribe these drugs. First- and second-line drugs are also not available in pharmacy retailer shops.

To ensure a strong PSM, training on rational use of anti-TB drugs has been done by EMTD. The adherence to guideline is monitored by NTCP. Training on PSM has been conducted with TA from WHO.

Issues and challenges

- Delay in approval of PSM plan
- Stockouts of both first- and second-line drugs
- Delay in receiving the drugs
- Delay in procurement of second-line drugs
- Inadequate coordination and collaboration
- Inadequate monitoring and supervision

Country perspective: Sri Lanka

In Sri Lanka, all the procured drugs are supplied to the Chief Pharmacist at Central Drug Stores at Welisara. A portion of the drugs is distributed to the chest hospital Welisara for the use of inpatients, while others are distributed to chest clinics according to their requirement (two months' stock of the regimen of diagnosed MDR-TB patients). Management procedures include maintenance of lot cards, use of drug register regularly and First Expiry–First Out.

To ensure rational use of these drugs, all FDCs and second-line anti-TB drugs are available only at district chest clinics. Individual first-line drugs are available at government hospitals and through the private sector also.

Issues and challenges

- Procurement procedure is too long
- Fund transfer delay because of linking with the GF PUDR (every six months)

- Estimate of MDR patient for a particular year is very small (nearly 12)
- Short shelf-life of second-line drugs (18 months)
- QA system for FDC has not been implemented
- Not adequate personnel in drug management and high turnover of trained staff
- Lack of technology for quality testing of FDC
- Inadequate storing facilities in periphery
- Unavailability of post-supply quality testing system

(7) Scaling up community TB care and civil society involvement in TB control

For TB control, involving communities in health care is important and urgent. Though TB has been around for hundreds of years and is curable, the toll in 2010 was 8.8 million cases, 1.1 million deaths and an additional 0.35 million deaths among PLHIV. In 2009, 9.7 million children were rendered orphans as a result of parental deaths caused by TB.

Most TB cases and TB deaths are in the SEA Region. Based on the estimates, there are about three million people with TB missing globally. The missing cases could be in the private sector, urban slums, migrants, remote rural areas, difficult terrain, PLHIV, prisons, etc.

TB still does not appear to be high on the agenda for governments, donors, national programmes, researchers, drug manufacturers, inventors, journalists, activists and civil society. There are many players and unless we move away from treating TB only as a medical problem, substantial results will not be seen. TB is a major public health and social problem needing social and medical interventions. Developing a new way of thinking, a paradigm shift is needed.

Government and national TB programmes alone cannot achieve the targets and the results will not be sustainable unless the communities are involved. All the different players need to collaborate and be strengthened. The missing link is the communities, who have the biggest stake in the

health of the members. This can only be achieved if and when civil society is engaged and involved in a meaningful manner. A deliberate intentional inclusiveness is required that may at times require a change in policy, creating the space and offering respect.

Community systems are community-led structures and mechanisms used by communities through which community members and community-based organizations (CBOs) and groups interact, coordinate and deliver their responses to the challenges and needs affecting their communities. Community systems strengthening (CSS) is an approach that promotes the development of informed, capable and coordinated communities and CBOs, groups and structures. CSS involves a broad range of community actors, enabling them to contribute as equal partners alongside other actors to the long-term sustainability of health and other interventions at community level, including an enabling and responsive environment in which these contributions can be effective. The six core components of a CSS framework are:

- (1) Enabling environments and advocacy, including community engagement and advocacy for improving the policy, legal and governance environments and affecting the social determinants of health
- (2) Community networks, linkages, partnerships and coordination enabling effective activities, service delivery and advocacy, maximizing resources and impacts, and coordinated and collaborative working
- (3) Resources and capacity-building, including HR with appropriate personnel, technical and organizational capacities, financing and material resources
- (4) Community activities and service delivery, accessible to all who need them, evidence-informed and based on community assessments of resource and needs
- (5) Organizational and leadership strengthening including management, accountability and leadership for organizations and community systems
- (6) Monitoring and evaluation (M&E) planning including M&E systems, situation assessment, evidence-building and research, learning, planning and knowledge management.

Civil society organizations (CSOs) provide the last mile of services. There are many areas where government agencies are not able to provide services to the population, for a variety of reasons including geographic barriers. CSOs are working in such areas, enjoying the confidence of the local population and providing much-needed health and other services. This proximity to and acceptability by the communities/population gives CSOs a vital role in health-care service delivery, a fact now universally recognized.

Role that communities and organized infected/affected CBOs can play:

- Intensified case finding
- Treatment adherence and completion support
- Defaulter prevention and tracking
- Advocacy for increase programmatic and research resources and implementation

(8) TB prevalence survey

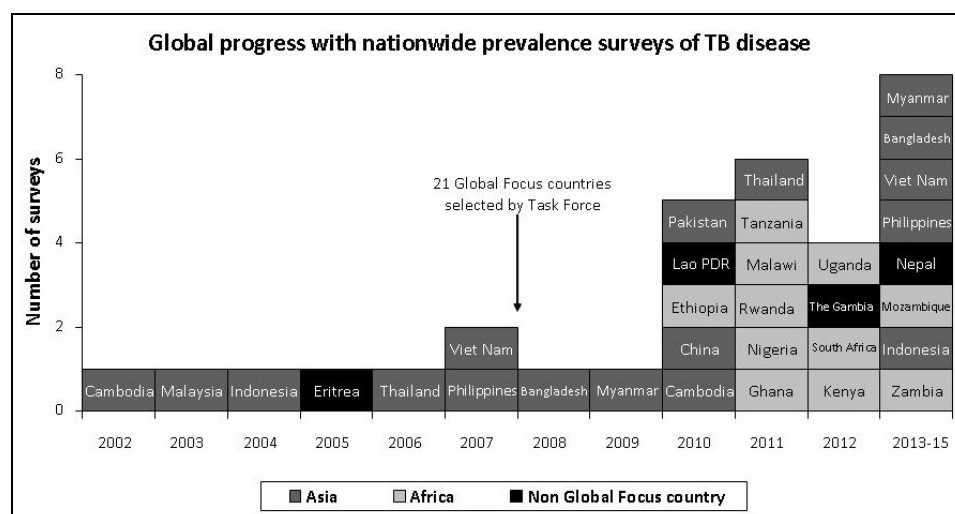
The WHO Global Task Force on TB Impact Measurement was established in June 2006 and is convened by the TB M&E team in the Stop TB Department. The mandate of the Task Force is to produce a robust, rigorous and widely-endorsed assessment of whether the 2015 targets set for TB control with the MDGs and by the Stop TB Partnership are achieved at global, Regional and country levels; to regularly report on progress towards these targets in the years leading up to 2015; and to help build national capacity in M&E. To fulfil this mandate, the Task Force has defined three major strategic areas of work: strengthened routine surveillance of TB cases and deaths; national population-based surveys of the prevalence of TB disease in around 20 global focus countries in Africa and Asia; and periodic review and updating of the methods used to translate surveillance and survey data into estimates of TB incidence, prevalence and mortality. Three subgroups have been formed to take forward each of these areas of work.

Most of the global focus countries are actively planning to carry out a prevalence survey before 2015 (Figure 5). In Africa, these surveys will be the first ever, or the first in more than 50 years. Prevalence surveys have

been implemented in several Asian countries in recent years, but some countries will be implementing a survey for the first time or for the first time using the methods recommended by the Task Force (as set out in the recently published handbook on disease prevalence surveys, aka The Lime Book). The WHO Global Task Force on TB Impact Measurement continuously supports countries to plan and implement quality surveys and analyse and disseminate results promptly.

In 2011 the completion of the first survey in Ethiopia was the biggest achievement. China survey results that showed significant reduction of prevalence between 2000 and 2010 were highlighted in the Global Report 2011.

Figure 5: National TB prevalence surveys, 2002-2013



Among SEA Region countries, Myanmar completed a national survey under the WHO-recommended strategy with chest X-ray screening and culture diagnosis in 2010. The findings of the survey are challenging, but point the way forward to improve the TB care and control. In India, Gujarat state is carrying out a statewide survey and a nationwide survey in Thailand is about to launch, followed by Indonesia in 2012.

As TB prevalence surveys begin to tell much more than just prevalence, quality studies will lead to quality TB care and control and programme efficiency.

(9) Health systems strengthening (HSS) and TB control

It is well recognized that health systems based on the principles of PHC (i.e. universal coverage/equity, community participation, intersectoral collaboration and use of appropriate technology as underpinned in the Alma-ata Declaration) are critical for achieving better health. Experiences in implementing vertical programmes to scale up interventions in disease prevention and control to secure rapid health outcomes and to achieve MDGs reaffirm that if systems issues are not addressed, service delivery programmes often fall short of their potential or are unable to sustain themselves. Therefore, global health initiatives like the Global Fund and GAVI Alliance have allocated resources for HSS in Member countries receiving its grants to improve their capacity to achieve the project's health goals. International health partnerships and global forums like the G8 summits, most recently in Okinawa, have emphasized HSS as the key to achieving immediate, medium-term and long-term health goals and outcomes. The World Health Assembly in 2011 adopted five resolutions on HSS illustrating its importance.

HSS, therefore, is at centre stage. However, it is important to make sure that any proposed intervention for HSS really addresses the needs. Therefore, there is an urgent need to have a guideline for rapid assessment of health systems to highlight the strengths and weaknesses related to a particular project/programme to be rectified through a specific project supported by the Global Health Initiatives or advocacy at various levels.

To foster a systematic and comprehensive understanding of health systems, WHO has developed a Framework for Health Systems which highlights the six elements or building blocks of it.

Tuberculosis control, as one of the key disease control programmes, has recognized the need for stronger health systems to ensure sustainability. Table 7 illustrates the gaps in the health system's abilities to provide universal access to quality TB control services following a health system rapid assessment in two countries, Bhutan and Thailand.

Table 7: Gaps in health system capacity for TB control

Health systems building blocks	Gaps in providing TB services
Financing	<ul style="list-style-type: none"> • All SEA Region governments have committed to free TB services , however health budgets take the first cut when national budgets are downsized. • There are risks of re-allocation of health budgets to other perceived priorities, and difficulties in retaining adequate TB budgets at local governments level. • GF offers a separate component for HSS: TB can contribute to funding HSS. GF also offers a cross-cutting HSS proposal that should show it will benefit at least two diseases including TB. • GAVI offers a HSS proposal whereby countries can propose steps to improve TB programme sustainability such as strengthening district health systems, health workforce training, improving drug distribution management and laboratory capacity. • The need to be proactive to identify and use subnational or new donor potentials. • Thailand: Enough funds at facility level; there is a need to give incentive for monitoring (to be included for all diseases in the national health budget). • Bhutan: Not enough government funding committed for TB control.
Governance	<ul style="list-style-type: none"> • Most countries have multi-year plans for TB control aligned with national health plans, but NTP is not involved in health system development decision-making. • To engage with HSS focal points within ministries of health (planning bureaus at best) to contribute for setting priorities, planning, oversight functions in overall planning. • Improve management and technical capacity at regional/district levels • Improve collaboration with the private sector for more comprehensive information (at present loss of information under “dual track” financing mechanisms of the Global Fund and some external donors). • Thailand: need more attention to programme development such as MDR-TB issue (also strengthening BASIC DOTS in Bangkok Metropolitan Hospitals, which is complex). • Bhutan: There is a need for proper coordination of budget for programmes.

Health systems building blocks	Gaps in providing TB services
Human Resources	<ul style="list-style-type: none"> • Improve engagement of professional associations to maintain quality. • Training quality and post-training M&E. • Need to establish recent inclusion of private laboratories in diagnostic network (India, Myanmar, Thailand). • Involvement of community network, volunteers. • Thailand: Use volunteers to monitor; now they are trying to involve family members of patients. • Bhutan: Lack of adequate skilled human resources at all levels. Low awareness among health workers about maternal, newborn and child health and TB in children.
Medicines, vaccines and health equipment	<ul style="list-style-type: none"> • Improving supply management to prevent recurrence of breakdown in supply chains and emergency procurements (Indonesia: imminent stock-outs: Oct. 2007, April 2008; Bangladesh: many emergency procurements) • Improving in-country PSM capacity especially in the case of the TB programme scale-up.
Service delivery	<ul style="list-style-type: none"> • Improving capacity, expertise at subnational levels. • Improving government capacity to manage the TB programme, taking into account the increase in service delivery points and increased private sector and NGO involvement. • Improving contribution in case notification and treatment outcome from the private sector. • Improving subnational government capacity in enforcing common norms, standards in decentralized systems. • Increasing attention to women and children in TB control. • Bhutan: Need to introduce PAL Health approach • Thailand: Need to ensure success of treatment (provincial level is good but Bangkok Metropolitan is weak in reporting).

Health systems building blocks	Gaps in providing TB services
Information surveillance	<ul style="list-style-type: none">• Development of integrated surveillance system.• Improving HMIS for TB programme analysis and dissemination at all levels.• Improving engagement of research institutes with national programmes.• Integrate operational research for newer drugs and diagnostics.• Bhutan: Low awareness of TB and HIV co-infection (apparently low HIV in Bhutan).• Thailand: Find new cases from screening activities; more efforts on HIV cross-infection.

The way forward

Clearly identifying the gaps in each building block of the health system will not by itself improve service delivery nor have the desired impact of the programme activities. However, by adopting an integrated approach and by understanding the bigger health system issues, TB programme managers can take concrete steps, to strengthen health systems. HSS can, as well as specific disease control interventions, be well planned, implemented and monitored.

At health facility level, TB control services are one of the many interventions that need to be well managed. A comprehensive approach that is implemented in an efficient way will also improve the health of the population.

4. Policy

(1) Scaling-up of PMDT- policies and strategies, including global and Regional GLC

In 2010, there was an estimated prevalence of 650 000 cases of MDR-TB, and in 2008 it was estimated there were 150 000 MDR-TB deaths annually. The number of patients enrolled on MDR-TB treatment increased to 46 000 in 2010. Despite this increase, just 16% of the estimated number of MDR-TB patients requiring treatment in that year received it.

A number of key bottlenecks, which are common across many affected countries planning and beginning to implement the M/XDR-TB response, will require political decisions within the health system as a whole to overcome:

- (1) Forecasting the control of MDR-TB epidemics
- (2) Addressing the gaps in TB control
- (3) Providing M/XDR-TB management and care
- (4) Addressing the health workforce crisis
- (5) Responding to the laboratory bottleneck
- (6) Ensuring access to quality-assured anti-TB medicines
- (7) Restricting the availability of anti-TB medicines
- (8) Prioritizing TB IC
- (9) Maximizing research opportunities to address M/XDR-TB
- (10) Financing M/XDR-TB control and care

(For more detail please go to: <http://www.who.int/tb/challenges/mdr/bottlenecks/en/>)

The 2011 update of Guidelines for the Programmatic Management of Drug-resistant Tuberculosis is intended as a tool for use by public health professionals working in response to the Sixty-second World Health Assembly's resolution on prevention and control of MDR-TB and XDR-TB.

National TB control programmes, public health decision-makers and technical and implementing partners involved in the control of MDR-TB are encouraged to use the recommendations to guide their work, and to adapt national guidelines accordingly.

These practices are expected to encourage further collection of evidence and to initiate new research, particularly on the composition of regimens and the duration of treatment for patients with XDR-TB.

A new global framework to support scale-up of MDR-TB services has been developed and agreed upon. During 2009, key stakeholders supporting the expansion of MDR-TB services and care concluded that a revision of the global framework (known as the GLC initiative) that addresses MDR-TB diagnosis and management was necessary. Following a stakeholders meeting in February 2011, a transition plan was finalized and the new global framework to support scale-up of MDR-TB services and care was endorsed by the Stop TB Partnership (STP) Co-ordinating Board on 31 March 2011 and the WHO Strategic and Technical Advisory Group for Tuberculosis (STAG), Geneva, June 2011.

The goal of the new framework to support scale-up of PMDT is to have universal access to MDR-TB management by 2015. Elements of the new framework are:

- (1) Increased level and diverse models of technical support from partners to assist countries to plan, implement, manage and monitor the required scale-up of MDR-TB services.
- (2) Increased access to high-quality, affordable second-line drugs for the treatment of MDR-TB.
- (3) Strengthened advocacy for the accelerated scale-up of the response to MDR-TB.
- (4) Regular and supportive M&E of country performance in accelerating access to MDR-TB treatment and care, to inform assessment of global progress, to propose improvements to the global, regional and national approaches, and to pursue advocacy activities tailored to country needs.

- (5) Provision of advice to funding agencies, on their request, ensuring that treatment of patients with MDR-TB is done in accordance with international standards.

Principal features of the framework are:

- Focus will be on building national capacity to scale up MDR-TB services and care, via increased TA;
- No separate GLC application or approval process, but rather, review of national MDR-TB management expansion plans;
- Programmes/projects can directly ask the GDF for quality-assured second-line drug procurement and supply;
- MDR-TB related advocacy activities to be strengthened;
- Establishment of a successor to the current GLC at the global level which should be a broader based strategic committee (Global GLC or gGLC), the secretariat of which is at WHO, with a dual role of advising WHO and partners; and
- Decentralized Regional entities (rGLCs) to be established in a phased manner.

To support the activities and implementation of the new global framework, GLCs are to be established at the global and Regional levels. They will be known as the Global GLC at the global level and generically at the Regional level as the Regional GLCs. The term "GLC" is however now to be seen as a brand name and not as an abbreviation of a specific longer form of notation.

The new framework, with the Global and three Regional GLCs housed at WHO Geneva and the WHO Regional Office for the Americas/Pan American Health Organization, Regional Office for Europe, and Regional Office for the Western Pacific, respectively, started functioning from 1 July 2011. The first meeting of the gGLC was held on 6-7 October 2011 at WHO Geneva. The meeting recommended that the decentralization of GLC services to the remaining three Regions (African, Eastern Mediterranean and South-East Asia) should be done as soon as possible, and that the secretariats of these three rGLCs should be housed in the respective WHO Regional Offices. The recommendations of the gGLC were

subsequently discussed and agreed upon by the Core Group of the STP's MDR-TB Working Group on 24 October 2011 in Lille, France.

Next steps:

- Set up rGLC in other Regions, particularly the SEA Region
- Make the new framework functional in the Region

(2) Paediatric first-line anti-TB medicines

Paediatric formulations of first-line anti-TB medicines have been available since 2007 from GDF through UNITAID support. In the SEA Region, Bangladesh, Bhutan, the Democratic People's Republic of Korea, India, Indonesia, Myanmar, Nepal, Sri Lanka and Thailand have benefited from this facility.

Recently WHO has issued Rapid Advice that has led to a revision to the recommended dose of anti-TB drugs to be used in children.

The rationale for the revision of the recommended dose was that previously recommended dosing of R, H, Z and E was extrapolated from adult dosing, leading to lower serum concentrations in the paediatric age group. There was also a longstanding understanding that doses of drugs prescribed for children require adaptation to yield the same exposure as in adults.

For the revision of the guidelines, there were series of systematic reviews of literature related to pharmacokinetics of E (2006), R, H and Z (2008); efficacy, safety and toxicity; hepatotoxicity H, R, Z - (2009); efficacy and safety of intermittent treatment regimens (2009); efficacy, safety and pharmacokinetics of the first-line anti-TB medicines in children below three months of age (2009); efficacy and safety of the first-line TB medicines in the treatment of TB meningitis (2009); efficacy and safety of the first-line anti-TB medicines in the treatment of osteo-articular TB (2009); and the choice of fluoroquinolones for treatment of TB in children, including a review of safety (2010).

Given the risk of drug-induced hepatotoxicity, WHO recommends the following dosages of anti-TB medicines for the treatment of children (see also Table 7):

- Isoniazid (H) – 10 mg/kg (range 10-15 mg/kg); maximum dose 300 mg/day
- Rifampicin (R) – 15 mg/kg (range 10-20 mg/kg); maximum dose 600 mg/day
- Pyrazinamide (Z) – 35 mg/kg (30-40 mg/kg)
- Ethambutol (E) – 20 mg/kg (15-25 mg/kg)

Children with TB living in settings with high HIV prevalence (or with confirmed HIV infection) should not be treated with intermittent regimens (twice-weekly or thrice-weekly doses). During the continuation phase of treatment, in settings with well-established DOT, thrice-weekly regimens can be considered for children known to be HIV-uninfected. Infants (aged 0-3 months) with suspected or confirmed TB should be promptly treated with the standard treatment regimens, as older children. Treatment may require dose adjustment to reconcile the affect of age and possible toxicity in young infants. The decision to adjust doses should be taken by a clinician experienced in managing paediatric TB.

New recommendations and available products

FDCs approved by the WHO-UN prequalification programme:

- rifampicin + isoniazid: 60 mg + 30 mg dispersible
- rifampicin + isoniazid + pyrazinamide: 60 mg + 30 mg + 150 mg dispersible
- rifampicin + isoniazid: 150 mg + 75 mg tablet
- rifampicin + isoniazid + ethambutol: 150 mg + 75 mg + 275 mg tablet
- Rifampicin + isoniazid + pyrazinamide + ethambutol: 150 mg + 75 mg + 400mg + 275 mg tablet

Two other FDCs that are available under GDF QA policy

- rifampicin + isoniazid: 60 mg + 60 mg dispersible
- rifampicin + isoniazid: 150 mg + 150 mg tablet

Table 8: Paediatric medicine dosages

Weight Band	Intensive phase (2 months)		Continuation phase(4 months)	
	RHZ(60+30+150)	RH(60+60)	RH(60+30)	RH(60+60)
5-7 kg	1	1	1	1
8-14 kg	2	1	2	1
15-20 kg	3	2	3	2

Weight Band	Intensive phase (2 months)			Continuation phase(4 months)	
	RHZ(60+30+150)	RH(60+60)	E100	RH (60+30)	RH(60+60)
5-7 kg	1	1	1	1	1
8-14 kg	2	1	2	2	1
15-20 kg	3	2	3	3	2

Weight Band	Intensive phase (2 months)			Continuation phase (4 months)	
	RH(150 + 75)	RH(60+60)	Z400	RH(150+ 75)	RH(60+60)
21-30kg	2	2	2	2	2

Weight Band	Intensive phase (2 months)		Continuation phase (4 months)	
	RHZE(150 + 75+400+275)	RH (60+60)	RH (150+ 75)	RH (60+60)
21-30kg	2	2	2	2

Next steps for countries:

- Adapt WHO Rapid Advice as soon as possible

- Make best use of the currently available paediatric formulations to reflect higher recommended dosage for children until appropriate new products are made available
- Update guidelines/annexes
- Intensify diagnostic of TB in children
- Initiate chemoprophylaxis treatment as and when required and ensure availability of H100 at relevant facilities levels
- Organize trainings for health providers involved in diagnostics and treatment of TB in children

(3) TB Technical Assistance Mechanism (TBTEAM)

TBTEAM is a mechanism for building country capacity, TA coordination, planning and resource mobilization, and an international platform for supplying and coordinating TA.

The concept of TBTEAM was presented to the STP Coordinating Board in 2005 to address the perceived need at country, Regional and global level for more efficient and effective coordination of TB TA. TBTEAM was subsequently launched in 2007.

TBTEAM is an STP initiative under the umbrella of the DOTS Expansion Working Group. It consists of TB TA providers (currently 33 partners plus 29 Supranational Reference Laboratories). The secretariat is provided by WHO Stop TB Department. There is also a focal point in the STP secretariat

The rationale for establishing TBTEAM is to enable the most effective use of GF and other external resources and to coordinate support to new round applications through building national capacity and ownership of countries' own TA plans and implementation.

TBTEAM aims to assist countries and international agencies coordinate TA through a well-organized network of technical partners. It helps countries and partners with ad hoc requests for assistance that could be provided by a consultant within a large pool of qualified experts.

The TBTEAM functions at three levels: national, Regional and global. At country level the TBTEAM focal point should be in NTP or within a country-based technical partner or coordination body: ICC, TWG, STB Partnership, or other (including sufficient representation of all TB implementers). The team then prepares a TA plan (incorporating GF, TBCARE, and national budget) according to TB strategic plan and the annual TB implementation plan and monitors the TA plan implementation, updating it regularly according to needs. TBTEAM is used to identify TA as a supplement to the support available from the traditional partners, by engaging all partners including civil society.

The role of the TBTEAM focal point at the Regional level is to support each country (NTP) in TA development, provide strategic support, and monitor on-going GF TB grants, and to respond to urgent and routine TA requests.

The role of the TBTEAM at the global level is to monitor and analyze GF grant progress, coordinate with partners to respond to TA requests, monitor, evaluate and report on all TBTEAM activities, and support Regional and national TBTEAM.

Following the initial experience of TBTEAM a number of challenges were identified. To address the challenges new strategic directions have been developed as illustrated in Table 9.

Table 9: Challenges and strategies for TA

Challenges	New directions
TA supply- rather than demand-driven Focus on global coordination of TA	Systematic analysis of country needs and GF performance Strengthen country capacity to plan and coordinate their own TA <ul style="list-style-type: none"> • National TA planning guide • TA planning missions to countries • 10 priority countries in 2011 supported to develop TA plans • Shift to longer-term TA • Seed funding for national planning and coordination • Regional workshops to inform TA needs • Mentoring by Regional focal points

Need to strengthen Regional focal points	Increased training by HQ staff Joint Regional/HQ support to key countries Increased support to Asia, Africa
Need to strengthen partners' involvement Need to broaden TA provision	Strengthen flow of information to partners Improve website with key messages Improve communications (i.e. "Go To Meeting")
Insufficient technical focus	MDR-TB scale-up Rolling out Xpert MTB/Rif Drug and laboratory supply management Engaging civil society and the community

For countries, the mechanism means that NTP is in charge of its own TA needs and plans. Technical partners assist in the development of a TA plan and engage in the process of implementation (upon the request of NTP) and effectively there is a better coordination and planning of TA missions. There is also comes with an ability to track TA missions and view possible scheduling conflicts while engaging all partners, national and international. Overall the TBTEAM coordinates use of resources for TA and identifies gaps and ensures quality assurance to evaluate TA.

Next steps

A Regional TBTEAM workshop is planned in 2012 which would involve training for National TBTEAM Coordinators from priority countries and group work with national TBTEAM Coordinators, NTPs and country staff.

5. Partners' perspectives

Becton Dickinson (BD)

BD is a 100-year-old medical devices and technology group partnering with the TB control programme in India as a knowledge partner for access to modern TB technology. It is involved mainly in rapid culture and DST systems and collaborates with FIND for strengthening NRLs and IRLs under Expand-TB project. The organization also partners with The Union, LRS Institute and the Public Health foundation of India for its activities in the country. BD has launched a Trusted Partners Campaign for improved awareness on M/XDR-TB, and is involved in biosafety training and in hospital-associated IC (Safe-I NABH accredited programme).

BD has the potential to provide TA in strengthening health systems, medical technology, vaccines and devices, laboratory strengthening, infection prevention and control, engagement of all care providers, especially in private sector engagement (policy development for appropriate screening algorithm, rational antibiotic use and infection prevention and operations research [TB-diabetes co-infection]).

Challenges

Pace of training in public sector is slower than expected

- Attrition rate of trained personnel
- Large scale of unorganized private sector
- Lack of regulation and policy for appropriate screening algorithms for accurate diagnosis and treatment of TB, especially in private sector

Bangladesh Rural Advancement Committee (BRAC)

BRAC started a TB control programme in 1984 in one subdistrict and scaled up to 10 subdistricts by 1992. NTP-BRAC have jointly expanded DOT services to 297 subdistricts, 42 districts and parts of five city corporations and now involve 24 academic institutes and prisons. The focus areas for BRAC include workplaces and industrial areas in districts/cities. Population coverage now stands at 94 million with over 80 000 health volunteers.

The BRAC strategy mainly functions through Shasthya Shebikas, who disseminate a TB message during their household visits and health forums, identify and refer TB suspects for sputum test and hold outreach sputum collection centres below subdistrict level. The sputum is examined at government/BRAC laboratories and treatment initiated under the guidance of UHC medical doctors as per NTP guidelines. Shasthya Shebika ensures daily intake of medicine (DOT). In certain cases self-administered treatment is given with support of family members or the community.

Challenges

- Sustainability of funding, commitment, quality of care
- Enhance diagnosis and treatment of MDR-TB cases
- Strengthening the system for diagnosis of smear-negative, extra-pulmonary and childhood TB
- Outreach in hard-to-reach areas and urban slums to ensure access
- Addressing TB-HIV
- Involvement of more private providers

United States Centres for Disease Control (CDC)

The CDC Southeast Asia Regional Tuberculosis Programme, Division of TB Elimination works with the goals of developing an evidence base for public health programmes and policies to control TB through programmatically relevant research, and improving the quality of TB surveillance, prevention, and treatment through TA to National TB and HIV programmes in the Mekong region.

The main focus areas have been:

- Diagnostics (case-finding and drug resistance)
 - TA for rollout, implementation research, cost-effectiveness evaluation
 - liquid culture, rapid identification, LED microscopy, LPAs (Hain)
 - Current: Xpert MTB/Rif

- TB-HIV (TA and operational research)
 - Observational studies identifying risks for mortality
 - 3 I's (intensified case finding, INH preventive therapy, IC demonstration projects)
 - PITC for HIV among TB patients, ART referral
- Epi/surveillance systems and training
 - Enhanced surveillance demonstration projects (electronic data systems, enhance lab capacity, PPM) and data literacy
 - Operational research training, multiple rounds
- Airborne IC (TA and operational research)

The division works in collaboration with multilateral, national, and NGO partners on human capacity development (training, mentoring, partnering)

Challenges

- Ensuring alignment of agency priorities with national priorities
- Discrepancies between national / subnational / facility-level / community perspectives in problem definition
- NTP colleagues have multiple competing demands; challenging to engage as equal partners in TA and operational research
- Inherent tension with political commitment: short-term targets vs. long-term impact assessment
- Finding the right balance between short, focused support vs. Longer-term partnerships

German Leprosy and TB Relief Association (GLRA)

GLRA participates in India's TB control programme in promotion of treatment adherence through innovative strategies like involving community volunteers, flexi-timing DOTS, etc. GLRA projects focus on TB in specific groups, specifically difficult-to-reach populations like urban slums/tribal

areas/miners/prisons. GLRA is also involved in home-based care to promote adherence among MDR-TB patients and IC in patients and the community.

Some of the other areas of possible contribution include HSS for MDR diagnosis, support teams, human resources and participation in national- and Regional-level consultative meetings (government and major NGO partners).

Médecins Sans Frontières Holland (MSF Holland)

MSF is an international medical humanitarian NGO with five operational sections: MSF-Holland, MSF-Switzerland, MSF-France, MSF-Belgium and MSF-Spain. MSF has humanitarian missions in 80 countries. It has been working in Myanmar since 1993 in Yangon, Rakhine, Shan and Kachin mainly focussing on TB-HIV (MDR-TB), PHC, RH, malaria and emergency response.

The MSF TB programme started in 1998 supporting the NTP in case detection, diagnosis and treatment, referral of non-HIV cases to NTP where available, TB-HIV activities like VCCT, OI Tx, HAART, INH prophylaxis therapy (pilot project), MDR-TB (pilot project), IC, and other support like nutrition (IP), HE and counselling, and adherence support.

Activities started in July 2009 in Yangon:

- Aung San TB Hospital renovation and building new MDR-TB wing
- IC and safe work practice introduced in the hospital
- Participated and facilitated trainings on counselling, case management, IC
- Edutainment activities carried out in hospital
- Food, ancillary drugs support provided to patients in hospital
- Developed guidelines for project implementation and strengthened M&E system

Challenges

- Treating selectively very sick people and unstable population leading to poor outcomes
- Difficulty in defaulter tracing, specifically among moving populations
- Over- or underdiagnosis of patients
- False pre-treatment case definitions (false new cases) because patient may not reveal his/her past TB drug history
- Human resource issues because of high staff turnover
- Non-availability of MDR-TB treatment in other areas

Program for Appropriate Technology in Health (PATH)

PATH undertakes projects in India supported by the United States Agency for International Development (USAID) and GF. It supports the NTP through laboratory strengthening in 21 states with support from FIND/ASM, airborne IC in four states with PIH, ACSM in six states with a DC team, HSS in a sample of four to five states and other initiatives like PPM, PMDT scale-up, M&E, etc.

PATH complements the national lab scale-up plan in association with WHO and FIND and supports laboratory upgrading (Biosafety Level 3 and clean room upgrades for LPA) for eight laboratories. PATH is also providing TA to acquire and maintain laboratory accreditation in 21 states (23 labs) and conducting experience-sharing workshops for IRL microbiologists and Revised National Tuberculosis Control Programme (RNTCP) consultants. This includes formulation of standard operating procedures at IRLs; maintenance manual; and EQA and introduction to new formats.

PATH is undertaking capacity-building on ACSM and M&E with support from the GF Round 9 Project Axshya Partners, which involves 118 professionals from 39 organizations. Under the project there is state-level training on ACSM and PPM for six states and district-level training of 10 districts from five states. Till date more than 269 RNTCP staff have been

trained on ACSM and PPM. A district-level microplan for 10 districts in five states has been prepared.

Stanford University

Stanford University is an NGO running the United States–Democratic People’s Republic of Korea TB laboratory project. The partners involved in the project include the Bay Area TB Consortium (a US humanitarian NGO), MoPH of the Democratic People’s Republic of Korea and Global Health and Security Initiative with technical support from WHO.

The partnership formation took place in 2008 followed by technology assessments in 2009, installation of equipment in 2010 and requisite trainings in 2011. Some of the rapid diagnostic techniques are still in pilot phase.

The project is currently being supported through GF funding. However, for sustainability the laboratory services need to be fully integrated into the national PMDT plan.

TB CARE I Indonesia

TB CARE is one of the main global mechanisms for implementing USAID’s TB strategy as well as contributing to TB-HIV activities under the U.S. President’s Emergency Plan for AIDS Relief. TB CARE collaborates with other national and international initiatives in providing global leadership and support to national TB control efforts.

TB CARE I consists of 7 organizations working in TB control:

- American Thoracic Society (ATS)
- FHI 360
- International Union Against Tuberculosis and Lung Disease (The Union)
- Japan Anti-Tuberculosis Association (JATA)
- KNCV Tuberculosis Foundation

- Management Sciences for Health (MSH)
- World Health Organization (WHO)

In Indonesia KNCV is the coordinating partner. The main responsibilities of the coordinating partner are:

- Liaison with USAID mission
- Liaison with NTP
- Workplan development
- Timely implementation of all activities (also those of collaborating partner)
- Timely reporting
- Coordination with all partners working in the country

Key achievements

- PMDT was implemented in five sites, with a total of 1585 MDR-TB suspects identified; out of these suspects 471 MDR-TB cases have been confirmed, and 332 cases were put on treatment.
- 29 provincial OR teams were trained to support OR activities.
- TB-IC full package implementation in 26 sites: five PMDT hospitals with TB-HIV care, 13 PMDT health centres, eight hospitals with TB-HIV care.
- TB control has been implemented in 10 prisons and 92% of HIV+ persons in supported prisons have been screened for TB.
- A national accreditation standard for DOTS implementation in hospitals has been developed.
- To support EQA for microscopy, seven provincial referral microscopy labs have been established. Five culture and drug susceptibility testing (C/DST) labs have been certified for first-line and second-line drugs to support PMDT implementation and scale-up.

- TB CARE I also supported the procurement of 17 GeneXpert machine units to scale up PMDT and strengthen diagnosis of TB among HIV patients.

Challenges

- Improve the quality of PMDT in five existing sites and support scale-up of programmatic management of drug-resistant TB to nine new sites.
- Strengthening the laboratory network (implementing lot quality assurance sampling for smear microscopy, expanding capacity for C/DST and supporting introduction of new diagnostics) phased implementation of GeneXpert MTB/RIF in 17 sites to enhance prompt diagnosis and treatment of MDR-TB and TB-HIV co-infected cases.
- Improving the management of TB-HIV co-infection in 8 provinces.
- Improve drug and pharmaceutical management to ensure uninterrupted supply of first- and second-line TB drugs to all health facilities/PMDT sites.
- Strengthen data and information management through Management Information for Action, by improving the TB Monitoring Information System of case-based reporting from district to national level and integration of surveillance to the National Data and Information Centre for Health.
- Improve functioning of e-TB Manager and scale up e-TB Manager to new sites in accordance with the PMDT expansion plan.
- Develop and begin implementing the exit strategy to greatly increase domestic funding for TB with an emphasis on costs, government allocations and revenue generation (especially from insurance).

TB CARE II Bangladesh

The TB CARE II project has been designed in consultation with USAID/Bangladesh and NTP to contribute to achieving Bangladesh national objectives for preventing and controlling TB and to help the Government of Bangladesh achieve its MDGs for TB. The specific objectives of the project include the following:

- Improve universal access to TB diagnosis and treatment;
- Work with the government to reach and sustain the global targets of > 80% case detection and > 90% cure rates under DOTS;
- Provide high-quality DOTS through all levels including those of private providers;
- Improve programmatic management of MDR-TB and increase access to MDR-TB prevention and treatment through community-based approaches;
- Strengthen diagnostic capacity for drug-susceptible and drug-resistant TB;
- HSS;
- Focus on women, girls and gender equity.

According to the WHO report 2010, it is estimated that there are 9800 new cases of MDR -B each year in Bangladesh. A more accurate estimate will be available after completion of the Drug Resistance Survey (DRS), which is currently underway. An initial workshop was set up to discuss the implementation of community based PMDT (cPMDT). NTP took the lead and other key partners include WHO, National Institute of Diseases of the Chest and Hospital, BRAC and DF. Three districts have been identified for initial implementation of cPMDT. The assessment looked into district-level capacity on ambulatory care for MDR-TB patients, systems to ensure DOTS services to patients, household IC, management of side effects, surveillance to identify suspected MDR-TB cases, and transportation of sputum to national and regional reference laboratories for culture and DST.

TB CARE II core activities:

- (1) Provider Compliance Study – The objectives of the compliance study are to:
 - generate information on the knowledge and skills of providers to provide “standard” TB services; measure the extent to which providers follow national and service-delivery standards;
 - compare service facilities at public and private facilities;
 - generate information on patients’ understanding of TB treatment guidelines and perceptions of quality of care at provider and facility levels.
- (2) Health insurance study
- (3) Joint TB CARE I & II IC activities

Japan Anti-Tuberculosis Association (RIT JATA)

RIT has been a partner for SEA Region TB programmes for the last 50 years. RIT has sent specialists to assist NTP and TB laboratories through various schemes including WHO in Bangladesh, Bhutan, Indonesia, Myanmar, Nepal, Sri Lanka and Thailand. Currently RIT is assisting activities in the area of national prevalence surveys, laboratories and community-based DOTS. Notable also is the networking with RIT alumni of the international training courses organized in collaboration with WHO. More than 500 national staff in the Region have received training in RIT courses since 1963. Those participants are followed up as lifelong RIT honorary members. In this SEA Region managers meeting, RIT was pleased to meet seven RIT graduates.

United States Agency for International Development (USAID)

USAID support to TB control in South-east Asia totals approximately US\$ 42 million. There is direct country support in Bangladesh, India and Indonesia and Regional support through the Regional Development Mission Asia (RDMA). The TB CARE II project is coordinated by URC with PIH. The project aims to improve the quality of, and access to, TB prevention,

diagnosis and treatment, coordination of TB-HIV activities, MDR-TB prevention, diagnosis and treatment and to strengthen TB systems as they relate to the overall health care system.

In India, technical support to RNTCP is provided via the WHO TA team and WHO-RNTCP medical consultant network, supporting expanded activities towards universal access at the national, state, and regional levels of the health system, including scale-up of MDR-TB services, TB-HIV collaborative activities, and engagement of all TB care providers. The support includes strengthening of the laboratory network for mycobacterial culture and rapid DST for first- and second-line drugs; expansion of large-scale demonstration studies of rapid diagnostics for early and improved TB case detection, encompassing urban and rural areas, public and private providers; collaborative activities with the TB Research Centre, Chennai on epidemiological impact assessment, drug-resistant TB and HIV-associated TB; and strengthening national capacity for generating, analysing and using strategic information for programme improvement.

USAID supports PATH in India in the activities already enlisted. It also provide financial assistance to The Union to support the national programme to organize and conduct a situation analysis; identify research priorities for the next phase of the programme; facilitate and assist in implementation of research priorities; organize and conduct the STREAM study in India; and support programmatic evaluation and dissemination of research for policy.

USAID support in Indonesia has greatly enhanced the capacity to diagnose MDR-TB cases, initiated treatment for MDR-TB patients and established five PMDT sites. Five laboratories that received accreditation for first and second DST have been renovated to meet the appropriate international standards for DST (BSL-2). Through support to U.S. Pharmacopeial Convention's Promoting Quality Medicine programme two local pharmaceutical companies are on track to receive WHO pre-qualification accreditation for several first-line TB drug products at the end of the calendar year. Technical support is being provided to the Ministry of Health and BPOM (food and drug monitoring agency) to establish a robust medicines monitoring programme which will test the quality of TB drugs in both the public and private sector; and support to raise public awareness about the danger of counterfeit and sub-standard medicines, particularly for TB.

RDMA is USAID's Regional Mission in Asia. RDMA's TB portfolio's goals are two-fold:

- (1) To support MDR-TB control scale-up within RDMA's "non-presence countries" or the countries that the specific USAID Mission is designated to cover
- (2) To support Regional platforms to address cross-border responses within the Mekong Region.

There are four programme objectives:

- (1) Strengthened MDR-TB and TB-HIV prevention: support for strengthening of DOTS, drug quality management and community mobilization;
- (2) Strengthened MDR-TB and TB-HIV management: scale-up of case-finding and diagnosis, human resource capacity for PMDT management including community-based models of care;
- (3) Strengthened enabling environment: strengthened partnerships with the private sector, between community-based organizations and the NTP; strengthened policies, guidelines and processes for TB and MDR-TB control;
- (4) Model MDR-TB and TB-HIV programmes scaled up: Development of demonstration projects and models that can be scaled up or replicated across the Region.

The portfolio is also placing an increasing emphasis on the use and application of innovation and technology, working with local organizations and strengthening public-private partnerships for the scale-up of TB control.

World Vision Foundation – Thailand (WVFT)

World Vision Foundation of Thailand (WVFT) is a Christian NGO, registered in Thailand in 1972. It works in 55 provinces of Thailand in a combination of sponsored children (who number 115 149), area development programmes (75), and specialized projects – health, anti-human trafficking, child protection (19).

WVFT was a principal recipient in GF TB Round 6 the Phase 2, which ends in September 2012. The objective of the project is TB Reduction

among Non-Thai Migrants in Six Border Provinces, covering a target population of 235 000. Over a four-year period the project has screened 14 914 suspects. Out of the screened suspects, 1111 cases were notified as new smear-positive cases (7% of the screened suspects), and 1049 cases were enrolled in the project (94% of the cases notified). The treatment success rate for new smear-positive cases is 83%, while TB-HIV co-infection rate is 12%-13%.

WVFT is also a subrecipient in the GF TB Single Stream of Funding (SSF) project for which Phase 1 began in October 2011. The objective of this project is to expand and enhance high-quality DOTS and address TB-HIV and MDR-TB among high-risk groups in a target population of 568 000 (both Thai nationals and non-Thai migrants).

WVFT works in close collaboration with MOPH where hospitals provide the sputum screening, HIV testing and drugs for the treatment regimen among cases referred by WVFT. There is also a collaboration with BTB and the Department of Disease Control (DDC) in terms of advocacy events, technical training for staff, as well as guidance on materials for information, education and communication and behaviour change communication. WVFT has worked with the DDC on the M&E plan for Phase 2 of TB Round 6, with TA from WHO.

The GF TB SSF will also be based on collaboration with the MoPH, BTB and DDC. There will be technical support to PR in terms of developing a comprehensive M&E plan. There is continued collaboration in Bangkok (high-risk groups) and five provinces for non-Thai migrants for sputum screening, HIV testing and treatment of TB cases. Additional collaboration in terms of trainings, advocacy events, and coordination with the Bangkok (BKK) Metropolitan Administration hospitals is also envisaged.

6. Group work

A group work was organized in which each country formed a team and partners working with the NTP in the respective country joined the group. Technical resource persons were available as floating facilitators. The objectives of the group work were:

- Review progress of the implementation of interventions and activities considered important during the planning exercise two years ago
- Review their planned activities presented in the poster presentations in light of issues discussed during this meeting
- Have more in-depth technical discussions with technical focal points and colleagues from other countries
- Update the planned activities for 2012-2013

Presentations of the groups are available as country status report and action plan in the annexure.

7. Conclusions

- (1) Countries in the WHO SEA Region have made significant progress towards the TB-related MDGs. The estimated incidence of all forms of TB, estimated prevalence of all forms of TB and the estimated TB mortality all continue to show a downward trend. The treatment success rate among new smear-positive PTB cases has remained above 85% since 2005, and is 89% in 2010.
- (2) While there has been progress, TB control remains a huge challenge in the Region. Approximately 40% of the estimated global number of cases – 8.8 million – occur in the SEA Region (based on current estimates) as well as more than one third of MDR-TB cases.
- (3) Most countries in the Region have been observing an incrementing or stabilizing trend of smear-positive case notifications, and nationwide prevalence surveys have been identifying that the TB burden in most countries is much bigger than previously estimated. The findings of the recently completed national survey in Myanmar are challenging, but point the way to improving TB care and control.
- (4) A growing number of MDR-TB diagnosis and treatment sites are being established in the Region, and in 2010 almost 4000 MDR-TB patients were put on treatment. However, this represents only a fraction of the estimated 130 000 MDR-TB cases in the Region.
- (5) Collaboration between TB and HIV control programmes is improving. However, this collaboration needs further strengthening to ensure universal HIV counselling and testing for all TB patients, the availability of CPT and ART for all eligible TB patients co-infected with HIV as well as INH prophylaxis, and air-borne IC in health-care facilities.
- (6) Many of the constraints to effective implementation of TB control services in Member countries relate to underlying weaknesses and underfinancing of national health systems in general, many of which are already overstretched in terms of both infrastructure and staffing. The recent funding cuts by the

GF pose a serious threat to sustaining the gains and reaching Stop TB partnership targets for 2015.

- (7) The fragile funding situation, health system constraints and critical unmet capacity needs for universal access to high-quality care for all people with TB, including children, introduction of new/rapid diagnostics for TB, taking TB control beyond the health sector, scaling up civil society involvement and addressing TB-diabetes and other co-morbidities all pose major challenges to TB control programmes.
- (8) To enable continuing scale-up of critical interventions there is an urgent need to sustain current financial commitments and to advocate for additional financial resources.

8. Recommendations

In light of the above, the participants of this meeting propose the following recommendations:

Recommendations to National TB Control Programmes, Ministries of Health

Earlier and higher case detection

- Address the considerable gap between estimated and notified TB cases:
 - Continue and intensify efforts to strengthen the capacity of the public health system to provide high-quality services for early and increased case notification. This includes, but is not limited to, revision of definition of TB suspects, broadening screening indications based on additional symptoms and using risk factor profile: e.g. contacts, HIV, poor, slum-dwellers, homeless, alcoholics, smokers, diabetics, elderly, infants, previously treated patients, migrant workers and malnourished children.
 - Further strengthen and improve community involvement, awareness and early care-seeking behaviour.
 - Scale up PPM approaches and involve all care providers.
- Continue to develop capacity at all levels to analyse and use locally available data to strengthen programme management at different levels.

Strengthen the laboratory network

- Continue efforts to strengthen the capacity of NTRLs to improve quality of the existing microscopy service and appropriate implementation of planned diagnostic activities.
- Assess cost-effectiveness and operational feasibility of newer diagnostics including roll-out of Xpert MTB/Rif and other new diagnostics at different levels and for different populations,

coordinating with the partners/private sectors working in the country.

- Revise/update laboratory expansion plan, including the revision of diagnostic algorithms and establishment of specimen transportation systems, in line with introduction of newer diagnostics, and synchronize with the PMDT and TB-HIV expansion plans (alignment of diagnostic and treatment capacity).

Scale-up of PMDT

- Develop a costed plan and mobilize resources for achieving universal coverage by 2015 and in line with the SEA Regional Office Regional response plan 2011-2015, particularly for introduction of rapid diagnostic services, treatment provision and related care services.
- Establish a stakeholder forum (NTP, implementing partners, technical agencies, donor representative, CSOs, medical/paramedical professional organizations) and organize regular meetings on progress of implementation, identification of bottlenecks and TA needs of PMDT to coordinate all efforts (through national TBTEAM forum or any other existing forum like CCM, interagency coordination forum, etc.).

Scale-up of access to TB-HIV diagnosis and treatment services

- Strengthen the level of collaboration for planning, guidance, and oversight through the establishment/strengthening of TB-HIV coordinating/technical committees, working groups.
- Ensure health facilities with TB services are prioritized for expansion of HIV screening, promoting universal access to counselling, testing and treatment services (using Provider-Initiated Testing and Counselling) and better reporting of HIV screening in TB patients.
- Increase TB-HIV coordination for cross-referrals, IC, linkages between NTPs and NAPs to promote scale-up of diagnostic HIV testing of TB patients and improve access for HIV-infected TB patients to CPT and ART.

- Plan and roll out Isoniazid prophylaxis therapy (IPT) as a priority. In some setting, studies on INH resistance mapping may be considered, although this may not be necessary in all countries, particularly those that now have full coverage with DOTS and where TB drugs are used through established national programmes. However, such studies should not delay the availability of IPT.

Quality-assured drugs and supply chain management:

- Involve national DRAs in establishing and enforcing QC and QM systems and adherence to common QA standards for TB drugs and supplies procured with funding from all sources.
- Ensure rational use of anti-TB drugs and establish mechanisms for pharmaco-vigilance.

Scale-up of community TB care and civil society involvement

- Develop and strengthen the national strategy to scale up community TB care and civil society involvement and include M&E mechanisms and tools for measuring results.
- Develop and implement mechanisms for patient-centred approaches for all TB patients including psychosocial support of MDR-TB patients to improve treatment adherence.

Prevalence surveys and surveillance (impact measurement)

- Countries with plans to conduct a TB disease prevalence survey should proceed in its preparation to launch the field operation on time in 2012 (Thailand, Indonesia).
- Countries that plan a repeat survey by 2015 should design a survey carefully in close consultation with the Task Force on TB Impact Measurement (Bangladesh, Myanmar).
- Countries considering a nationwide survey should assess feasibility and design a survey in accordance with the WHO handbook (Lime Book). Under current global financial situation, financial plans should be developed more carefully.

Health Systems Strengthening

- Advocate for and contribute to assessment of gaps in the health system to determine new short-term priorities at national level using the Health System Rapid Assessment guide developed by SEA Regional Office.
- Develop/strengthen clear linkages in strategic plans for TB control with health policies, strategies and plans to ensure:
 - Access to health-care services for poor and vulnerable populations
 - Strategic allocation of resources for supporting priority health programmes including TB control services in a sustainable manner
 - Availability of sufficient competent health workers at all levels of the health system including programme planning, implementation, M&E
 - Establishment of sufficient number of diagnostic facilities and storage space for drugs and supplies of necessary quality-assured drugs and consumables to ensure universal coverage of health services
 - Integration and upgrading of TB information systems in the general health management information systems
 - Governance (leadership, policy, planning and organizational support)
 - Full integration of TB control activities into all HSS efforts
 - Inclusion of operational research
- Strengthen the existing surveillance and vital registration systems.

TBTEAM

- Accelerate the establishment of national TBTEAM mechanisms and the development of consolidated TA plans.

Paediatric TB

- Prioritize diagnosis and treatment of TB among paediatric cases.
- NTPs to consider amendment to paediatric TB treatment guidelines in alignment with WHO Rapid Advice on management of paediatric cases using the existing quality-assured paediatric formulations as may be applicable in local context. Child-friendly formulations are expected to be developed and made globally available in the next three to four years.

Infection control

- Prepare and implement an operational plan for airborne IC in all health facilities.
- Disseminate messages for IC in all congregate settings and at household level.

Resource mobilization

- Determine the essential components of the programme, update strategic plans with strong budgeting components developed with all stakeholders and advocate with government and partners for adequate resources for TB control.
- Develop an impact assessment of recent changes in GF eligibility and fund allocation policies.

Recommendations to WHO and technical partners

- Provide TA and support the Global Laboratory Initiative for introduction of newer tools and EXPAND TB Project in eligible countries.
- Provide regular updates to countries on experience of roll-out of Xpert MTB/Rif and newer technologies in diagnosis of TB and MDR-TB.
- Advocate and provide need-based assistance for resource mobilization for countries in the Region.

- Optimize and improve coordination of SNRL support for NTRLs in the SEA Region including identification and designation of a new SNRL within the Region.
- Establish the rGLC for the SEA Region in 2012 to facilitate the new framework for scaling up PMDT. Subsequently the rGLC Secretariat, in coordination with the Regional TBTEAM mechanism, should coordinate the provision of increased demand of TA related to PMDT.
- Coordinate and provide TA to support implementation of planned TB-HIV collaborative activities including implementation of IPT, and facilitate in-country implementation of all activities including IPT in HIV care settings.
- STAG/GDF and UNITAID to explore the possibility of preparation of paediatric patient kits/doses pouches (India) (at least two average weight bands) in the absence of child-friendly formulations.
- Collect and publish replicable best-practice models of community-based interventions for TB care and control in the Region.
- Provide TA to countries to develop comprehensive TA plans for all priority components of TB control.
- Continue to provide evidence-based information to countries through websites and other occasions such as regional meetings/conferences.
- Provide assistance in efforts to strengthen health systems, particularly strengthening district health systems: human resource management including improving training quality, supply management, public health laboratories and information management improvement and resource mobilization.
- Support countries in conducting a health systems rapid assessment to identify gaps and determine needs for new short-term priorities and strategies at national level
- Provide TA to countries to conduct operational research for sound and strategic policy development.

Annex I

Address by Dr Samlee Plianbangchang, Regional Director, WHO South-East Asia

Dr Paichit Warachit, distinguished participants, honourable guests, ladies and gentlemen;

It is my pleasure to welcome you all to the Regional Meeting of National TB Control Programme Managers and Partners in SEA.

The WHO South-East Asia (SEA) Region still bears more than one third of the “global burden” of tuberculosis. The Region has a pool of nearly 5 million cases to which more than 3 million are added each year. This is despite a more than 25% decrease in prevalence rate since 1990. Decline in TB prevalence rate in the Region has been achieved mainly due to improved case findings and treatment success.

This decline of TB prevalence is, therefore, contributed by the expansion of quality “DOTS” services. DOTS stands for Directly Observed Treatment – Short course. It is an international strategy for TB control. The mortality rate among TB patients has also decreased by more than 44% during the same period. However, the absolute number of TB deaths is still close to half a million. This is mainly because of the “population momentum”. With good performance in the implementation of DOTS, the level of multi-drug-resistant (MDR) TB among newly detected cases is low. Nonetheless, due to the large number of the total TB cases the Region accounts for an estimated 130 000 MDR-TB cases. This is nearly one third of the world’s estimate.

Ladies and gentlemen, HIV-TB co-infection is a serious problem in the SEA Region. The two related programmes, namely National TB Control and National AIDS Control programmes in most countries in the Region are jointly implementing a comprehensive package of interventions against this problem. This is helping them cover an estimated 600 million people. Success in TB control, to a large extent, has come from participation and involvement of a wide range of partners.

From the early 1990s, a large number of partners have been engaged in supporting the development and implementation of national TB control programmes. Examples of such partners are: private medical practitioners; international and national NGOs; public and private hospitals; medical colleges; and state enterprises, etc.

This multistakeholder involvement has contributed to about 25% increase in case-notification and to more than 90% of the treatment success rate.

However, we need to recognize that these achievements can be successfully maintained in the long term only when national health systems based on the PHC approach function effectively. The PHC approach is the key intervention to help ensure that the hard-to-reach, or the unreached populations are covered. Education and empowerment of people, individually and collectively, is the primary tool of the PHC approach. In our experience, it has also been demonstrated that in terms of primary care in the community, the Practical Approach to Lung Health (PAL) is useful in the management of TB patients as the patients are managed through a syndromic approach that educates them appropriately.

The approach mentioned above is particularly useful in low- and middle-income countries. Community-based care and services are essential for sustained achievements in long-term TB control for the entire population. Tuberculosis is a disease of poverty having strong social and economic determinants. Therefore, adequate social and economic support to control programmes, including TB patients, is critically important for the programme's success.

Indeed, national TB control programmes face the following challenges in medical, social and economic terms:

- difficulty faced by patients in accessing quality medical treatment;
- poverty, at the individual and family level, in particular;
- stigma, as a social barrier, to a certain extent; it prevents patients from seeking treatment;

- crowded and polluted environment that is conducive to TB transmission;
- poor nutrition that leads to low body resistance against the infection; and
- displaced population that is prone to TB infection due to various reasons.

All in all, ladies and gentlemen, at least, an estimated one third of TB cases remains unreported. Such cases are of particular concern because they perpetuate continued disease transmission in the community, pose a serious risk of drug-resistant TB that leads to difficulty in its treatment, and to high TB mortality.

Our national TB control programmes also identify the lack of laboratory capacity, which is essential for providing back-up to effective diagnosis and surveillance. This is a major constraint, among other things, to the scaling-up of diagnosis and treatment of MDR-TB cases in particular.

Another important problem of ensuring uninterrupted supplies of quality second-line drugs for treatment of patients with MDR-TB is indeed proving to be a difficult task, especially in larger countries.

Ladies and gentlemen, national TB control programmes in our Region still need continued support from various organizations. We acknowledge the commitment of many development and technical agencies including national and international NGOs for their generous contribution to the implementation of national TB control programmes in the SEA Region.

The Global Fund to fight AIDS, TB and Malaria is now the largest funding source for TB control. The Global Drug Facility is providing essential back-up through its procurement mechanisms. As we are well aware, the long-term goal of TB control is to eliminate the disease as a public health problem. With this perspective in view, increased and continued commitment is needed from all stakeholders and partners. In the process of implementing the control programmes with external inputs, special attention should be paid to country capacity strengthening in order to achieve long-term, sustainable self-reliance.

Therefore, partners' support may be focused more on capacity development. At the same time, we should keep in mind that in TB control treatment of cases is the main control intervention. The part of health systems that deals with TB control must therefore be strengthened urgently. A national public health specialist should always be available to provide continuous technical back-up to the development and management of national TB control programme. TB control services should be integrated into general health-care services. As TB is a disease of poverty, the physical, social and financial barriers that prevent affected persons from accessing the needed care and services must be overcome.

In this context, we may need to understand that improvement in the overall social and economic development of a country will contribute importantly in its long-term, sustained success in TB elimination or eradication. Indeed, a comprehensive and holistic package of interventions for TB control must involve multisectoral and multidisciplinary efforts.

The basic issues involving the following areas must be tackled first for TB control:

- universal case detection of all forms of TB;
- introduction of new and more effective laboratory diagnosis;
- increasing access to quality DOTS services;
- effective IC, both in- and outside institutions;
- availability of quality TB drugs that are affordable to individuals, families, community and the government; and
- drugs that are accessible to all patients who need them.

In particular, the rational use of anti-TB drugs must be promoted. This is another critical area of concern. National regulatory mechanisms must be strengthened to help ensure quality and rational use of drugs.

Distinguished participants, with regard to surroundings, certain aspects of physical and social environment help perpetuate the existence of TB disease in a population. These environmental factors must be kept in mind while planning a TB control programme for long-term, sustained success. Even though we have been successful in TB control through DOTS, we should think of a more comprehensive and holistic plan for long-term elimination and eradication of TB.

Ladies and gentlemen, we are here at this meeting to address our common concerns, and to plan collectively for effective implementation of various interventions including the most recent strategies towards meeting the targets set under the MDG 6, in particular. This meeting affords another platform to further promote intercountry cooperation and strengthen the commitment of all partners to reduction of the TB problem in the SEA Region.

With these words, ladies and gentlemen, I wish all of you fruitful deliberations. I also wish the meeting a successful outcome and hope that all of you have an enjoyable stay in Bangkok.

Thank you.

Annex II

Summary of country presentations

Bangladesh		
Activities planned in 2009	Status of implementation	Activities for 2012-2013
<p>Early and higher case detection</p> <ul style="list-style-type: none"> • Focus on slums and elderly population among social risk groups • Focus on HIV positives, diabetics and malnourished children (in coordination with NNP) • Focus on garment workers and prison populations • Establish contact tracing for all smear-positive cases • Ensure provision of INH prophylaxis for children under five years (local technical assistance (TA) needed) • Finalize operational guidelines on childhood TB • Initiate PAL pilot projects • Initiate links with maternal and child health programmes/ clinics • Undertake a national drug resistance survey (TA needed) • Re-estimate the burden of TB/HIV (TA needed) 	<ul style="list-style-type: none"> • Focus on slums partly implemented • Focus on HIV partly implemented (establishing links with VCT centres ensured TB tests for PLHA); Study conducted on diabetics and malnourished children; DOTs corner established in Dhaka Paediatric Hospital • Expanded in garments sector (BGMEA and partners) and all prisons • Implemented in some areas • Chemoprophylaxis being given for <1 yr old child • Operational guidelines on childhood TB has been finalized involving paediatric association • Guideline in the process of finalization; equipment procured for 72 pilot sites • Policy is in place with limited linkages with MCH • DR Survey completed, data finalization, analysis and report writing on process • HIV testing among selective TB patients ongoing 	<ul style="list-style-type: none"> • Focus on elderly population among social risk groups; slums to be strengthened through PPM and civil society involvement • TB tests for high risk groups (IDUs, MSM, SWs); • Expansion in next years • Partnership with BKMEA that also covers >1 million workforce • Expansion throughout the country • Expansion in phases throughout the country: up to 5-yr old children • Development of training material, ToT and implementation • Endorsement of guideline, capacity building, distribution of equipments and piloting • Expansion and strengthening • Drug resistance surveillance will be expanded throughout the country • NO TA needed
<p>Laboratory strengthening</p> <ul style="list-style-type: none"> • Commence accreditation of private labs • Establish three more culture and DST labs 	<ul style="list-style-type: none"> • Not done • Two culture and DST labs has been established 	<ul style="list-style-type: none"> • Piloting planned in next years • Another one lab will be established in Khulna

<ul style="list-style-type: none"> • Introduce LED/FM microscopy at selected sites 	<ul style="list-style-type: none"> • 15 LED microscopes are functional and 33 LED microscopes have been procured and will be distributed soon. Training materials developed, TOT completed. One Xpert MTB/Rif is installed in Icddr,b 	<ul style="list-style-type: none"> • Conventional microscopes will be replaced by LED microscopes phase wise. Xpert MTB/Rif in planning for expansion • LPA & Liquid culture will be established in selective sites
<p>Improving TB treatment success rates</p> <ul style="list-style-type: none"> • Strengthen participation of health assistants • Establish contact tracing for all smear-positives through cured patients • Develop childhood TB treatment regimens based on newly published guidelines (TA needed) 	<ul style="list-style-type: none"> • HA are trained and participating for DOT in some places • Cured patients participate in contact tracing • Guideline Finalized 	<ul style="list-style-type: none"> • Further strengthening through mobilizing local health authorities and establishing linkages with Comm. Clinics. • Further strengthening and systemization will be done. • Guideline printing, development of training material • TA needed for TOT development (URC), training on childhood TB involving all paediatricians
<p>Improved procurement and supply management</p> <ul style="list-style-type: none"> • Identify funds for procurement of first line drugs • Procure LED microscopes for selected sites • Identify funds for laboratory consumables • Improve procurement and supply management system at all levels 	<ul style="list-style-type: none"> • HPNSDP fund doubled for FLD & paediatric formulation free from GDF • Procured as per plan • GFATM, HPNSDP and URC fund • Procurement and supply management system updated centrally, PSM guideline updated 	<ul style="list-style-type: none"> • HPNSDP, GDF and GF fund will be sustained • Procurement for phase wise replacement (about 50 during 2012 – 2013) • GFATM, HPNSDP and URC fund • Supply management system at district will be updated
<p>ACSM: Advocacy, communication and social mobilization</p> <ul style="list-style-type: none"> • Obtain BMA endorsement of the International Standards for TB Care (ISTC) (local TA needed) • Continue to observe World TB Days in collaboration with the Ministry of Health and local authorities (Local TA needed) 	<ul style="list-style-type: none"> • Not done • WTB days observation continued (No TA needed) • Ongoing (no TA needed) • done • done 	<ul style="list-style-type: none"> • Adoption of ISTC by all Medical Associations • No TA needed • Observation of WTB Day will be continued • Will be continued and will further be strengthened • Not needed • Further strengthening planned

<ul style="list-style-type: none"> • Establish cross-referral with other health related departments/divisions (Local TA needed) • Distribute short IEC films in rural areas • Strengthen DOTS coverage in workplaces 		
<p>M&E: Monitoring and evaluation</p> <ul style="list-style-type: none"> • Pilot the use of an electronic recording and reporting register • Ensure peer supervision of programme implementation in the different districts • Train staff to make more use of available data for programme improvements • Undertake a mortality survey 	<ul style="list-style-type: none"> • Electronic recording and reporting system is being piloted at 6 places • Peer supervision of programme implementation • Ensured • Sixty five staffs of district and sub-district level were trained on use of available data • Not done 	<ul style="list-style-type: none"> • Electronic recording and reporting system will be piloted at 30 more new places gradually • Peer supervision of programme implementation will be continued. • Continue data review and provide feedback • No planning
<p>TB/HIV: Collaborative activities</p> <ul style="list-style-type: none"> • Introduce IPT for HIV positives in HIV settings 	<ul style="list-style-type: none"> • Not done 	<ul style="list-style-type: none"> • Need Review
<p>MDR-TB: Prevention and control of multi-drug resistant TB</p> <ul style="list-style-type: none"> • Strengthen patient categorization for choosing treatment regimen (TA needed) • Strengthen smear microscopy to identify late converters and failures (TA needed) • Develop a national MDR-TB expansion plan (TA needed) 	<ul style="list-style-type: none"> • Patient categorization strengthened • Strengthened • Done 	<ul style="list-style-type: none"> • Further strengthening will be continued • Implementation planned
<p>Infection control</p> <ul style="list-style-type: none"> • Develop a strategic plan for infection control (TA needed) 	<ul style="list-style-type: none"> • done 	<ul style="list-style-type: none"> • Implementation planned
<p>Health system strengthening</p> <ul style="list-style-type: none"> • Develop strategic plan for human resource development 	<ul style="list-style-type: none"> • Done • National TB technical Committee in place 	<ul style="list-style-type: none"> • Revision and implementation • TB TEAM will be established engaging the National TB

<ul style="list-style-type: none"> • Establish national TBTEAM • Effectively utilize existing human resources to improve programme management (TA needed) and work with MoH to fill vacant positions • Conduct leadership and management course on TB (TA needed) • Strengthen supervision from central level to improve programme supervision (TA needed) 	<ul style="list-style-type: none"> • Under process • Ongoing without TA • Supervision from central level strengthened without TA 	<p>Technical Committee</p> <ul style="list-style-type: none"> • No TA needed but advocacy and lobbying for implementation • To be continued, no TA needed • Supervision from central level will be continued
<p>Operational research</p> <ul style="list-style-type: none"> • Undertake OR on TB prevalence among high risk groups 		

Bhutan		
Activities planned in 2009	Status of implementation	Activities for 2012-2013
<p>Early and higher case detection</p> <ul style="list-style-type: none"> • Plan and undertake a cross-border awareness campaign • Establish screening of immigrant labour workers at main entry points in Bhutan • Sensitize physicians to screen for active TB among relevant clinical risk Groups • Develop guidelines for contact tracing of sputum smear-positive cases at household/community levels • Organize a consultation with the NACP to establish effective cross referral and links between the two services • Develop guidelines to establish linkage between HISC and district hospitals • Estimate the burden of MDR-TB through a drug resistance survey (TA needed) 	<ul style="list-style-type: none"> • Implemented in the four border towns • Implemented at the border town hospitals • Completed • Importance of contact tracing mentioned in the new TB revised Guideline,2010 • Implemented • Implemented • On going at PHL(Public Health Lab) 	<ul style="list-style-type: none"> • Cross-border awareness campaign in border towns to be continued • Training/sensitization/awareness campaign of monks and nuns in monasteries
<p>Laboratory strengthening</p> <ul style="list-style-type: none"> • Establish culture and DST facilities at two regional referral hospitals (RRHs) • Procure Florescent microscopes for three high burden district hospitals 	<ul style="list-style-type: none"> • Implemented • Implemented 	<ul style="list-style-type: none"> • Training of Laboratory technicians on DST in the SNRL • 4. Quality assessment visit by the SNRL to the PHL • Procurement of Line Probe Assay (LPA) equipment
<p>Improving TB treatment success rates</p> <ul style="list-style-type: none"> • Re-orient Gewog (Village) DOTS Committees towards community-based TB activities and train local leaders and village health workers 	<ul style="list-style-type: none"> • DOTS committee- difficult to implement • Village Health workers- implemented 	<ul style="list-style-type: none"> • Training of village health workers on TB

<p>Improved procurement and supply management</p> <ul style="list-style-type: none"> Assess procurement and supply management system needs Train pharmacists and pharmacy technicians on procurement and supply management systems 	<ul style="list-style-type: none"> Implemented by the DVED(Drug Vaccine and Equipment division) Implemented 	<ul style="list-style-type: none"> Procurement of FLDs and SLDs Assuring quality monitoring and testing of drugs Asses drug quality testing in the country PHL and get it ISO certified
<p>ACSM: Advocacy, communication and social mobilization</p> <ul style="list-style-type: none"> Initiate advocacy on TB/HIV with stakeholders Undertake advocacy/awareness campaigns aimed at the national workforce (NWF); train stakeholders and religious leaders 	<ul style="list-style-type: none"> Implemented Implemented 	<ul style="list-style-type: none"> Develop, design and Printing of IEC materials Using media to educate public(airing on radio/TV, publication in newspaper)
<p>M&E: Monitoring and evaluation</p> <ul style="list-style-type: none"> Link TB reporting with Bhutan Health Management Information System Train TB focal persons on data analysis and use (TA needed) 	<ul style="list-style-type: none"> Implemented Implemented 	<ul style="list-style-type: none"> Monitoring and supervision of districts 10. Conduct annual TB/lab review meetings 11. Refresher training on recording and reporting system for TB
<p>TB/HIV: Collaborative activities</p> <ul style="list-style-type: none"> Screen all TB patients for HIV in hospitals and BHU Grade I Counsel and screen all HIV positive cases for TB in three Regional reference hospitals (RRHs) and in high TB burden districts Improve cross-referral between HIV and TB programmes recording and reporting to capture TB/HIV co-infections 	<ul style="list-style-type: none"> Implemented and ongoing Implemented and ongoing On going 	<ul style="list-style-type: none"> Continue screening of TB patients for HIV and vice versa in all hospitals/BHU I
<p>MDR-TB: Prevention and control of multidrug-resistant TB</p> <ul style="list-style-type: none"> Improve recording and reporting of MDR-TB 	<ul style="list-style-type: none"> Implemented (3 regional referral hospitals) 	<ul style="list-style-type: none"> Training on MDR-TB management for the physicians Refurbishment of MDR-TB wards in RRHs

<p>Infection control</p> <ul style="list-style-type: none"> • Implement existing infection control plan in three RRHs 	<ul style="list-style-type: none"> • Implemented 	<ul style="list-style-type: none"> • Continue infection control activities as per plan
<p>Health system strengthening</p> <ul style="list-style-type: none"> • Train doctors and health workers on revised guidelines including recording/reporting • Establish national TBTEAM mechanism • Capacity building of programme staff 	<ul style="list-style-type: none"> • Implemented • Technical working group formed as a part of TB TEAM • Implemented 	<ul style="list-style-type: none"> • Training of health workers on management of TB • Long-term training on PHM • Introduce Practical Approach to Lung Health
<p>Budgeting and financing</p> <ul style="list-style-type: none"> • Train finance and programme staff on budgeting and financing 	<ul style="list-style-type: none"> • Implemented 	
<p>Operational Research</p> <ul style="list-style-type: none"> • Undertake operational research on TB among children • Undertake operational research on TB among nomadic or mobile population • Undertake operational research on TB and stigma 	<ul style="list-style-type: none"> • Not implemented • Not implemented • Not implemented 	<ul style="list-style-type: none"> • Conduct operational research in priority areas

DPR Korea		
Activities planned in 2009	Status of implementation	Activities for 2012-2013
<p>Early and higher case detection</p> <ul style="list-style-type: none"> • Provide training on possible association between TB and alcohol consumption for general physicians and household doctors • Provide training on smoking cessation strategies for TB care providers • Undertake a study on use of household doctors and community volunteers for contact tracing and its impact on increasing case detection • Provide training on rapid and patient-friendly diagnostic algorithm of international standard for paediatricians and TB doctors at all levels targeted at homes of SS+ cases 	<ul style="list-style-type: none"> • Under consideration • Included in the general training - do- • Not conducted formally till date • Paediatrics management guideline and training material have been developed in 2010 	<ul style="list-style-type: none"> • Highlight relationship between smoking and alcohol drinking in all TB training • Coordinate with Tobacco control Unit within the MoPH for awareness generation and health effects of smoking • Nation-wide training of paediatricians will be conducted • NTP will work to form a formal group for planning, prioritising and monitoring OR (OR Task Force) in the country. This and other OR agenda will be referred to the group. • Integrated training modules will be developed and staff trained accordingly. • Target professional associations at the local, regional level to improve screening for TB in children, MCH group and patients with DM. • Review and develop training material accordingly.
<p>Laboratory strengthening</p> <ul style="list-style-type: none"> • Establish EQA at national reference laboratory (NRL) level • Undertake analysis and protocol development of resistance survey completed to identify resistance pattern and standardization of country specific regimen, in collaboration with SNRL, Hong Kong • Pursue accreditation of NRL by SNRL, Hong Kong 	<ul style="list-style-type: none"> • Smear microscopy EAQ involves on-site evaluation and rechecking • DRS protocol drafted and awaiting for finalisation • Under process • Partners has trained senior lab tech at the NRL and provided equipment and consumable • Not undertaken • On going • SLD resistance testing will be part of the planned DRS survey 	<ul style="list-style-type: none"> • Review the EQA guidelines and all three components of EQA • Planned to be conducted in 2012 • Longer term TA for NRL from partners or SNRL • Cross validation of methodologies will be supported by partners • NTP plans to introduce Xpert within next year from either Rd 8 grant or other sources if available. • Technology needs assessment for and piloting of Xpert and LPA will be supported by partner.

<ul style="list-style-type: none"> • Provide training on newer diagnostic tools available globally in collaboration with FIND (LED-based fluorescent microscopy, liquid culture, species identification by speedier method and molecular-based diagnosis for detecting TB and MDR-TB) • Undertake a feasibility assessment and development of plan for setting up culture free(or rapid) diagnostic settings in NRL, in collaboration with FIND • Develop proficiency measures for culture and FLD/ DST at NRL • Complete drug resistance survey for XDR-TB in collaboration with SNRL, Hong Kong 		<ul style="list-style-type: none"> • SNRL and technical partner support to be continued and enhanced • Planned for 2012 • Additional: <ul style="list-style-type: none"> - Renovation of all MCs and establish new MCs - Comprehensive lab training - Establish 2 new C&DST centers
<p>Improving TB treatment success rates</p> <ul style="list-style-type: none"> • Ensure regular supervisory activities intensified for health settings by NTP and PTP • Develop and print DOTS manual for general population • Develop certificate for recognition of 100% DOTS adherence • Pilot training on prevention of TB for volunteers (KAP, action points designated for relationship with TB doctors and patients) 	<ul style="list-style-type: none"> • Ongoing • Completed • Achieved 100% adherence already • Planned 	<ul style="list-style-type: none"> • To be continued in 2012-13 • Dissemination of prints • KAP survey will planned to be conducted in next a couple of years
<p>ACSM: Advocacy, communication and social mobilization</p> <ul style="list-style-type: none"> • Coordinate mechanism established between NTP and mass media • Develop and print DOTS manual, brochures, video materials (age and occupation specific) for general population 	<ul style="list-style-type: none"> • Established partnership between NTP and broadcasting agency • It is done • World TB Day commemorative event in all provinces on 24.Mar.2011 	<ul style="list-style-type: none"> • Continue the dissemination of TB information among population and take consideration on revision of material • Methodological improvement will be considered • Additional:

<ul style="list-style-type: none"> • Observe World TB Days in different provinces 		<ul style="list-style-type: none"> - Draft of national ASCM strategic plan will be finalized and follow it.
<p>Improved procurement and supply management</p> <ul style="list-style-type: none"> • Identify potential funding sources for procurement of first-line anti-TB drugs • Complete GLC application by first half of 2010 for procuring 2nd second line anti-TB drugs • Place order by year-end for procuring second-line anti-TB drugs • Train NTP staff on management and coordination mechanism established for improving drug and supply management • Enrol MDR-TB cases and provide second-line drugs • Computerize drug stock management in connection with TB e-surveillance system 	<ul style="list-style-type: none"> • Support from GF and GDF covers the whole requirements • Already done • Already ordered with GF budget • Already done • Developed data management software 	<ul style="list-style-type: none"> • Enhance the advocacy for raising the Government budget for procurement of FLD. • Seek other funding sources • initiate the treatment of MDR-TB patients (50 cases) • Seek other funding sources • scale up the procurement activities year by year <ul style="list-style-type: none"> - Strengthening of capacity of medical warehouses and training PSM staff will be continued - Quality assurance and quality control system will be intensified. - In early 2012, identify the patients to receive the SLD - regular enrolment as per National Expansion Plan under optimal conditions • Logistic support (IT equipments) in pipeline.
<p>M&E: Monitoring and evaluation</p> <ul style="list-style-type: none"> • Train staff on use of software developed for central and provincial level (APW with IT institute in DPRK) and expand the system • Pilot TB data management system on LAN-based Infrastructure (S&E) • Integrate GIS into existing software • Provide training on epidemiological methods for central and provincial level staff 	<ul style="list-style-type: none"> • Done already in Nov.2011 • Not yet piloted • Not yet • Not yet 	<ul style="list-style-type: none"> • Complete the system to provincial level • Make schedule for pilot testing and conduct • Feasibility assessment for integration of GIS will be done. • Initiate TOT on survey and surveillance. • JMM in 2013

<p>TB/HIV: Collaborative activities</p> <ul style="list-style-type: none"> Establish one sentinel screening site at central level TB care centre and two provincial level TB care centres in collaboration with NTP and NAP 	<ul style="list-style-type: none"> Ongoing Draft of plan with budget breakdown is developed 	<ul style="list-style-type: none"> Establishing the formal sentinel surveillance mechanism will be discussed with NAP and other stakeholders.
<p>MDR-TB: Prevention and control of multidrug-resistant TB</p> <ul style="list-style-type: none"> Submit application to Green Light Committee Train health staff on MDR-TB management at approved sites 	<ul style="list-style-type: none"> Already done Study tour on PMDT is ongoing 	<ul style="list-style-type: none"> Annual GLC mission In-country training will be undertaken.
<p>Infection control</p> <ul style="list-style-type: none"> Develop guidelines on infection control in TB care settings Train medical staff and patients at sanatoria on infection control Develop pilot curriculum for training of professionals working on MDR-TB (TA at regional level) 	<ul style="list-style-type: none"> Ongoing, the guidelines to be finalized in the end of December. Not yet Under process 	<ul style="list-style-type: none"> Print the developed guidelines and distribute. Cascade training will be conducted. Training modules will be drafted in 2012 and trainings conducted prior to PMDT launch
<p>Health system strengthening</p> <ul style="list-style-type: none"> Establish national TBTEAM Provide training for all household doctors and doctors in other sectors in TB management 	<ul style="list-style-type: none"> Already organized Ongoing 	<ul style="list-style-type: none"> Intensifying TB TEAM in terms of membership, program management and technology (especially coordination of TA). Trainings regularly will be conducted. GMP and GLP for NDRA lab in coming years. GMP/ WHO pre-qualification for existing drug factory. Linking of people's hospital with the NTP at the appropriate levels and training of other general care staff.

India		
Activities planned in 2009	Status of implementation	Activities for 2012-2013
<p>Early and higher case detection</p> <ul style="list-style-type: none"> • Map diabetic clinics and develop/pilot active case finding interventions • Develop/pilot active CF activities in prisons • Resolve PPD supply issue for childhood TB (TA needed from WHO and SSI Copenhagen) • Establish linkages with PAL by including activities like piloting PAL in Kerala (TA needed from WHO, WHO CC (NTI)) • Undertake rapid surveys for R and FQ resistance in new TB cases for reestimating • burden of MDR-TB (TA needed) • Revise DRS survey protocols to provide representative MDR-TB estimates amongst different Cat II types on entry to treatment (TA needed) • Scale-up interventions based on results of proposed pilot studies (TA needed from WHO and WHO CCs (NTI and TRC)) • Scale-up PAL interventions based on results of pilot in 2010 	<ul style="list-style-type: none"> • National programme for non-communicable disease launched in 100 districts • National consultation meeting- Nov 2011 • OR-in Kerala, Tamilnadu, 6 centres piloting DM/TB cross referral system. • DMCs and DOTS centres existing- active CF yet to be initiative- efforts are on • PPD procured • Piloting on- training module developed, training planned in dec • Not done, more DRS survey have been done • Revised • Rapid scale up with all states covered by involving at least 1 district by 2011 • Completing pilot by 2012 end- then plan for scale-up 	<p>Universal Access to TB Care</p> <ul style="list-style-type: none"> • ACSM- develop white paper on ACSM in RNTCP including M&E and develop necessary modules for capacity building (TA PATH) • Diagnosis <ul style="list-style-type: none"> - Pilot and scale up LED based FM Microscopy (TA FIND,WHO) - Pilot and scale up automated NAAT based technology (GeneXpert) for diagnosis of Rif resistance among re-treatment cases and diagnosis TB among high risk population like HIV (TA - WHO) - Review of evidences available from field level studies on ICF in high risk groups including contact tracing and develop guidelines for better monitoring of ICF activities (TA-WHO) • Treatment compliance and reduction in defaults <ul style="list-style-type: none"> - Compilation of experiences and developing national guidelines for addressing compliance (TA WHO, Union, WV,PATH, FHI-360) - Urban slums and migratory population - Innovative models developed and piloted including use of SMART card (TA-WHO) - Workplace intervention- linking industries with RNTCP (TA-PATH)

		<ul style="list-style-type: none"> • PPM <ul style="list-style-type: none"> - Revise PPM guidelines, develop National Standard of TB Care (TA-WHO, IMA) - Pilot notification mechanism from private sector (TA-WHO, IMA, BMGF) - Develop innovative models in PPM and pilot (TA-WHO) • PMDT <ul style="list-style-type: none"> - 43 Labs with Solid, Liquid culture and LPA (TA-WHO, FIND, PATH) - Review meetings, experience sharing (TA-WHO, PATH) - Operational research (TA-WHO) - Review of regimens and revision of DR-TB management guidelines (TA-WHO) - Patient support systems including counselling tools • Paediatric TB <ul style="list-style-type: none"> - Revise guidelines for diagnosis and treatment of paediatric TB - Documenting pilots ICF among malnourished children • TBHIV collaboration <ul style="list-style-type: none"> - Scale up ART/CPT in all TB patients - Scale up AIC in ART centres - Review of the counselling practises at ART/ICTC centres, TB patients including DR-TB and strengthen services • TB/DM <ul style="list-style-type: none"> - Develop National Guidelines for collaboration of TB/DM
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		<ul style="list-style-type: none"> • Monitoring and supervision <ul style="list-style-type: none"> - Review meetings including Joint Monitoring Missions (TA-WHO) - Revised scoring system for district performance and state implemented (TA-WHO) - Revise RNTCP Supervision and Monitoring strategy document (TA-WHO) - Electronic Case based notification system developed and implemented - Disease burden estimation at National level - Capacity building of programme managers in surveillance data management using Managing Information For Action (MIFA) trainings.(TA-WHO) • Regulating Anti-TB Drug sale in open market <p>Pilot pharmacovigilance and review evidences (TA-WHO)</p> <p>Facilitate regulation of first line Anti TB Drugs with National and State Drug Controllers</p> • Health system strengthening <ul style="list-style-type: none"> - Decentralization of subdistrict supervisory and monitoring system from Tuberculosis Unit (500,000 population) to Block level (200,000 population) in alignment with General Health system. - Practical Approach to Lung Health (PAL) pilot project evaluation and developing national guidelines for PAL for wider implementation by general health system- TB programme acting as facilitator.
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		<ul style="list-style-type: none"> - HR system strengthening with additional staff, capacity building and incentives for retaining. • Operational Research <ul style="list-style-type: none"> - Revising OR agenda based on the needs for Universal access (TA- WHO, The Union) - Capacity development for OR and support to conduct OR (TA- WHO, The Union)
<ul style="list-style-type: none"> • d 	<ul style="list-style-type: none"> • LED FM microscope s in 200 medical college DMCs, 	
<p>Improving TB treatment success rates</p> <ul style="list-style-type: none"> • Revise TB treatment regimens and implement four drug “New” (previous Cat I regimen) and five drug “Previously treated” (previous Cat II regimen) regimens proposed (TA needed from WHO, WHO CC (NTI)) 	<ul style="list-style-type: none"> • Done 	
<p>Improved procurement and supply management</p> <ul style="list-style-type: none"> • Ensure pre-qualified FP for FLD procurement under GF for procurement of first-line drugs (TA needed from GDF, WHO) • Explore utilization of procurement mechanisms outside GLC mechanisms (Stream B & C mechanisms) during future grant negotiations with GF for second-line drug procurement (TA needed from GDF, GLC and WHO) • Establish electronic SLD management systems for improving drug and supply management (TA needed from GDF, MSH and WHO) 	<ul style="list-style-type: none"> • Done • Done • Yes 	

<p>ACSM: Advocacy, communication and social mobilization</p> <ul style="list-style-type: none"> • Develop tools for improved communication with MDR-TB suspects and patients (TA from WHO and WHO CC (NTI)) • Increase representation of community in all relevant forums (via civil society partners) (TA needed from STP, PATH and the Union) 	<ul style="list-style-type: none"> • Not done • Done, State and District Health Societies have community representation in all, Under Project Axshya TB forums with community members only in 374 districts etc 	
<p>M&E: Monitoring and evaluation</p> <ul style="list-style-type: none"> • Develop software for integrated information system for DR-TB services which links lab, in-patient and ambulatory treatment service and management sites (TA from MSH, WHO and WHO CC (NTI)) • Undertake RCT for shortening treatment regimen for (24 to 15 month regimen) for MDR-TB (TA requested from WHO, WHO CC (TRC) and GLC) • Pilot IPT in ART centres (TA requested from WHO and UNAIDS) • Undertake RCT for shortening of treatment regimen (24 to 15 month regimen) for MDR-TB (TA requested from WHO, WHO CC (TRC) and GLC) • Pilot IPT in ART centres (TA requested from WHO and UNAIDS) 	<ul style="list-style-type: none"> • Yes, in the process of developing a electronic case based notification system. Expected to have the beta version by 2nd qtr 2012 • RCT is on going • Piloting on 	
<p>Infection control</p> <ul style="list-style-type: none"> • Pilot airborne IC guidelines in two states and scale up based on results of the pilot with TA from PATH, CDC and WHO 	<ul style="list-style-type: none"> • 3 states (Andhra Pradesh, Gujarat and West Bengal) completed, facility risk assessment reports being submitted to National Airborne infection control committee. Draft guidelines published. Up scaling started in Maharashtra. 	

<p>Health system strengthening</p> <ul style="list-style-type: none"> Strengthen HR at all levels to effectively utilize external support to be taken up in 2010 with TA requested from WHO 	<ul style="list-style-type: none"> HR assessment study started, on going activity 	
<p>Operational research</p> <ul style="list-style-type: none"> Concentrate on new diagnostics and drugs with TA from FIND, WHO, WHO CCs (NTI, TRC) 	<ul style="list-style-type: none"> LED FM Gen Xpert RCTs- ongoing Shortening duration of treatment Immunomodulation in TB treatment Zinc & Vit D with ATT Treatment in TB/HIV Tobacco cessation in TB STREAM study 	

Indonesia		
Activities planned in 2009	Status of implementation	Activities for 2012-2013
<p>Early and higher case detection</p> <ul style="list-style-type: none"> • Strengthen case finding in slum areas and in areas with high HIV prevalence • Include HIV positives in all VCT clinics and diabetics in health facilities with DOTS units • Screen TB patients in prisons and workplaces • Continue household contact tracing activities • Continue childhood TB diagnosis activities • Household contact of positive TB cases • Pilot PAL at central and province-level hospitals • Expand TB/HIV collaboration in VCT and CST centres 	<ul style="list-style-type: none"> • Strengthened and intensified case finding in 137 remote areas through innovative and local based approach, and in the areas with high HIV prevalence implementing an integrated approach to to accelerate the improvement of health development in Papua (Presidential Instruction no 1/2010) ◊ save Papua programme (P2KTP) using active screening approach with mobile clinic • TB patient screening in prisons for new inmates and periodic screening, and post release prisoner/ parole referral system • Intensified Contract tracing and childhood TB diagnosis → utilizing BOK (operational cost for PHC) • Pilot PAL in 3 provinces, Lampung, West Java, and Jakarta • Collaborative TBHIV initiatives in VCT and CST have been implemented in 17 provinces (HIV affected areas), and will be expanded gradually to other provinces → coordination forum of TBHIV at Provinces and districts are being enforced and facilitated by NTP 	<ul style="list-style-type: none"> • Monitoring progress of implemented activities – measuring output of case finding and assessing cost-efficiency • OR on data for burden of diabetes • Complete coverage for availability of TST • Expansion of PAL based on results of pilots • Strengthening data exchange between TB and HIV programmes to have information on referrals
<p>Laboratory strengthening</p> <ul style="list-style-type: none"> • Develop national reference laboratory • Expand intermediate labs in seven new provinces • Involve non-NTP labs for quality assured smear microscopy 	<ul style="list-style-type: none"> • 3 National reference laboratory established (Microscopic, DST/Culture and Molecular/research); • Intermediate laboratory in 6 out 7 provinces are functioning • LQAS is expanded in step wise approach 	<ul style="list-style-type: none"> • Formal designation of NRLs • Strengthening Laboratory services through TB care support from JATA, FIND • Expanding EQA system • Training for Xpert MTB/Rif • OR for Xpert implementation

<ul style="list-style-type: none"> Establish culture and first-line DST activities in five labs for lab strengthening through culture and first-line DST 	<ul style="list-style-type: none"> 5 labs already certified by Supranational Lab (IVM) and 5 more are in the process to be certified in 2012 17 genexperts will be distributed and operate for TBMDR, TBHIV and TB in prison OR for networking the involvement of private labs have been conducted PPM for private labs workshop will be conducted December 19, 2011 	<ul style="list-style-type: none"> Algorithm for Xpert examination developed Continuing effort to seek appropriate model for networking private labs, private practitioner and private pharmacist
<p>Improving TB treatment success rates</p> <ul style="list-style-type: none"> Continue use of incentives for health workers for treatment success outcomes 	<ul style="list-style-type: none"> Continuing incentive to health worker for treatment success out comes. Incentive will be covered by province and district in step wise manner Engagement all care providers → <ul style="list-style-type: none"> professional society using ISTC → linkage with certification and licensing Hospital Accreditation → Quality TB care as one of the minimum standard services for accreditation 	<ul style="list-style-type: none"> Encouraging provinces to allocate resources for incentives and rationalising use of incentives Strengthening linking process of TB/MDR-TB patients with other social development programmes
<p>Improved procurement and supply management</p> <ul style="list-style-type: none"> Organize high level inter-sectoral meetings in provinces to ensure realization of govt. commitment for drug procurement with reference to procurement of first-line anti-TB drugs, lab equipment and supplies Coordinate TA amongst partners for improving drug and supply management 	<ul style="list-style-type: none"> To ensure logistic availability → Procurement and supply management of TB drugs and reagents → pooled as MOH responsibility Procurement of lab equipment and consumables will be allocated by province and district, through special allocation funding Cross component coordinating forum for SCM for improving drug and supply management (SCM partners group) 	<ul style="list-style-type: none"> Develop standards for drug storage – design of warehouses Develop Good Storage/warehousing practices In coordination with IFDA conducting quality control for ATD Develop SOP for QC up to end users and reporting mechanism for client complaints

<p>ACSM: Advocacy, communication and social mobilization</p> <ul style="list-style-type: none"> Proposed plan for training of province and district ACSM teams (TA needed) Finalize advocacy toolkits Start a national TB campaign Update TB website/evaluate TB campaign Produce and distribute Gerdunas bulletin Disseminate patient charter, support community organizations and pilot village TB posts in remote areas Constitute a Journalist Award and documentation of partnership in annual TB report and Gerdunas 	<ul style="list-style-type: none"> ACSM training has been conducted (budget at SR level) in R5 and will be continued in SSF grant Advocacy toolkits has been finalize, printed and distributed to province Media campaign plan of action (5 years) has been finalized and starting to be implemented (2010) in coordination with Center for health promotion (production of master campaign package) and NTP (media placement and duplication of campaign packages to provinces and districts) TB website, www.tbindonesia.or.id are well functioned and regularly being updated → all IEC material and manual/guidelines are uploaded. Evaluation of campaign being monitored from comment posting at this websites and other website (aids-ina) Patient charter are being disseminated (R5 MOH and R8-Aissyiyah), pilot Gerdunas bulleting are produced but not as frequent as planned Not yet executed 	<ul style="list-style-type: none"> Continued training of ACSM teams (will be completed by March 2012) Newer initiatives for strengthening ACSM with targeted messages Small grants (US 50,000-150,000) have been launched to stimulate involvement of NGOs and partners in ACSM (12 grants are under processing) Continue campaigning in line with POA and allocation of Media placement budget every year (in SSF grant) Implementation of village TB posts finalized and being expanded in SSF grant Intensified Gerdunas bulletin → CSR involvement
<p>M&E: Monitoring and evaluation</p> <ul style="list-style-type: none"> Pilot online TB surveillance system as part of improving data management software Train M&E staff on data management/analysis 	<ul style="list-style-type: none"> Electronic TB surveillance system is initiated → transitioning all paper based system into electronic/web-based system → to be integrated with health information system Training M & E staff on data management/analysis has been conducted, MIFA training will be introduced Initiating modelling estimates to explore understanding on the epidemic situation → starts in 2010 	<ul style="list-style-type: none"> Completion of electronic patient registers (TB03) and logistic (LMIS) to central level by June 2012. Shifting from paper based reporting to electronic/web based reporting and enhancing cross validation and cross analysis data → by June 2013 Continue improving modelling estimates, dissemination of result and develop modules and training → upon request/interest (from provinces)

		<ul style="list-style-type: none"> Initiating MIFA → to improve capacity of provincial and district officer in analysing and utilizing data for advocacy and DM, develop modules and training package
<p>TB/HIV: Collaborative activities</p> <ul style="list-style-type: none"> Establish TB/HIV working group in high burden areas Train TB workers on HIV-related issues Train HIV workers on TB-related issues Implement TB/HIV surveillance system in high-burden areas 	<ul style="list-style-type: none"> Established TB/HIV coordination forum in high burden areas Training of TB workers and HIV workers completed Improving two sided of reporting recording formats 	<ul style="list-style-type: none"> Strengthening Collaborative TBHIV forum, revision all related guidelines Implement TB-HIV surveillance system
<p>MDR-TB: Prevention and control of multidrug-resistant TB</p> <ul style="list-style-type: none"> Develop guidelines and training modules Implement pilot site at Surabaya hospital Expand coverage area of Jakarta pilot site 	<ul style="list-style-type: none"> Guidelines and training modules developed Pilot site at Surabaya hospital already established and Jakarta coverage expanded Starting in 2011 PMDT become a national program and PMDT action plan has been made and implemented in step wise manner 	<ul style="list-style-type: none"> Expansion of PMDT services as per the plan Implementation of HR capacity strengthening for PMDT expansion Initiating Centre for Excellence for PMDT Developing Counselling manual and plan for capacity strengthening in counselling
<p>Infection control</p> <ul style="list-style-type: none"> Train and assess two hospitals for infection control standards 	<ul style="list-style-type: none"> Training and assessment for infection control in 2 hospitals were done TB infection control now part of the Hospital infection control guidelines Support for renovating infection control ward were provided in some hospitals (PR FKMUI) 	<ul style="list-style-type: none"> Further strengthening and monitoring of Infection control practices Plan to run workshop for Hospital specialist Architects (through association) → TBCARE 1
<p>Health system strengthening</p> <ul style="list-style-type: none"> Revise training material for district coordinator and health facility staff for human resource development 	<ul style="list-style-type: none"> Training material for district coordinator and health facility staff for HRD revised 	<ul style="list-style-type: none"> Finalizing ACDA (Advance Course for DOTS Acceleration) modules and start the training as per plan

<ul style="list-style-type: none"> • Scale-up HDL and TB/HIV training for 100% coverage • Regular planning and M&E to improve programme management • Routine quarterly supervision 	<ul style="list-style-type: none"> • HDL training scaled-up → anticipating PPM scale up with the establishment of PTT (Provincial Training team) and self financing training package • Regular planning and M&E to improve programme management undertaken • Training for Logistic management at provincial and district levels are finalized 	<ul style="list-style-type: none"> • Finalizing self financing training package for HDL and PPs • Strengthening and functioning of PTT
<p>Budgeting and financing</p> <ul style="list-style-type: none"> • Finalize implementation tool and planning for budgeting 	<ul style="list-style-type: none"> • Tool for planning and implementation for budgeting finalised • Initiating multi mix financing by involvement of insurance scheme → MOU with Jamsostek (2010), inclusion of Standard TB drugs at ASKES insurance scheme (2011) • HSS project supported by AUSAID and UNDP aiming to advocate and ensure increasing budget from central and local financing as mandated by Health Law 36/2009 → exit strategy 	<ul style="list-style-type: none"> • Advocacy for increased resource allocation for health at all levels as per the prescribed limits (at least 5% National, 10% Province and 10% districts) → ensuring that increase allocation of health budget in line with increase allocation of TB budget • Continuing to advocate inclusion of standardized regimen of TB drug in all health insurance scheme • Finalizing Cross component Exit Strategy of GFATM and monitor the implementation of the exit strategy
<p>Operational research</p> <ul style="list-style-type: none"> • Capacity building at province level for conducting OR for TB 	<ul style="list-style-type: none"> • List of priority agendas for OR finalised • Provincial level OR team consisting of Academician, NGOs and Provincial Health officer established and network are being strengthened 	<ul style="list-style-type: none"> • Undertake OR as per plan • Incorporating new OR agenda for Xpert
<p>Others</p>		<ul style="list-style-type: none"> • Expansion of PPM through accreditation of hospitals and licensing of private practitioners • Community systems strengthening and involvement of affected communities for advocacy, empowerment and public watch role

		<ul style="list-style-type: none">• Initiating engagement of Indonesian Pharmacist association in PPM• Enhancing collaboration with Indonesian Nurse association for patient care (adherence and completeness of treatment)• Preparatory activities and start of prevalence survey by September 2012• Piloting tuberculin testing in 9 provinces
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Maldives		
Activities planned in 2009	Status of implementation	Activities for 2012-2013
<p>Early and higher case detection</p> <ul style="list-style-type: none"> • Conduct workshop for rehab and prison workers on transmission/ prevention of TB • Conduct training workshop for community health workers on TB case management and contact tracing 	<ul style="list-style-type: none"> • Completed • Completed 	<p>Early and higher case detection</p> <ul style="list-style-type: none"> • Capacity Strengthening for prevention and treatment of TB • Capacity building of health personnel in forecasting of anti-TB drugs and logistics system
<p>Laboratory strengthening</p> <ul style="list-style-type: none"> • International training for TB lab workers on culture sensitivity • Establish connection with SNRL in Chennai for DST 	<ul style="list-style-type: none"> • Lack of capacity and financial support • On going - First few samples were sent to Chennai for DST, but now the sputum samples are being sent to the National Tuberculosis Institute (NTI) in Bangalore via DHL. 	<p>Laboratory strengthening</p> <ul style="list-style-type: none"> • International training for TB lab workers on culture sensitivity
<p>Improved procurement and supply management</p> <ul style="list-style-type: none"> • Procure limited amount of loose drugs through GDF • Procure INH for prophylaxis through GDF • Conduct workshop for regional hospitals and main DOTS centres on drug supply management 	<ul style="list-style-type: none"> • On going • On going • Lack of capacity and financial support 	<p>Improved procurement and supply management</p> <ul style="list-style-type: none"> • Conduct workshop for NTP and main DOTS centre staff on drug supply management

<p>ACSM: Advocacy, communication and social Mobilization</p> <ul style="list-style-type: none"> • Conduct workshop to sensitize political leaders on community engagement in TB prevention • Educate expatriate recruiting agents on TB prevention and control • Develop and print IEC information packages on transmission and prevention of TB for school children 	<ul style="list-style-type: none"> • Lack of capacity and financial support • Completed • Completed 	<p>ACSM: Advocacy, communication and social Mobilization</p> <ul style="list-style-type: none"> • Advocacy meeting to sensitize political leaders on community engagement in TB prevention • Develop and distribute IEC packages on DOTS
<p>M&E: Monitoring and evaluation</p> <ul style="list-style-type: none"> • Integrate TB Surveillance information in to SIDAS system 	<ul style="list-style-type: none"> • Not done yet. But Centre for community health and disease control is developing a communicable disease notifying system and TB will be included in this system so that TB surveillance information will be integrated in to the SIDAS. 	<p>M&E: Monitoring and evaluation</p> <ul style="list-style-type: none"> • Integrate TB Surveillance information in to SIDAS system • Monitoring of provincial TB programmes • Mapping of TB risk groups • Field visits and review of Tb services conducted
<p>TB/HIV: Collaborative activities</p> <ul style="list-style-type: none"> • Carry out awareness programme and active case finding on world TB Day 	<ul style="list-style-type: none"> • Completed 	<p>TB/HIV: Collaborative activities</p> <ul style="list-style-type: none"> • Establish DOTS services for drug users linked to voluntary counselling and testing centre at journey • VCT training to DOTS centres staff
<p>MDR-TB: Prevention and control of multidrug-resistant TB</p> <ul style="list-style-type: none"> • Adopt WHO guidelines on treatment of MDR an national level 	<ul style="list-style-type: none"> • MDR-TB guideline adopted and national guideline on MDR-TB has been developed and finalized. Has to be published. 	<p>MDR-TB: Prevention and control of multidrug-resistant TB</p> <ul style="list-style-type: none"> • Establish MDR-TB review committee • Development dissemination of IEC package to all MDR-TB patients on treatment adherence
<p>Infection control</p> <ul style="list-style-type: none"> • Develop guidelines for infection control 	<ul style="list-style-type: none"> • Lack of capacity and financial support 	<p>Infection control</p> <ul style="list-style-type: none"> • Develop guidelines for infection control

<p>Health system strengthening</p> <ul style="list-style-type: none">• Establish National TB Team• Provide international training for two staff members of DOTS centers on DOTS• Supervise visits to three regional DOTS centers	<ul style="list-style-type: none">• Established in 2011 , but lack of capacity• Lack of capacity and financial support• Lack of capacity and financial support	<p>Health system strengthening</p> <ul style="list-style-type: none">• strengthen National TB Team• Provide international training for two staff members of DOTS centers on DOTS• Supervise visits to the regional DOTS centers• Develop a National practical approach to lung health guideline
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Myanmar		
Activities planned in 2009	Status of implementation	Activities for 2012-2013
<p>Early and higher case detection</p> <ul style="list-style-type: none"> • Continue coverage of social risk groups • Expand to newer sites depending on availability of funds specific to risk groups. • Pilot coverage of clinical risk groups in 100 sites (funds for X-ray diagnosing needed) • Continue and improve existing system of contact tracing to proceed more systematically including household contacts and contacts of previous year's positive cases (financial support needed for all these activities) • Expand use of paediatric formulation, including training of basic health staff (BHS) for childhood TB • Develop new reporting system and training to BHS on its use • Expand linkages with HIV and MCH programmes • Improve estimates for paediatric TB 	<ul style="list-style-type: none"> • TB control activities at Myanmar Thai border conducted in 2007, at Myawaddy, in 2010 at Tachileik townships. • The activities expanded to Muse and Kawthaung townships in 2011 (GF) • X-ray facility is available in 14 State and Regional TB centres. • Community TB care guideline was drafted. • Revision of recording and reporting forms for community based TB care was carried out. Community volunteers from 79 townships were trained. • Paediatric formula anti-TB drugs were distributed to all basic DOT units. • Revised reporting and recording forms for routine DOTS, TB/HIV, MDR-TB. • TB/HIV collaborating activities conducted in 17 townships • Expansion of 10 VCCT sites in 2011. • Revised the reporting format on paediatric TB 	<ul style="list-style-type: none"> • Two border townships (Maung Taw and Tamu) will be expanded. • Standardization of guideline and introduce to the partners. • Community volunteers from 71 townships will be trained. • To adopt and update "Rapid Advise of WHO in childhood TB management" to township TB coordinators, Township Medical Officers and Paediatricians. • Dissemination of revised forms • TB/HIV collaborative activities are to be expanded. • Linkage of TB control services with MCH programmes • Data analysis on paediatric TB • Scale up of PPM including private hospitals • Involving informal health care providers in TB control • To design additional strategies for detecting TB patients with minimal symptoms
<p>Laboratory strengthening</p> <ul style="list-style-type: none"> • Improve infrastructure of 20 labs through quality-assured smear microscopy (financial support needed) • Expand new microscopy centres —10 per year as proposed under GFATM Round 9 • Introduce fluorescent microscopes in all states and regions 	<ul style="list-style-type: none"> • Decentralized sputum microscopy to 17 labs • Not done • Under process of procurement by PR (25 for Year 1 and 40 for Year 2) • Two BSL-3 laboratories established in Yangon and Mandalay. 	<ul style="list-style-type: none"> • To improve infrastructure up to 30 labs (cumulative) • Sputum collection centres will be expanded • To introduce LED in all State/Regional/District TB centres including EQA system for LED. • Maintenance of the BSL-3 labs and calibration of machines every year

<ul style="list-style-type: none"> • Establish national TB reference lab in Mandalay for lab strengthening through culture and second-line DST and two new sites proposed (TA needed) • Use FIND project funds to secure equipment and additional TA • Xpert MTB/RIF 	<ul style="list-style-type: none"> • Technical assistance was provided by FIND with the support of GF and FIND • Set up of Xpert in Myanmar (Union- 2, MSF-H -1) and provided training. 	<ul style="list-style-type: none"> • To start SL DST in those 2 labs • To establish additional culture facilities (e.g. in Shan State, Taunggyi) • Technical assistance is needed • To establish the diagnostic algorithm for X-pert • Set up of X-pert (1 from MSF-Switzerland, 2 for NTP)
<p>Improving TB treatment success rates</p> <ul style="list-style-type: none"> • Scale-up community involvement in projects implemented through INGOs like Three Diseases Fund and GFATM Round 9 • GFATM Round 9 	<ul style="list-style-type: none"> • Quarterly cohort review meeting, quarterly township evaluation meeting, bi-annual TB evaluation meeting at States/Regions, annual evaluation meeting at central level • Involving community volunteer in case holding • Provided patient support by partners • Provided patient support for MDR-TB patients • Activities started in January 2011. 	<ul style="list-style-type: none"> • To provide patient support for TB patients • Activities in Year 2, Phase – 1 of GF Rd9 will be continued.
<p>Improved procurement and supply management</p> <ul style="list-style-type: none"> • Procure first-line anti-TB drugs planned through Three Diseases Fund 	<ul style="list-style-type: none"> • In 2009 – one year grant from GDF, followed by from 3DF for 2010 and from Japanese Government for 2011. • For 2011, 70% buffer stock procured under GF Rd 9 Year 1 and ordered for Year 2. • Ordered paediatric drugs from GDF with high dose according to rapid advice for 2012. • Procured SLD for 50 patients with GF 	<ul style="list-style-type: none"> • Secure FLD till June, 2013, including for anticipated additional case finding. • Preparation for the possible interruption of supplies between Phase 1 and 2 GF Rd 9.
<p>ACSM: Advocacy, communication and social mobilization</p> <ul style="list-style-type: none"> • Increase case detection in some townships 	<ul style="list-style-type: none"> • By introduction of community based TB care activities, case detection improved in some townships esp. townships working with Myanmar Health Assistant Association. 	<ul style="list-style-type: none"> • Expand community involvement in TB control • Media campaign will be conducted

<ul style="list-style-type: none"> Form TB Team (tasks committee) to discuss ACSM and its scope at different levels of project implementation Start partnering process by mobilizing potential partners to establish national Stop TB Team 	<ul style="list-style-type: none"> Technical Strategic Group for TB is functioning under Myanmar Central Coordination Mechanism Conducted media campaign at Yangon and Mandalay Develop new IEC materials based on the findings of national KAP survey 	<ul style="list-style-type: none"> To tailor IEC materials to local areas, particularly in states (translation in local languages, etc.)
<p>M&E: Monitoring and evaluation</p> <ul style="list-style-type: none"> Expand DHIS software to improve data management software Train township-level facilitators to improve database analysis and its use Prevalence survey and KAP is in progress 	<ul style="list-style-type: none"> DHIS soft ware was introduced to State / Region level Computers were distributed up to district level Data management training provided Conducted Conducted 	<ul style="list-style-type: none"> To identify a data clerk in each district/ township Provide necessary training for DHIS up to district level Provide training on data management up to township level 3rd DRS, TB mortality study are to be conducted
<p>TB/HIV: Collaborative activities</p> <ul style="list-style-type: none"> Expand collaborative activities to three new townships every year till 2015. Continue TB/HIV sentinel surveillance Ensure that 3,000 eligible TB patients are treated for HIV in 2010 and 8860 of estimated eligible TB patients treated for HIV in 2011 	<ul style="list-style-type: none"> Implementing in 17 sites Cross referral of TB patients for VCCT and TB screening for PLHIV started Continuation of TB/HIV sentinel surveillance in 20 sites IPT for PLHIV without active TB is piloted in 9 sites 	<ul style="list-style-type: none"> To develop TB/HIV scale-up plan for wider coverage To provide PICT for TB patients and to screen PLHIV for TB in step wise manner To evaluate the IPT pilot phase and to adopt a policy for IPT and to develop the guideline
<p>MDR-TB: Prevention and control of multidrug-resistant TB</p> <ul style="list-style-type: none"> Targets set for MDR-TB control for 2010:175 patients Targets set for MDR-TB control for 2011: 200 patients 	<ul style="list-style-type: none"> Enrolled 298 MDR-TB patients in pilot project 50 MDR TB patients will be enrolled in Dec, 2011 with GF Rd 9 MDR-TB scale up plan developed (10,000 pts to be enrolled over five years) Guideline and records/reports were reviewed and revised 	<ul style="list-style-type: none"> 550 MDR-TB patients will be enrolled in 2012 and 400 in 2013. To establish a system for linking with Xpert MTB/RIF for diagnosis of MDR-TB To introduce case-based electronic reporting for PMDT. Community involvement in PMDT Drug regulation for SLD and law reinforcement of FDA

<p>Infection control</p> <ul style="list-style-type: none"> Strengthen infection control measures to decrease nosocomial transmission of TB in township implementing TB/HIV collaborative activities and MDR-TB programme management (through 22 TB/HIV sites, 26 MDR-TB sites, seven of which overlap between TB/HIV and MDR-TB) (TA needed) 	<ul style="list-style-type: none"> Infection control at MDR wards, health centres, laboratories where MDR-TB management was piloted. 	<ul style="list-style-type: none"> To improve infection control in all health care settings by reinforcing existing IC rules and regulation To provide training on personal protection to health staffs
<p>Health system strengthening</p> <ul style="list-style-type: none"> Provide training in lab equipment maintenance and repair (TA needed) 	<ul style="list-style-type: none"> Recruited different categories of staff under WHO/3DF and GF Recruited an engineer for lab equipment maintenance HSS at township level with GAVI (Cross cutting) 	<ul style="list-style-type: none"> HR needs at district / township level
<p>Budgeting and financing</p> <ul style="list-style-type: none"> Budgetary allocation of US\$ 869 000 and budgetary allocation of US\$815 500 for next two years 	<ul style="list-style-type: none"> Received GF Rd9 Phase 1 	<ul style="list-style-type: none"> To explore all options for resource mobilization, in particular Govt of Myanmar, GF, 3MDGF, JICA, USAID, WHO, other
<p>Operational research</p> <ul style="list-style-type: none"> Explore possibility of implementing a nine-month regimen for MDR-TB (TA needed) 	<ul style="list-style-type: none"> Evaluation of existing pilot studies 	<ul style="list-style-type: none"> OR for accelerate case finding OR for new diagnostic tools
<p>Technical assistance</p>		<ul style="list-style-type: none"> To develop the TA plan (TA is needed for PMDT, new diagnostics, ACSM, TA for revising existing plans reflecting on the findings of national TB prevalence survey)

Nepal		
Activities planned in 2010_11	Status of implementation	Activities for 2012-2013
<p>Early and higher case detection</p> <ul style="list-style-type: none"> • Address cross-border issues with border districts in India; document and quantify problem and conduct meetings with India (TA and WHO facilitation needed) • Conduct OR and tobacco cessation activities for TB patients (TA needed from WHO and The Union) • Focus on systematic screening, treatment and infection control for prisoners • Develop clear operational guidelines for contact tracing among household contacts of smear-positive cases and MDR-TB (TA needed) ; conduct OR on yield and further expansion (TA needed) • Develop guidelines for childhood TB (TA needed) • Strengthen and scale up PAL (TA and financial assistance needed) • Link up with maternal and child health services (TA needed) • Conduct TB/HIV training for staff (TA needed) 	<ul style="list-style-type: none"> • No progress made • Planned for 2012/13 • DOTS available in several main prisons, however routine screening and infection control still lacking • Operational guidelines on contact tracing developed, implementation in progress. OR should be planned for the next biennium • Childhood TB Guidelines developed • PAL expanded to 9 district, • No progress • On going, several trainings conducted as per NSA plan 	<ul style="list-style-type: none"> • Initiate regular DOTS for most at risk population (prisons, slum areas, factories etc) with the aim to cover all prisons, all major slum areas and all factories by end of 2013. • Implement DOTS in all urban areas (100% municipality coverage by 2013) • Establish routine contact tracing among household contacts of smear-positive cases and MDR-TB (TA needed) ; conduct OR on yield and further expansion (TA needed) • Strengthen and scale up PAL/TFI in 19 district by end 2013 (TA needed) • Link up with maternal and child health services (TA needed) • Introduce TB Diabetes initiative using WHO "Collaborative framework for care and control of tuberculosis and diabetes"
<p>Laboratory strengthening</p> <ul style="list-style-type: none"> • Scale-up quality assurance sampling (LQAS) based external quality assessment (EQA) for smear microscopy (TA and funds needed) 	<ul style="list-style-type: none"> • Laboratory network expanded, 505 labs offer TB microscopy services • In progress, plan to cover entire country by 2015 • Currently culture and DST 	<ul style="list-style-type: none"> • Establish culture and DST services at Regional levels as per NSP plan (4 culture and 1 DST lab.) • Expedite expansion of LQAS with the aim to achieve nationwide coverage by 2013.

<ul style="list-style-type: none"> • Develop national lab capacity and set up provincial level labs for lab strengthening through culture and first-line DST (TA needed) • Introduce liquid culture (equipment already available) and fluorescence microscopy. Introduce line probe assay (TA needed) 	<ul style="list-style-type: none"> • services are available from NTP Central Lab and GENETUP. NTP Central Lab. was accredited by SNRL (Gauting) in 2010. NTP plans to expand culture (addition four sites) and DST (one additional lab) to regional level during 2012/13 • In place at GENETUP 	<ul style="list-style-type: none"> • Consider introduction of Gene Xpert technology after conclusion and careful review of the IOM TB REACH project.
<p>Improving TB treatment success rates</p> <ul style="list-style-type: none"> • Pilot a mix of family DOTS and health facility DOTS to improve TB success rates through DOTS and patient support. 	<ul style="list-style-type: none"> • Community and family based DOTS offered during continuation phase of treatment 	<ul style="list-style-type: none"> • Improve cure rates among drug resistant TB patients through establishment of a regular and aggressive defaulter tracing mechanism • Evaluate the utility and usefulness of MDR TB hostel (TA needed)
<p>Improved procurement and supply management</p> <ul style="list-style-type: none"> • Address issues related to fund transfer for first-line drug procurement between GF, PR and GDF • Train and monitor drug logistics management to improve drug and supply management (TA needed) 	<ul style="list-style-type: none"> • GF grant for procurement of first and second line TB drugs are channelled through NTP to WHO. Procurement done through GDF. • Done, on going 	<ul style="list-style-type: none"> • Prepare a plan of action to gradually take over the anti TB drug procurement responsibility
<p>ACSM: Advocacy, communication and social mobilization</p> <ul style="list-style-type: none"> • Develop a comprehensive national ACSM plan and (TA needed) 	<ul style="list-style-type: none"> • Done. ACSM plan is part of the National Strategic Plan 2010 - 2015 	<ul style="list-style-type: none"> • Revise ACSM approaches in light of the OR conducted (part of NSA plan)
<p>M&E: Monitoring and evaluation</p> <ul style="list-style-type: none"> • Replace Epicentre software with something simpler to improve database management software (TA needed) • Organize MIFA training for data management (TA needed) 	<ul style="list-style-type: none"> • Work in progress to introduce OpenMRS for MDR programme. Once established NTP will proceed to introduce electronic data management for rest of the TB programme • Not done 	<ul style="list-style-type: none"> • Ensure full operationalization of OpenMRS before end 2012 (TA needed) • Initiate piloting of electronic data management • Finalize planning and initiate implementation of Prevalence Survey before end 2012

<ul style="list-style-type: none"> Undertake a prevalence survey (TA needed along with outsourced implementation by an agency) 	<ul style="list-style-type: none"> Plans for PS in progress. Initial feasibility assessment done. RIT contacted and agreed to provide overall technical assistance. Procurement of equipment and implementation will start in later half of 2012 	
<p>TB/HIV: Collaborative activities</p>	<ul style="list-style-type: none"> TB HIV collaborative activities implement in 15 districts 	<ul style="list-style-type: none"> Increase TB HIV collaborative activities as per NSP (25 district by end 2013) Ensure full implementation of IPT (asap) Review policy of HIV screening of all TB patients and start implementation national consensus achieved
<p>MDR-TB: Prevention and control of multidrug-resistant TB</p>		<ul style="list-style-type: none"> Ensure full implementation of Drug Resistant TB programme as per revised Guidelines (developed in 2011). Revise DR TB national plan and targets (TA needed) Screen all category I failures and DR TB patient contacts
<p>Infection control</p> <ul style="list-style-type: none"> Develop guidelines for infection control (TA needed) 	<ul style="list-style-type: none"> National policy and guidelines developed POA for procurement, IC staff TOR, SOP and guidelines for IC in MDR TB hostel developed. Guidelines for surveillance/screening of health workers prepared Resources for IC secured through NSA grant for 2010 – 2015 period. 	<ul style="list-style-type: none"> Ensure IC implementation as per NSP plans
<p>Health system strengthening</p> <ul style="list-style-type: none"> Organize training on programme management (TA needed) 	<ul style="list-style-type: none"> Done, on going 	<ul style="list-style-type: none"> Organize training on programme management (TA needed) Organize training to develop counselling skills (TA needed) Organize training on laboratory

<ul style="list-style-type: none"> Organize training to develop counseling skills (TA needed) Organize training on laboratory techniques (TA needed) Organize training on TB/HIV (TA needed) Organize training to improve supervision strengthening (TA needed) 		<p>techniques (TA needed)</p> <ul style="list-style-type: none"> Organize training on TB/HIV (TA needed) Organize training to improve supervision strengthening (TA needed)
<p>Budgeting and financing</p> <ul style="list-style-type: none"> Manage new GF grant including consolidation of grants (TA needed) Utilize WHO planning and budgeting tool as routine practice (TA needed) 	<ul style="list-style-type: none"> R4, R7 and NSA grants consolidated. NTP used both GF templates and WHO planning and budgeting tools for National Strategic Plan and NSA grant application 	
<p>Operational research</p> <ul style="list-style-type: none"> Evaluate PAL (TA Needed) Evaluate contact tracing (TA needed) Evaluate treatment delays (TA needed) Evaluate alternative DOT models (TA needed) 	<ul style="list-style-type: none"> PAL programme component was evaluated by external expert (WHO HQ) twice. Not done On going On going 	<ul style="list-style-type: none"> Conduct OR as per NSP 2010 – 2015 plan
<p>Others</p>		

Sri Lanka		
Activities planned in 2009	Status of implementation	Activities for 2012-2013
<p>Early and higher case detection</p> <ul style="list-style-type: none"> Target slum/internally displaced/elderly and estate populations for active case finding through intensified screening. 	<ul style="list-style-type: none"> For slum dwellers identified the hotspots in CMC area and limited numbers of screening programmes were conducted due to financial constraints. Internally displaced – during the initial stages all the displaced populations were screened for TB. When they've already re-settled in those areas the TB services were implemented by establishing two DCCs. Returnees from India are screened for TB and other diseases when they've settled in their towns/villages. Elderly – most of the elderly population living in selected areas were screened. 	<ul style="list-style-type: none"> Strengthened the 2 DCCs in re-settled areas (infrastructure, HR) Strengthened HR in all the DCCs on enhanced case detection Conducting targeted active case detection and case holding in all high risk groups (urban slums, prison, estates, DM clinic, migrants settings) Strengthening contact tracing in a systematic manner. Expansion of DOTS centres and participation of private and indigenous sectors in TB diagnosis and management
<ul style="list-style-type: none"> Develop guidelines for screening and mapping of diabetic clinics (TA needed from WHO) 	<ul style="list-style-type: none"> Guidelines developed. 	<ul style="list-style-type: none"> TB-DM project will be implemented in 3 selected sites.
<ul style="list-style-type: none"> Develop active case finding in prisons 	<ul style="list-style-type: none"> Routine system of screening in prisons established. One OR completed on prison settings. Survey among 8000 prisoners on TB initiated Two Microscopic centres were established in leading prisons and X-ray facilities were provided to the major prison in the country. 	<ul style="list-style-type: none"> Survey among 8000 prisoners will be continued. Reform of prison health service including TB care
<ul style="list-style-type: none"> Review guidelines for contact tracing and household contacts (TA needed from TBTEAM and The Union) 	<ul style="list-style-type: none"> Guidelines and formats were developed, concerned health staff were trained, registers are maintained at DCCs. 	<ul style="list-style-type: none"> Continue training

<ul style="list-style-type: none"> Finalize TB/HIV guidelines (TA needed from WHO) 	<ul style="list-style-type: none"> TB/HIV guidelines developed. Counselling guidelines finalized 	<ul style="list-style-type: none"> Training of relevant health staff on the guidelines and joint meetings, reporting system & monitoring. Scale up screening of all TB patients for HIV under PICT.
<ul style="list-style-type: none"> Link with HIV, NCD and programmes for elderly people (TA needed from WHO) 	<ul style="list-style-type: none"> cross-participation in advisory groups sharing of information and resource material Link PEN-PAL initiatives 	<ul style="list-style-type: none"> PAL will be implemented in selected sites.
<ul style="list-style-type: none"> Re-estimate burden of MDR-TB, TB/HIV and paediatric TB (TA needed from WHO) 	<ul style="list-style-type: none"> DRS protocol was developed but could not conduct due to financial constraints. 	<ul style="list-style-type: none"> Resource mobilization for implementation of DRS
<p>Laboratory strengthening</p> <ul style="list-style-type: none"> Organize training on maintenance of microscopes (TA needed from GLI and FIND) Introduce newer diagnostic tools for rapid culture and DST as recommended (TA needed from GLI) Introduce training for LED and fluorescent microscopy, establish laboratory information system and networking between laboratories (TA needed) 	<ul style="list-style-type: none"> Training conducted with public-private partnership. Regular mapping of status of microscopes. Refurbishment of National TB Reference Laboratory, establishment of regional culture labs in Kandy & Ratnapura. Liquid culture introduced, National Laboratory manual is developed. Training conducted. Lab information system was integrated into web-based PMIS. 	<ul style="list-style-type: none"> Introduction of Gene X-pert and line-probe Assay Upgrading of NTRL to BSL-3. Proper mechanism for sputum transportation – sputum carriers, low-cost mode of transportation Further establishment of 2 regional culture labs and offer culture services to all TB patients. Conduct QA for sputum microscopy labs in the private sector.
<p>Improving TB treatment success rates</p> <ul style="list-style-type: none"> Introduce counselling training for health personnel for improved DOT and patient support (TA needed from WHO) 	<ul style="list-style-type: none"> Counselling guidelines developed. Training will be commenced from January 2012. 	<ul style="list-style-type: none"> Establishment of counselling services at DCCs Use of SMS mechanism to increase compliance to Anti-TB Drugs
<p>Improved procurement and supply management</p>	<ul style="list-style-type: none"> Direct fund transfer mechanism established. 	<ul style="list-style-type: none"> Strengthening the capacity of NDQL to make it ISO certified Regional Lab for drug QC (TA

<ul style="list-style-type: none"> • Transfer funds directly to GDF; register FDCs; establish QA for procurement of first-line anti-TB drugs in collaboration with GDF and GFATM to (TA needed from GDF) • Transfer funds directly to GLC from GFATM for procurement of secondline drugs (TA needed from GDF and GFATM) • Drug and supply management training through GDF 	<ul style="list-style-type: none"> • Formats developed for QA system to obtain feedback from periphery. • Secured the 1st line drug supply through grant mechanism till 2015. • Achieved • Conducted 	<p>from WHO);</p> <ul style="list-style-type: none"> • reviewing existing protocol for monitoring quality of drugs in national supply chain • Enhance diagnosis of paediatric TB; Training of Paediatricians /Chest Physicians on WHO Rapid Advice for management of paediatric TB • Strengthening pharmacovigilance of Anti TB drugs
<p>ACSM: Advocacy, communication and social mobilization</p> <ul style="list-style-type: none"> • Develop ACSM plan with M&E plan (TA needed from partners) 	<ul style="list-style-type: none"> • Draft ACSM plan available, has to finalize the M&E component of it. 	<ul style="list-style-type: none"> • implementation of ACSM Plan • conduct of community-based KAP study to evaluate TB programme implementation • advocacy to enhance political commitment for TB control.
<p>M&E: Monitoring and evaluation</p> <ul style="list-style-type: none"> • Improve existing data management software and GIS (TA needed from WHO) • Train TB programme managers at all levels for data analysis (TA needed from WHO) 	<ul style="list-style-type: none"> • Data management software tested and finalized (PIMS). • Data entry operators appointed in all districts; Training of all Data entry operators and DTCOs on recording and reporting. M&E officer appointed in NPTCCD. • Initiated district reviews yearly • TB Technical working group has been constituted and meets bi-monthly • Various formats rolled out such as “TB Death analysis” formats, Prison screening format, Contact Screening register, Supervisory Checklist for DOT centres • Amendments to existing legislation regarding TB notification 	<ul style="list-style-type: none"> • Web-based PMIS will be launched in all districts. • Formats for recording and reporting had been updated but have to be made in line with upcoming NTP Manual revision and change of technical aspects like no of sputum tests per patient, regimens, etc. • External review of National response to TB Control.

<p>MDR-TB: Prevention and control of multidrug-resistant TB</p> <ul style="list-style-type: none"> Finalize guidelines for MDR-TB management (TA needed from WHO) 	<ul style="list-style-type: none"> will be finalized with the revised NTP manual. 	<ul style="list-style-type: none"> Training of relevant NTP personnel on PMDT Development of MDR-TB expansion plan
<p>Infection control</p> <ul style="list-style-type: none"> Review National Infection Control Policy and guidelines (TA needed from WHO) 	<ul style="list-style-type: none"> Strengthening of infection control facilities at DCCs Guideline will be finalized with the budget 	<ul style="list-style-type: none"> Implementation of infection control guidelines.
<p>Health system strengthening</p> <ul style="list-style-type: none"> Train staff in programme management and planning for district level managers (TA needed from WHO) Develop skills in counselling for TB staff (TA needed from WHO/FHI) Train district level managers on programme management (TA needed from WHO) Improve supervision tools (TA needed from WHO) 	<ul style="list-style-type: none"> Capacity of the staff strengthened for programme & project management & planning. Revision of National TB Manual Introduced productivity & quality assurance concept into NTP Refurbishment/development of infrastructure at Central TB Drug Stores, MDR-TB wards at the National Chest Hospital, establishment of DOTS centres at private hospitals, Patient satisfaction survey done in 2010 for TB only 	<ul style="list-style-type: none"> Infrastructure development at Chest Hospital, Welisara, Colombo Chest Clinic and other district Chest clinic. Improve mobility for TB staff at central and district level. Integration of TB case detection and case holding to existing PHC system.
<p>Budgeting and financing</p> <ul style="list-style-type: none"> Train staff on planning and budgeting tool (TA needed from WHO) Secure support for preparation of GFATM R10 proposal on TB (TA needed from WHO) 	<ul style="list-style-type: none"> Staff have been trained on Financial Management Government Procurement Procedure training is underway for NPTCCD staff NPTCCD undertook the budgeting exercise for National Strategic Plan 2012-2016 	<ul style="list-style-type: none"> If Global Fund support or donor support is available, will undertake analysis of "Counterpart funding" in TB control in Sri Lanka Cost effectiveness analysis of TB care in Sri Lanka Cost effectiveness analysis for Targeted Interventions for TB care Strengthening social support mechanism in collaboration with Social Services Department & civil societies

<p>Operational research</p> <ul style="list-style-type: none"> • Undertake OR on diabetes and TB; prevalence of TB among contacts; and on treatment delays 	<ul style="list-style-type: none"> • 4 Staff trained in Operational Research methodology at IIHMR, India • List of research conducted: <ul style="list-style-type: none"> a) Involvement of GPs in TB control b) Prevalence, contributory factors, disease pattern and treatment outcome of TB amongst prisoners in Sri Lankan prisons c) Status of DOTS implementation in Sri Lanka d) Patient satisfaction survey e) Epidemiological trends in TB for Sri Lanka (Japanese collaboration) f) Detection of non-tuberculosis mycobacterium using microbiological and molecular typing methods amongst symptomatic of TB g) Research on safety and benefit of adjunct systemic cortico-steroids in the management of severe pulmonary TB 	<ul style="list-style-type: none"> • Operational Research priorities identified and included in NSP 2012-2016 • Further training on Operational Research methodology for NPTCCD staff • Plan to constitute National TB Operational Research Steering Committee • Plan to conduct annual National TB Conference for research dissemination and promotion of research and best practices in TB control • Plan to provide grant to Post Graduate students to support Thesis on TB
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Thailand		
Activities planned in 2009	Status of implementation	Activities for 2012-2013
Early and higher case detection		
<ul style="list-style-type: none"> Continue focus on elderly population 	<ul style="list-style-type: none"> Survey of elderly shelters set up in 2009 and carried out in 2010. Prevalence among elderly was found to be lower than expected Intensified case-finding now promoted among risk groups including elderly; suspect cases referred to hospitals. Provincial level staff trained to increase case-finding among elderly 	<ul style="list-style-type: none"> People living with chronic diseases (namely diabetes and chronic lung disease) have been added to high-risk groups targeted for intensified case finding
<ul style="list-style-type: none"> Focus on migrants to assess initiatives for verbal screening of documented migrants during registration 	<ul style="list-style-type: none"> Intensified case-finding now promoted among risk groups including migrants; suspect cases referred to hospitals. NGOs trained to increase case-finding among migrants 	<ul style="list-style-type: none"> Maintain intensified case-finding among migrants
<ul style="list-style-type: none"> Ensure screening and chest X-rays for prisoners 	<ul style="list-style-type: none"> Intensified case-finding now promoted among risk groups including prisoners; suspect cases referred to hospitals. 	<ul style="list-style-type: none"> Maintain intensified case-finding among prisoners
<ul style="list-style-type: none"> Strengthen contact tracing, mainly among close contacts, for household contacts 	<ul style="list-style-type: none"> Intensified contact tracing for children under 5 and for treated cases. 	<ul style="list-style-type: none"> Expect to cover 2, possibly 3, more regions
<ul style="list-style-type: none"> Build capacity of paediatricians and GPs on case detection for early and higher case detection for childhood TB 	<ul style="list-style-type: none"> If active TB, then patients provided with IPT. Coverage is 80 per cent in Regions 9 and 10 	<ul style="list-style-type: none"> Regions to be determined
<ul style="list-style-type: none"> Revise R&R formats to include 0-4 years and strengthen R&R of children with TB 	<ul style="list-style-type: none"> Formats not yet changed and can offer IPT Children benefit more than adults from IPT and thus more cost-effective 	<ul style="list-style-type: none"> Evaluate current formats.

<ul style="list-style-type: none"> Review and establish procedures in collaboration with private hospitals and non-MOPH GO hospitals (military, university etc.) 	<ul style="list-style-type: none"> 60 per cent are now reporting Global Fund initiative to expand coverage for the next 5 years Established training on national guidelines and ISTC 	<ul style="list-style-type: none"> Global Fund initiative to expand coverage for the next 5 years. Military and university hospitals of particular importance.
<ul style="list-style-type: none"> Establish linkages with selected hospitals to pilot PAL 	<ul style="list-style-type: none"> Not complete 	<ul style="list-style-type: none"> Not expected to be completed in 2012-2013
		<ul style="list-style-type: none"> Global Fund SSF now supporting TB screening in MSM, SW, migrants, and urban slum dwellers for 3 years, phase 1.
Laboratory strengthening		
<ul style="list-style-type: none"> Strengthen EQA system at regional level and initiate EQA system in private hospitals for lab strengthening through assured smear microscopy 	<ul style="list-style-type: none"> System strengthened in all regions by transferring EQA system responsibilities to regional labs instead of provincial hospitals. 	<ul style="list-style-type: none"> Maintain current EQA system at regional level and increase coverage of private hospitals by 10 per cent.
<ul style="list-style-type: none"> Set up QC system of FLD-DST at regional level and monitor quality of established liquid culture facilities to strengthen laboratories for culture and first-line DST 	<ul style="list-style-type: none"> Regional labs had capacity testing Only 6 covered so far; external panel testing was added. 	<ul style="list-style-type: none"> Six more sites will be added and all will have external panel.
<ul style="list-style-type: none"> Maintain capacity in performing culture and second-line DST at national level 	<ul style="list-style-type: none"> No budget for performing culture prior to 2009 With GF Round 6 funding, Thailand had 2 experts come in 2011 and in 2012, one more expert will come LPA (HAIN) capacity established at NTRL and BMA lab in Bangkok 	<ul style="list-style-type: none"> 2013 no more funding for experts Need support from WHO request for TA from WHO; need a TB team to QA for 1st and 2nd lines TBTEAM. Plan is to not extend LPA. 9 Xpert pilot sites to be implemented. Aim to establish national guidelines for use of molecular tests and for specimen transport system.
		<ul style="list-style-type: none"> Launching GeneXpert in regional area.

Improving TB treatment success rates		
<ul style="list-style-type: none"> Strengthen role of district TB coordinators to facilitate the increased role of primary care units in providing DOTS 	<ul style="list-style-type: none"> Completed nationally 	<ul style="list-style-type: none"> To maintain role of district TB coordinators
<ul style="list-style-type: none"> Supervise DOT providers through health services 	<ul style="list-style-type: none"> Implemented nationally 	<ul style="list-style-type: none"> Maintain supervision process
<ul style="list-style-type: none"> Capacity enhancement of community-based DOT providers 	<ul style="list-style-type: none"> On job training of VHV conducted by health care staff and district TB coordinators; and VHV guidelines established 	<ul style="list-style-type: none"> Maintain on job training
<ul style="list-style-type: none"> Increase proportion of community-based non-family member DOT providers (Village Health Volunteers, community health leaders, neighbours) to provide quality DOTS 	<ul style="list-style-type: none"> Proportion of non-family-based DOT set as indicator for district hospitals: must have >50% non-family DOT observers (part of broader initiative to strengthen disease control at district level). 69% of hospitals meet target 	<ul style="list-style-type: none"> Target for 75 per cent of hospitals to meet target
<ul style="list-style-type: none"> Provide food coupons and transportation costs to TB patients 	<ul style="list-style-type: none"> In initial implementation, staff reimbursement was too slow; treatment success rates rose but not clear if due to this initiative. 	<ul style="list-style-type: none"> Adjust payment process to make process more feasible; continue process in 3 districts per province. Evaluation to be done next 2 years.
<ul style="list-style-type: none"> Provide monetary incentives to DOTS partners for treatment success case 	<ul style="list-style-type: none"> Bonus to provincial health office when success rates high. 20% of provinces reached 85% target, ~\$3000 USD. Success rates when up; attribution not clear. 	<ul style="list-style-type: none"> System to be maintained; evaluate in next 2 years.
Improved procurement and supply management		
<ul style="list-style-type: none"> Procure first and second-line drugs through National Health Security Office under management of GPO 	<ul style="list-style-type: none"> Implemented. 	<ul style="list-style-type: none"> Continue.
<ul style="list-style-type: none"> Procure lab equipment and supplies under NHSO 	<ul style="list-style-type: none"> NHSO reimburses labs for supplies and DST, allowing labs 	<ul style="list-style-type: none"> System will continue.

management	more flexibility in procurement.	
<ul style="list-style-type: none"> Improve drug management through Vendor Mandatory Inventory System 	<ul style="list-style-type: none"> Web-based system was put in place for drug management at every NHSO-affiliated hospital. 	<ul style="list-style-type: none"> Continue.
<ul style="list-style-type: none"> Strengthen monitoring of drug supply at health facility level 	<ul style="list-style-type: none"> Added to supervision checklist of Regional Disease Control Offices. Drug storage/expiry problems identified and resolved. 	<ul style="list-style-type: none"> Continue.
ACSM: Advocacy, communication and social mobilization		
<ul style="list-style-type: none"> Integrate TB monitoring into regular health inspector's checklists 	<ul style="list-style-type: none"> Completed. 	<ul style="list-style-type: none"> Continue to monitor.
<ul style="list-style-type: none"> Establish MoUs between Ministry of Public Health (MOPH) and Ministry of Justice and MOPH and Bangkok Metropolitan Administration for facilitating TB control services among specific population groups/targeted areas 	<ul style="list-style-type: none"> Completed. 	<ul style="list-style-type: none"> No further action
<ul style="list-style-type: none"> Rent air time to provide key messages on TB to local radio stations and village broadcasting system 	<ul style="list-style-type: none"> Completed in 2010. 	<ul style="list-style-type: none"> Next round of key messages 2012.
<ul style="list-style-type: none"> Mobilize potential partners from civil society and the private sector to establish national TB partnerships 	<ul style="list-style-type: none"> Stop TB partnership formed 2010, including civil society and private sector partners; 2nd annual meeting 2011. 	<ul style="list-style-type: none"> Stop TB Partnership meetings to continue.
<ul style="list-style-type: none"> Start joint monitoring missions between various TB stakeholders including civil society and private providers in monitoring the programme (TA from STOP TB Partnership needed) 	<ul style="list-style-type: none"> External review postponed to next year. 	<ul style="list-style-type: none"> External review mission preparation in late 2012, and conduct in early 2013 (TA possibly needed from WHO)

<p>Infection control</p> <ul style="list-style-type: none"> • Pilot three components of IC in 35 provincial hospitals • Expand IC to more provincial hospitals 	<ul style="list-style-type: none"> • Training done in 35 hospitals; curriculum for nursing colleges; in depth baseline follow up assessments at 6 hospitals. 	<ul style="list-style-type: none"> • Further strengthening in original 35 hospitals; expand to cover 45 hospitals • Operational research to be initiated on efficacy of standard TB IC intervention package (2-country study with Vietnam)
		<ul style="list-style-type: none"> • Integrate NTP activities through the Royal projects.
<p>M&E: Monitoring and evaluation</p>		
<ul style="list-style-type: none"> • Develop and utilize national M&E plan at national, regional and provincial levels including other TB stakeholders (TA from STOP TB Partnership and WHO needed) 	<ul style="list-style-type: none"> • National M&E plan developed together with partners and being utilized at all levels; M&E plan for GF projects is part of integrated national plan. 	<ul style="list-style-type: none"> • Capacity building of staff on M&E at national and regional level
<ul style="list-style-type: none"> • Revise existing electronic data management software (current SMART TB programme) by NHSO 	<ul style="list-style-type: none"> • Software revision just completed. • Multiple electronic systems evaluated. 	<ul style="list-style-type: none"> • Build single data hub to link multiple current electronic data systems. • MDR TB electronic case reporting will be implemented.
<ul style="list-style-type: none"> • Conduct training on Management of Information for Action (MIFA) for regional TB coordinators and other partners 	<ul style="list-style-type: none"> • Training completed. 	<ul style="list-style-type: none"> • On-going supervision/monitoring to assess whether regional staff have retained skills and are using them.
<ul style="list-style-type: none"> • Re-estimate burden of MDR-TB, TB/HIV and paediatric TB; prevalence survey in 2011 (TA needed from WHO) 	<ul style="list-style-type: none"> • Retrospective chart review studies done of MDR TB and paediatric TB cases. • Prevalence survey delayed to start 2012. Known HIV status in TB patients now above 90%, special studies not needed. 	<ul style="list-style-type: none"> • Conduct prevalence survey 2012. • Conduct DRS 2012
<p>TB/HIV: Collaborative activities</p>		
<ul style="list-style-type: none"> • Strengthen collaborative mechanisms between HIV-TB at national, subnational and provincial levels 	<ul style="list-style-type: none"> • Mechanisms are in place but need revitalization 	<ul style="list-style-type: none"> • Revitalize collaborative mechanisms between HIV-TB at national, sub-national and provincial levels

<ul style="list-style-type: none"> Strengthen collaborative mechanisms 	<ul style="list-style-type: none"> Done. HIV testing in TB > 90% 	<ul style="list-style-type: none"> To be reviewed in 2014
<ul style="list-style-type: none"> Revise and distribute PITC handbooks to all service providers including private hospitals 		
<ul style="list-style-type: none"> Develop training curricula for providing ART for TB/HIV patients 	<ul style="list-style-type: none"> Draft curriculum developed. 	<ul style="list-style-type: none"> Revise and complete curriculum, including new recommendations and targets
<ul style="list-style-type: none"> Distribute HIV/TB ICF handbook to all health facilities 	<ul style="list-style-type: none"> Completed and distributed. 	<ul style="list-style-type: none"> Review and revise in accordance with WHO 2011 ICF guidelines Revise national guidelines for TB/HIV in light of new global guidance in past year.
<p>MDR-TB: Prevention and control of multidrug-resistant TB</p>		
<ul style="list-style-type: none"> Submit GLC application for three MDR-TB pilot sites 	<ul style="list-style-type: none"> Completed and approved and initiated. 	<ul style="list-style-type: none"> Expand new MDR TB treatment model to 15 sites
<ul style="list-style-type: none"> Provide second-line drugs to selected vulnerable populations like migrants 	<ul style="list-style-type: none"> Applied for under Global Fund. 	<ul style="list-style-type: none"> To start in 2012 in 15 approved sites
<ul style="list-style-type: none"> Expand MDR-TB pilot site across the country 	<ul style="list-style-type: none"> Expansion proceeding in 2012 	<ul style="list-style-type: none"> Complete expansion and strengthening of 15 sites.
		<ul style="list-style-type: none"> Provide clinical consultation to expansion sites Develop 5-yr strategic plan for MDR-TB; further new actions for 2012-2013 to be determined in 5-yr plan.

TIMOR LESTE		
Activities planned in 2009	Status of implementation	Activities for 2012-2013
<p>Early and higher case detection</p> <ul style="list-style-type: none"> Strengthen public-private mix (PPM) activities for case finding and case holding Revise TB guidelines to include IC, TB/HIV and paediatric TB 	<ul style="list-style-type: none"> National NGO consortium to work in TB has been formed Case notification has increased to 483 per 100,000 population (all TB) in 2010. A large proportion are smear negative TB Close to 18% of cases treated are Paediatric cases Draft TB/HIV policy circulated 	<ul style="list-style-type: none"> Plan to involve Traditional healers and church leaders by sensitising them on TB services Training for National and Regional Hospital Clinical doctors on Chest X-Ray reading (TA required) Revision of NTP Manual to include all new areas in TB Develop targeted interventions for poorly performing districts, prisons, etc
<p>Laboratory strengthening</p> <ul style="list-style-type: none"> Provide training and quality control for lab workers (TA needed) 	<ul style="list-style-type: none"> All districts are covered by supervision visits by the National Laboratory Culture and DST services are being procured from IMVS (SA Pathology), Adelaide EQA protocol prepared, but Blinded Rechecking not fully implemented 	<ul style="list-style-type: none"> Continue supervision visits by National Health Lab Plan to start indirect sputum smear examination at National Health Laboratory after upgrading bio-safety levels and recruiting and training new staff Lab layout design (TA required) Recruit additional staff and train at international lab sites
<p>Improving TB treatment success rates</p>	<ul style="list-style-type: none"> For the first three quarters of 2010, national level treatment success was 87% Involvement of PSF workers of SISCa programme has increased during 2011. All CHCs are being visited by TB staff and treatment cards are monitored 	<ul style="list-style-type: none"> Training of National and Regional Hospital staff and monitoring of progress in hospital involvement Continue expansion of SISCa involvement
<p>Improved procurement and supply management</p>	<ul style="list-style-type: none"> Good quality drugs are being procured via GDF Laboratory consumables are available in sufficient amounts Strengthening of central procurement agency SAMES 	<ul style="list-style-type: none"> Continue Pooled procurement via GDF Strengthen drug supply and storage

<p>ACSM: Advocacy, communication and social mobilization</p> <ul style="list-style-type: none"> Expand ACSM activities to include SISCa programme in poor performing districts (TA and funding needed) 	<ul style="list-style-type: none"> KAP study completed and results being finalized ACSM strategy drafted Seminars for village chiefs and other community leaders underway SISCa involvement being expanded 	<ul style="list-style-type: none"> Need to programme KAP study findings and implications into draft ACSM Strategy and plan Develop Strategy/ Guidelines for Community TB care (TA needed)
<p>M&E: Monitoring and evaluation</p> <ul style="list-style-type: none"> Strengthen monitoring and supervision to develop skills in M&E and data analysis (TA needed) 	<ul style="list-style-type: none"> Visits to districts by Regional supervisors continued Quarterly programme management meetings with District TB co-ordinators (DTCs) continued All DTCs have been provided laptops 	<ul style="list-style-type: none"> Develop electronic reporting form after revision of NTP manual, and roll out to districts (TA needed) Develop skills of Regional Supervisors to provide feedback to districts on quarterly reports
<p>TB/HIV: Collaborative activities</p> <ul style="list-style-type: none"> Establish national coordination framework for TB/HIV at national level (TA needed) 	<ul style="list-style-type: none"> Joint TB-HIV collaborative trainings have been initiated and DTCs, HIV programme counsellors and few CHC managers have been trained 	<ul style="list-style-type: none"> Expand Joint TB-HIV training Formalise the TB-HIV collaborative framework and policy Institute the National TB-HIV collaborative body Train TB staff on HIV testing of TB suspects on a voluntary basis
<p>MDR-TB: Prevention and control of multidrug-resistant TB</p>	<ul style="list-style-type: none"> PMDT committee constituted Clinical care specialist funded under Global Fund project in place Private sector partner (Eli-Lilly) assisted in upgradation of MDR-TB inpatient care into well ventilated separate units Testing facility provided by IMVS Adelaide 	<ul style="list-style-type: none"> Continue access and care for MDR-TB patients Attempt utilisation of Xpert MTB/Rif available at NGO source for programme purposes, by undertaking a study on patients at high risk for DR Continued access to good quality drugs through GLC Support NGO partner inputs in PMDT Support patients of DR-TB
<p>Infection control</p>		<ul style="list-style-type: none"> Prepare Air-borne infection control guidelines for health facilities and congregate settings

		<ul style="list-style-type: none"> • Training of TB staff on infection control
Health system strengthening <ul style="list-style-type: none"> • Retrain programme personnel on current issues • Develop plan for HR development (TA needed) 		<ul style="list-style-type: none"> • Standardised modular TB Training of newly appointed Cuban-trained Timorese doctors, followed subsequently by ISTC training
Budgeting and financing		<ul style="list-style-type: none"> • Undertake study of counterpart financing for TB control (TA needed)
Operational research <ul style="list-style-type: none"> • Develop research agenda and generic research protocol (TA needed) 		<ul style="list-style-type: none"> • Develop Research Agenda for Timor Leste and undertake 2 to 3 studies
Others <ul style="list-style-type: none"> • Develop national level "Joint Working Committee" for TB • Round 10 proposal development (TA needed) 	<ul style="list-style-type: none"> • TB Technical Working Group constituted 	<ul style="list-style-type: none"> • Global Fund Transitional Funding Mechanism Proposal to be developed (TA needed)

Annex III

Agenda

<p>6 December 2011 0830- 0900 Registration</p> <p>Session 1: Opening and introduction 0900 – 1000 Opening Address: <i>Dr Samlee Plianbangchang</i> Regional Director WHO-SEARO</p> <p style="padding-left: 40px;">Introduction and objectives of the meeting Announcements Group Photograph</p> <p>Session 2.1: Programme updates and review of the recommendations of 2009 NTP Managers meeting: <i>Chairperson: Dr Maureen E. Birmingham</i></p> <p>1030 - 1100 Global and Regional overview of TB: Progress and Challenges for TB Control – new policies <i>Khurshid A. Hyder</i></p> <p>1100 - 1200 Early and higher case detection <i>NTP Manager, Bangladesh, DPRK, Maldives and Timor Leste</i> <i>Facilitator: Karin Bergstrom</i></p> <p>1200 – 1245 Introduction of new laboratory diagnostics especially liquid culture, line probe assays and Xpert MTB/RIF diagnostic test <i>NTP Manager, Indonesia and Myanmar</i> <i>Facilitator: Mr Somsak Rienthong</i></p> <p>1245 – 1300 Discussion</p>	<p>Session 2.2: Programme updates and review of the recommendations of 2009 NTP Managers meeting: <i>Chairperson: Dr Sangay Thinley</i></p> <p>1400 – 1500 Progress towards universal access to diagnosis and treatment of M/XDR-TB <i>NTP Manager, India and Nepal</i> <i>Facilitator: V Bhatia</i></p> <p>1530 - 1615 Progress towards universal access to TB/HIV diagnosis and treatment services <i>NTP Manager, Thailand</i> <i>Facilitator: Khurshid A. Hyder</i></p> <p>1615- 1700 Use of quality assured anti-TB drugs by the National TB Programmes <i>NTP Manager, Bhutan and Sri Lanka</i> <i>Facilitator: Nigor Muzafarova</i></p> <p>1700 – 1730 Expanding the Regional TB response base: scaling up community TB care and civil society involvement to contribute to the global and regional targets for TB control <i>Blessi Kumar</i></p> <p>1730 – 1815 Countries to put up respective posters on “Progress and plans for TB control”</p>
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7 December 2011

Session 3: Review of programme planning and implementation

Chairperson: Dr Ashok Kumar

0830 - 1000 Prevalence survey in SEAR: Measuring TB incidence, prevalence and mortality

Ikushi Onozaki

Moderator: Ms Amy Piatek

Dr Nobukatsu Ishikawa

Ms Elisa Adelman

1030 – 1230 Countries to present their respective posters on progress, plans, challenges and gaps in implementing the Stop TB strategy (One hour individual review of posters followed by 10 minutes presentation by each country)

National Programme Managers

Session 4: Updates on Global and regional TB control policies and programme planning

Chairperson: Dr S K Sharma

1330 - 1430 *Scaling up of PMDT – Policies and strategies, including global and regional GLC*

Tauhidul Islam

1430 - 1500 Paediatric TB medicines

Nigor Muzafarova

1530 - 1630 TBTEAM: A coordinated approach to technical assistance

Karin Bergstrom

Session 5: Technical Assistance for TB planning and review

Moderator: Dr Ashok Kumar

Dr Sarath Amunugama

1630 – 1800 Perspectives from Partners

(Invited partners)

<p>8 December 2011</p> <p>Session 6: Cross-cutting issues in programme planning</p> <p><i>Chairperson: Drg Dyah Erti Mustikawati</i></p> <p>0830 – 0930 Health systems strengthening in TB control <i>Ilsa Sri L. Nelwan</i></p> <p>Session 7: Development of programme implementation plans 2012-2013</p> <p><i>Chairperson: Dr Karin Bergstrom</i></p> <p>Updating of national annual implementation plans for TB control 2012-2013 including:</p> <p>Roll out of new diagnostics in TB control and health system strengthening</p> <p>Scaling-up MDR-TB and TB/HIV interventions, including infection control measures</p> <p>Overview of technical assistance and resource requirements</p> <p>0930 – 1000 Introduction to group work and Group work</p>	<p>1030 - 1500 Group work: Updating of national annual implementation plans for TB control 2012-2013</p> <p><i>Chairperson: Dr Thandar Lwin</i></p> <p>1530 – 1700 Presentation of Group work by country</p>
<p>9 December 2011</p> <p>0900 – 1200 Presentation of group work by country (contd)</p> <p><i>Chairperson: Dr Ashaque Hosain</i></p> <p><i>Dr Krisada Mahotarn</i></p> <p>1200 – 1230 Discussion</p>	<p>Session 8: Regional Strategic Plan Update</p> <p>1330 – 1430 Update of the Regional Strategic Plan for TB control 2012-2015</p> <p>14:30 – 1500 Discussion <i>Khurshid A. Hyder</i></p> <p>Session 9: Conclusions and recommendations</p> <p><i>Chairperson: Dr Sangay Thinley</i></p> <p>1530 – 1630 Major conclusions and recommendations</p> <p>1630 - 1700 Closing</p>

Annex IV

List of participants

Bangladesh

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Countries in the WHO South-East Asia (SEA) Region have made significant progress towards the Millennium Development Goals relating to tuberculosis (TB). The estimated incidence of all forms of TB, estimated prevalence of all forms of TB and estimated TB mortality all continue to show a downward trend. The treatment success rate among new smear-positive pulmonary TB cases has remained above 85% since 2005, and was 89% in 2010.

But although there has been progress, TB control remains a huge challenge in the SEA Region. Approximately 40% of the estimated global number of cases 8.8 million occurs in the Region (based on current estimates) as well as more than a quarter of cases of multi-drug-resistant TB. The national TB and AIDS control programmes in seven countries are jointly extending a comprehensive package of interventions for those affected by both HIV and TB. The long-term goal is to eliminate TB as a public health problem.

Given the nature of the TB epidemic, increased and sustained commitment will be needed, from all stakeholders, including national governments and national and international partners. Our continued collaboration is critical to deliver much-needed services more effectively and efficiently, to reach all population groups and to overcome the physical, social and financial barriers that prevent people from accessing care



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